

G Wetland Functional Assessment

Wetland Functional Assessment Report

A Technical Report in Support of the Environmental Impact Statement for the Disposal and Reuse of Naval Air Station Brunswick Brunswick, Maine

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Prepared for:

U.S. DEPARTMENT OF NAVY

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able of Contents

Section			Page
1	Intr	oduction	1-1
2	Site	Description	2-1
3	Met	:hodology	3-1
	3.1	Review of Previous Wetland Surveys	
	3.2	Field Methodology	
4	Wet	tlands Types	4-1
	4.1	Spruce-Fir-Cinnamon Fern Forest	4-1
	4.2	Red Maple-Sensitive Fern Swamp	4-2
	4.3	Mixed Graminoid-Shrub Marsh	4-2
	4.4	Freshwater Tidal Marsh	4-2
	4.5	Brackish Tidal Marsh	4-3
	4.6	Spartina Salt Marsh	4-3
	4.7	Subtidal Estuary	4-3
5	Wet	tland Functions and Values	5-1
	5.1	Functions and Values Assessed.	5-1
		5.1.1 Functions	5-1
		5.1.2 Values	5-2
	5.2	Cluster 1	5-3
	5.3	Cluster 2	5-3
	5.4	Cluster 3	5-3
	5.5	Cluster 4	5-4
	5.6	Cluster 5	5-4
	5.7	Cluster 6	5-4
	5.8	Cluster 7	5-5
	5.9	Cluster 8	5-5
	5.10	Cluster 9	5-6
	5.11	Cluster 10	5-6
	5.12	Cluster 11	5-7
	5.13	Cluster 12	5-7
		Cluster 13	
		Cluster 14	
	5.16	Cluster 15	5-8

Final Environmental Impact Statement

Disposal and Reuse of NAS Brunswick, Maine

	Table	of	Contents	(cont.)
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Section		Page
6	Conclusions and Summary	6-1
7	References	7-1
Attachm	nents	
1	Photographs of the Wetlands for Functional Assessment	ATT1-1
2	Wetland Functional Assessment Datasheets	ATT2-1
3	Wetland Clusters	ATT3-1

ist of Tables

Table		Page
3-1	Wetlands Summary, NAS Brunswick	3-3
5-1	Wetland Functions and Values	5-3

ist of Figures

Figure		Page
2-1	NAS Brunswick and Outlying Properties, Brunswick, Maine	2-3
2-2	Ecological Communities, NAS Brunswick, Brunswick, Maine	2-5
3-1	Wetlands of NAS Brunswick, Brunswick, Maine	3-15

ist of Abbreviations and Acronyms

AMSL above mean sea level

E & E Ecology and Environment, Inc.

EIS Environmental Impact Statement

FHWA Federal Highway

GPS Global Positioning System

NAS Naval Air Station

USACE U.S. Army Corps of Engineers

ix

1

Introduction

This report has been prepared to support the Environmental Impact Statement (EIS) for the disposal and reuse of Naval Air Station (NAS) Brunswick in Brunswick, Maine. The Navy contracted with Ecology and Environment, Inc. (E & E) to conduct a functional assessment of the wetlands at NAS Brunswick and its outlying properties in the spring of 2009. The United States Army Corps of Engineers (USACE) recommends the use of the Federal Highway Methodology (FHWA method) as a descriptive approach to evaluating wetland functions and values for the Clean Water Act Section 404 Permit Program (USACE 1993). This approach incorporates a qualitative description of the wetland and the identification of wetland functions and values in order to come to conclusions based on wetland science and "best professional judgment."

The following report provides a brief overview of NAS Brunswick and the outlying properties (Section 2). Section 3 describes the methods used to evaluate the functions and values of the wetlands found at NAS Brunswick. Section 4 describes the locations of wetlands assessed on NAS Brunswick and its outlying properties during a reconnaissance field visit and includes a discussion of the wetland types found on the property. Section 5 describes the functions and values of the wetlands assessed on the property during the reconnaissance field visit.

2

Site Description

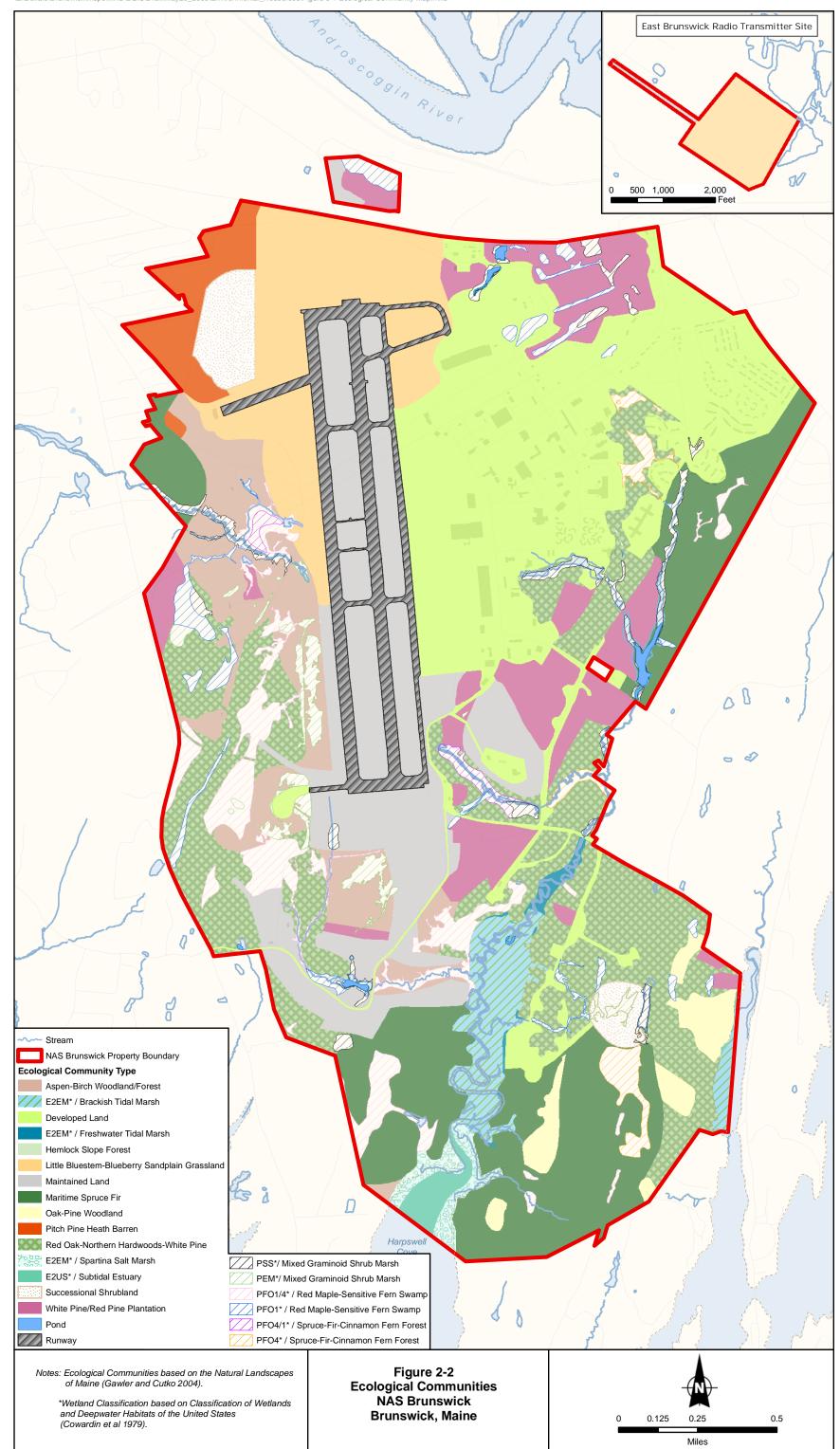
NAS Brunswick is located on approximately 3,117 acres in the town of Brunswick, Cumberland County, Maine (see Figure 2-1). NAS Brunswick lies between the Androscoggin River and U.S. Route 1, with Maine Route 24 to the north and Casco Bay to the south. Three outlying properties (the McKeen Street Housing Annex, East Brunswick Radio Transmitter Site, and Sabino Hill Rake Station) that are being reviewed in the EIS were initially included as part of this study; however, these properties do not support wetland habitat. The East Brunswick Radio Transmitter Site and Sabino Hill Rake Station are characterized entirely as upland communities and do not contain wetland habitat. The McKeen Street Housing Annex does support the headwaters of Mere Brook on the southern end of the property; however, no wetland habitat was identified during the site survey conducted by E & E biologists in April 2009. Therefore, these three properties are not discussed further in this report.

NAS Brunswick is located within the Central Maine Coastal and Interior Ecoregion. This area is comprised of glacially scoured and dissected peneplain, which slopes toward the coast and exhibits glacial features such as kames, eskers, and terraces. The topography is relatively flat to gently rolling, with elevations ranging from sea level to 1,000 feet above mean sea level (AMSL). Forests are the dominant vegetation type and consist of northern hardwood, northern hardwood-spruce, northern coastal spruce-fir, and spruce-fir-northern hardwood communities. Coastal pitch pine communities are known to occur in this ecoregion but are now uncommon. Open communities such as grasslands and tidal marshes also occur, but they do not comprise a large percentage of the overall land cover of this ecoregion (McNab and Avers 1994).

The land surrounding NAS Brunswick is predominately residential with areas of undeveloped forests and wetlands. Upland forests are the dominant vegetation community on the installation, covering approximately 1,336 acres (41%) of the total land area (E & E 2008). Large forested communities are located on the western, southern, and eastern portions of the base. These forested communities are interspersed with wetlands, ponds, and streams. Other vegetation communities at NAS Brunswick include a variety of grasslands, wetlands, and maintained lands. Developed areas occupy the central and north-central portions of the installation. Much of the eastern and western portions of the installation are forested and interspersed with wetlands, streams, and ponds. The southern and sou-

theastern portions of the base are characterized by forest and tidal wetlands associated with Harpswell Cove and Buttermilk Cove. The ecological communities mapped at NAS Brunswick are depicted on Figure 2-2.

NAS Brunswick is located within four watersheds: the Mere Brook/Harpswell Cove watershed, Buttermilk Cove watershed, Middle Bay watershed, and the Androscoggin River watershed. The installation is located within 0.5 mile of the Androscoggin River and Casco Bay. The installation is bisected by Mere Brook, which eventually drains into Harpswell Cove. Numerous streams, wetlands, and permanent freshwater ponds are scattered throughout the installation. Approximately 389 acres of wetlands are present on NAS Brunswick, of which 72% are freshwater and 28% are tidal (E & E 2008). A more detailed discussion of wetland types at NAS Brunswick is provided in Section 4 of this report.



3

Methodology

Field surveys of the wetlands at NAS Brunswick were conducted by E & E wetland biologists in May 2009. The objective of the field surveys was to conduct an assessment of the functions and values of wetlands previously identified on the base.

3.1 Review of Previous Wetland Surveys

Prior to conducting the field surveys, existing NAS Brunswick studies, plans, and environmental documents were reviewed to obtain information on wetlands at NAS Brunswick.

The Navy conducted a wetland inventory of NAS Brunswick in 1998 for planning-level purposes (Normandeu Associates 1998). The inventory was produced through aerial photo-interpretation and review of existing soils and wetlands data. Brief on-site reconnaissance was conducted to confirm the approximate locations of wetland boundaries. Wetland communities were described according to the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979). The Cowardin wetland community classification system is used widely throughout the United States for the purpose of inventory, evaluation, and management of wetlands. Under this system, wetlands are classified based on hydrology, soils, and plant communities. The inventory resulted in the mapping of approximately 443 acres of wetlands at NAS Brunswick. Of the 443 acres, approximately 116 acres of estuarine wetland were mapped, most of which are located around Harpswell Cove and Buttermilk Cove. The remaining 327 acres of wetland were classified as palustrine or freshwater wetlands. Under the Cowardin (1979) classification, the palustrine wetlands present at NAS Brunswick are emergent (PEM), scrub-shrub (PSS) and forested (PFO). Freshwater ponds are also included and are classified as PUB.

In addition to the planning-level wetland survey, maps of formally delineated wetland were also reviewed. Formal wetland delineation surveys were conducted at NAS Brunswick in the recent past using the *Corps of Engineers Wetland Delineation Manual* (1987). These field wetland surveys were conducted in support of planning and permitting for a variety of projects; however, formal wetland delineations have not been completed for the entire NAS Brunswick property or its outlying properties. Based on review of wetland delineation reports and associ-

ated mapping, approximately 80 acres of wetlands have been delineated at NAS Brunswick.

In 2008, E & E biologists conducted a reconnaissance survey of wetlands at NAS Brunswick and the outlying properties (E & E 2008). The objective of the survey was to field-verify the location of wetlands identified in the planning-level survey and the previously delineated wetland boundaries. As a result, E & E biologists confirmed the presence of approximately 389 acres of wetlands at NAS Brunswick (see Figure 3-1).

3.2 Field Methodology

Using the methodology outlined in the *Highway Methodology Workbook Supplement* (USACE 1999) and the Modified Functions and Values Assessment for Significant Nexus datasheet (USACE 2007), a functional assessment of previously identified wetlands was completed at NAS Brunswick in May 2009. These wetlands were grouped into clusters based on their geographic proximity and hydrologic connections (see Table 3-1 and Attachment 3). A walkover of each cluster was conducted to assess the function and values of each wetland community type. Previously identified wetlands were located using a Global Positioning System (GPS) unit. Each wetland location was recorded with a single GPS point, and a photograph was taken to document the existing conditions of the site (see Attachment A). For each wetland, a standardized datasheet was completed (see Attachment B), and the dominant vegetation within the wetland and upland border was recorded.

Wetland ID	and Values	Wetland Community Type ¹		Additional Comments
Cluster 1				
FA 5	GWR, S&S	PFO	Possible hydrologic connection to Androscoggin River	Red maple (<i>Acer rubrum</i>) wetland adjacent to a stream and ponded area originating from a storm water outflow; connected to FA 6 via a culvert under Perimeter Road.
FA 6	GWR	PFO	Possible hydrologic connection to Androscoggin River	Red maple wetland adjacent to ponded area. Originating from FA 5 via culvert under Perimeter Road and connected to FA 7 via culvert before culverted under Bath Road.
FA 7	GWR/D, FFA	PFO	Possible hydrologic connection to Androscoggin River	Small, linear wetland within a forested area along an ephemeral stream; vegetation dominated by red maple. Originating from a stormwater culvert under Perimeter Rd and connected to FA 6 via culvert before culverted under Bath Road.
FA 11	S&TR, NR&R	PSS	Possible hydrologic connection to Androscoggin River	Scrub-shrub wetland formed at the convergence of two man-made ditches through a white pine (<i>Pinus strobus</i>) plantation. A ditch flows east from the wetland into a storm water culvert under Perimeter Road.
FA 13	GWR/D, FFA, S&TR, NR&R	PFO	Possible hydrologic connection to Androscoggin River	Small red maple swamp bordered by white pine plantation. Southern portion drains into a ditched area that flows east and likely into the storm water system along Fitch Avenue.
FA 15	GWD, FFA, S&TR, NR&R, PE, WLH	PEM	Possible hydrologic connection to Androscoggin River	Linear wetland within white pine plantation. Adjacent to FA 16 and FA 17; drains west into FA 17.
FA 16	GWD, FFA, S&TR, NR&R	PSS	Possible hydrologic connection to Androscoggin River	Linear wetland within white pine plantation. Drains west to FA 15 and FA 17.
FA 17	GWR, S&TR, NR&R	PFO	Possible hydrologic connection to Androscoggin River	Linear wetland within mixed forest dominated by red maple, white pine, and red oak (<i>Quercus rubra</i>). Adjacent to FA 15. Likely drains FA 15 and FA 16 into storm water system at the intersections of Sixth Avenue and Fuel Farm Road with Pegasus Avenue.
FA 18	GWR	PFO	Possible hydrologic connection to Androscoggin River	Forested wetland dominated by red maple, white pine, and red oak, with a drainage ditch running along roadside. Likely drains into storm water system along Pegasus Avenue.
FA 19	GWR	PFO	Possible hydrologic connection to	Forested wetland dominated by red maple, white pine, and red oak, with a drainage ditch running along roadside. Likely drains into storm water

	- Wellands Summary, NA	Wetland		
Wetland ID	and Values	Community Type ¹	Hydrologic Connection	Additional Comments
FA 78	GWD, PE	PFO		Seepage wetland adjacent to a well-defined perennial stream. Dominated by red maple, skunk cabbage (<i>Symplocarpus foetidus</i>), and jewelweed (<i>Impatiens capensis</i>).
Cluster 2				
FA 8	GWR, WLH	PFO		Isolated wet depression in mixed forested area dominated by red maple, white pine, and red oak.
FA 9	GWR, S&TR, NR&R WLH	PFO		Isolated wet depression in mixed forested area dominated by red maple, white pine, and red oak.
FA 10	FFA, S&TR, NR&R	PFO		Isolated wet depression in mixed forested area dominated by red maple, white pine, and red oak.
FA 12	S&TR	PFO	No Apparent Surface Water Connection to Waters of the U.S.	Isolated wet depression in white pine plantation bordered by white birch.
Cluster 3	3			
FA 14	GWR, FFA	PFO	Possible hydrologic connection to an unnamed tributary of Mere Brook	Forested wetland dominated by red maple that drains into a ditch flowing south into the storm water system at the intersection between Avenue B and First Street.
FA 25	GWR, REC, WLH	PFO	Possible hydrologic connection to an unnamed tributary of Mere Brook	Convergence of two small ephemeral streams from culverts originating off the property. Drains into FA 23.
FA 26	FFA, PE, WLH	PEM	Possible hydrologic connection to an	Emergent wetland bordering tributary to Mere Brook. Flows south into ponded area – FA 23. Vegetation dominated by grasses, sphagnum moss (<i>sphagnum</i> spp.), and steeplebush (<i>Spiraea tomentosa</i>).
FA 27	GWR/D, FFA, PE, WLH	PFO	Possible hydrologic connection to an unnamed tributary of Mere Brook	Forested wetland bordering a large stream (a tributary of Mere Brook) and dominated by red maple and sphagnum moss. Drains south into FA 26.

	-1 Wetlands Summary, NA	Wetland		
Wetland ID	and Values	Community Type ¹	Hydrologic Connection	Additional Comments
FA 32	GWR, FFA, S&TR, NR&R, PE, WLH, S&S	PEM	Possible hydrologic connection to an unnamed tributary of Mere Brook	Emergent wetland surrounding a stream from a storm water detention culvert under First Street. Drains south where it is culverted under Chickadee Circle and converges with FA 36 and into FA 27.
FA 33	S&TR	PFO	Possible hydrologic connection to an unnamed tributary of Mere Brook	Small forested wetland depression between residential development and roadway. Likely drains into storm water system along First Street.
FA 34	S&TR	PFO	Possible hydrologic connection to an unnamed tributary of Mere Brook	Forested wetland dominated by red maple between residential development and roadway. Likely drains into storm water system along First Street.
FA 35	FFA, S&TR	PFO	Possible hydrologic connection to an unnamed tributary of Mere Brook	Forested wetland dominated by red maple, white pine, and red spruce (<i>Picea rubens</i>). This wetland connects to FA 36 by a small stream.
FA 36	FFA, S&TR		Possible hydrologic connection to an unnamed tributary of Mere Brook	Storm water detention pond within a residential area dominated by cattails (<i>Typha</i> spp.). Connected to FA 35 by a small stream. Culverted under Neptune Drive.
FA 37	GWD, FFA, S&TR	PEM	connection to an	Emergent wetland within ROW dominated by soft rush (<i>Juncus effusus</i>) and sedges (<i>Scirpus</i> spp.). Drains to the east into a forested wetland bordering a small stream – FA 38.
FA 38	Connecting tributary		Possible hydrologic connection to an unnamed tributary of Mere Brook	Small stream draining from FA 37. Dominated by red maple. Culverted under Neptune Drive, where it converges with FA 27.
Cluster 4	1			
FA 20	GWR	PFO	Hydrologic connection to an unnamed tributary of Mere Brook	Narrow border of forested wetland along an unnamed tributary of Mere Brook. Culverted in several places under roadways, including Neptune Drive, before converging with FA 22 and draining to FA 23.

	- i Wellands Summary, NA	Wetland		
Wetland ID	Primary Functions and Values	Community Type ¹	Hydrologic Connection	Additional Comments
FA 21	GWR, FFA, S&TR, S&S		Hydrologic connection to an unnamed tributary of Mere Brook	Ponded area with some emergent border from culvert on NW side likely from under airfield. Culverted under dirt road where it becomes FA 22.
FA 22	GWR, S&TR, REC, WLH, S&S		Hydrologic connection to an unnamed tributary of Mere Brook	Emergent marsh bordering a slow, meandering stream. Drains south into a ponded area – FA 23.
FA 23	GWR, F&SH, S&TR, REC, S&S	POW	Hydrologic connection to an unnamed tributary of Mere Brook	Open water area adjacent to FA formed by drainage from FA 22, FA 20, FA 25, and FA 26. Appears degraded – cloudy water, little emergent or submerged vegetation, posted signs indicating no fishing or swimming. Drains via culvert to FA 24.
FA 24	GWR, FFA	PSS	Hydrologic connection to an unnamed tributary of Mere Brook	Wetland bordering perennial stream originating via culvert from FA 23. Scrub-shrub wetland dominated by speckled alder (<i>Alnus incana</i>). Flows south into FA 47.
FA 47	GWR, FFA, F&SH, WLH		Hydrologic connection to an unnamed tributary of Mere Brook	Emergent wetland bordering perennial stream dominated by grasses and sensitive fern (<i>Onoclea sensibilis</i>). Stream flows south to its confluence with Mere Brook.
Cluster 5	5	•		
FA 28	GWR, WLH	PFO		Isolated wet depression in maritime spruce fir forest dominated by balsam fir (<i>Abies balsamea</i>), red spruce, and white pine.
FA 29	GWD	PFO		Isolated wet depression in maritime spruce fir forest dominated by balsam fir, red spruce, and white pine.
FA 30	GWR/D, FFA, WLH	PFO	* *	Isolated wet depression in maritime spruce fir forest dominated by balsam fir, red spruce, and white pine.
FA 31	GWR/D, FFA, WLH	PFO		Isolated wet depression in maritime spruce fir forest dominated by balsam fir, red spruce, and white pine.

Wetland ID	and Values	Wetland Community Type ¹		Additional Comments
Cluster (
FA 1	FFA, NR&R, PE, WLH	E2EM	Hydrologic connection to Mere Brook	Salt marsh wetland adjacent to a small stream dominated by cordgrass (<i>spartina</i> spp).
FA 2	FFA, PE, WLH	E2EM	Hydrologic connection to Mere Brook	Salt marsh wetland adjacent to a small stream.
FA 48	PE, WLH	PEM	Hydrologic connection to Mere Brook	Emergent wetland bordering Mere Creek. Wetland contains significant vernal pool no. 32.
FA 49	PE, WLH	PSS	Hydrologic connection to Mere Brook	Scrub/shrub wetland bordering Mere Creek dominated by meadowsweet (<i>Spirea latifolia</i>), steeplebush, and a variety of emergent vegetation.
FA 60	GWD, WLH	PFO	Hydrologic connection to Mere Brook	Forested wetland dominated by red maple, balsam fir, and skunk cabbage. Drains south into brackish tidal marsh along Mere Brook.
FA 61	WLH	PFO	Hydrologic connection to Mere Brook	Forested wetland dominated by red maple, red spruce, balsam fir, cinnamon fern (<i>Osmunda cinnamomea</i>), and sphagnum. Connects with FA 60.
FA 63	GWR/D, S&TR, NR&R, PE, WLH	PFO	Hydrologic connection to Mere Brook	Forested wetland dominated by red maple bordering open water with cattails at southern end. Flows into a perennial stream bordered by FA 64.
FA 64	Connecting tributary		Hydrologic connection to Mere Brook	Small stream draining from FA 64. Culverted and draining through Weapons storage compound to Mere Brook.
FA 65	GWR, F&SH, S&TR, PE, WLH	PSS	Hydrologic connection to Mere Brook	Shrub wetland bordering an impounded area of Mere Brook. This is culverted under a road as a perennial stream.
FA 66	Tributary to Mere Brook		Hydrologic connection to Mere Brook	Small stream draining into Mere Brook.
FA 67	Tributary to Mere Brook		Hydrologic connection to Mere Brook	Small stream draining into Mere Brook.

		Wetland		
Wetland		Community		
ID	and Values	Type ¹	Connection	Additional Comments
Cluster 7				
FA 3	S&TR, NR&R, WLH	PSS	No Apparent Surface	
			Water Connection to	
			Waters of the U.S.	
FA 4	GWR, S&TR, WLH	PFO	* *	Forested wetland dominated by balsam fir and spruce.
			Water Connection to	
			Waters of the U.S.	
FA 40	GWR, REC, WLH	PFO	No Apparent Surface	Southern forested portion of isolated wetland. Northern portion is FA 41.
			Water Connection to	Dominated by red maple and balsam fir.
			Waters of the U.S.	
FA 41	GWR, REC, WLH, ED/S	PSS	No Apparent Surface	Northern shrub swamp portion of isolated wetland. Southern portion is
			Water Connection to	FA 40. Dominated by steeplebush, meadowsweet, speckled alder, soft
				rush, and sedges.
FA 42	GWR, WLH	PFO		Western forested portion of isolated wetland. Eastern portion is FA 43.
	· ·			Dominated by red maple, red oak, and balsam fir.
			Waters of the U.S.	
FA 43	GWR	PSS	No Apparent Surface	Eastern shrub swamp portion of isolated wetland. Western portion is FA
				42. Dominated by unknown shrubs, possibly speckled alder.
			Waters of the U.S.	
FA 44	WLH	PFO	No Apparent Surface	Three north/south linear depressions hold water in this forested wetland
			Water Connection to	dominated by red maple, balsam fir, and white pine.
			Waters of the U.S.	
FA 45	WLH	PFO	No Apparent Surface	Southern forested portion of isolated wetland. Northern portion is FA 46.
				Dominated by red maple, balsam fir, and white pine.
			Waters of the U.S.	
FA 46	WLH	PSS	No Apparent Surface	Northern shrub swamp portion of isolated wetland. Southern portion is
				FA 40. Dominated by meadowsweet, speckled alder, soft rush, and
			Waters of the U.S.	sedges.
FA 62	S&TR, NR&R, PE	PSS		Shrub swamp adjacent to pond on eastern side of EOD pit. Dominant
-	, , ,			species include specked alder and meadowsweet.
			Waters of the U.S.	
Cluster 8	8			
FA 50	F&SH, PE	E2EM	Hydrologic	Emergent wetland adjacent to spartina salt marsh. Ponded water upstream
			connection to	drains through a culvert into the wetland before flowing into Harpswell
			Harpswell Cove	Cove.

Wetland ID	and Values	Wetland Community Type ¹	Hydrologic Connection	Additional Comments
FA 51	FFA, S&TR, N&RR, WLH	PFO	Hydrologic connection to unnamed tributary to Harpswell Cove	Forested wetland that has been bermed, impounding water, with a culverted outflow. Culvert drains into FA 50. Wetland originates from a small stream draining from FA 52.
FA 52	PE, WLH	PFO	Hydrologic connection to unnamed tributary to Harpswell Cove	Forested wetland dominated by balsam fir, red spruce and red maple. Drains into a small stream flowing into impounded area of FA 51.
Cluster 9				
FA 56	GWD, PE, REC		Hydrologic connection to unnamed tributary to Mere Brook	Forested wetland bordering perennial stream running through golf course. Groundwater seepage observed. Flows into impounded are that is culverted under roadway.
FA 57	PE, REC		Hydrologic connection to unnamed tributary to Mere Brook	Scrub/shrub wetland bordering perennial stream running through golf course. Flows into impounded area that is culverted under roadway.
FA 58	PE		Hydrologic connection to unnamed tributary to Mere Brook	Forested wetland dominated by red maple bordering perennial stream running through golf course. Flows from culvert under roadway.
FA 59	GWR, FFA, S&TR, NR&R, PE, REC, WLH		Hydrologic connection to unnamed tributary to Mere Brook	Emergent wetland bordering perennial stream flowing into Mere Brook. Wetland dominated by cattails and grasses.
FA 68	GWR/D		Hydrologic connection to unnamed tributary to Mere Brook	Emergent wetland located in grasslands in the southwest portion of the airfield. Ditched and draining south into a perennial stream.
FA 69	GWD, PE		Hydrologic connection to unnamed tributary to Mere Brook	Large shrub swamp formed in depressions within forested area. Drains into a tributary of Mere Brook.

	- Wellands Summary, N	Wetland		
Wetland ID	and Values	Community Type ¹	Hydrologic Connection	Additional Comments
FA 70	GWR, WLH	PFO	Hydrologic connection to unnamed tributary to Mere Brook	Large forested wetland formed in depressions within forested area.
FA 71	GWR, WLG	PFO	Hydrologic connection to unnamed tributary to Mere Brook	Forested wetland adjacent to a small seasonal stream. Wetland dominated by red maple, skunk cabbage, cinnamon fern.
FA 76	S&TR, NR&R	PEM	Possible hydrologic connection to unnamed tributary to Mere Brook	Emergent wetland at the northern extent of the golf course driving range. Appears to connect to an ephemeral stream course across the dirt road to the east of the driving range.
FA 77	S&TR, PE, WLH, S&S	PFO	Hydrologic connection to unnamed tributary to Mere Brook	Forested wetland narrowly bordering the convergence of an ephemeral stream and a perennial stream that flow south.
FA 79	FFA, S&TR	PEM	Hydrologic connection to unnamed tributary to Mere Brook	Scrub-shrub wetland adjacent to airfield dominated by meadowsweet, nannyberry (<i>Viburnum lentago</i>), and steeplebush.
FA 80	GWR, S&TR	PEM	Hydrologic connection to unnamed tributary to Mere Brook	Emergent wetland drainage along the edge of the airfield.
Cluster 1	10	•		
FA 53	NR&R, PE, WLH	PSS	Hydrologic connection to unnamed tributary of Middle Bay Cove	Scrub shrub wetland supplemented by runoff from the adjacent golf course and culverted in to a small stream flowing into Middle Bay Cove. Wetland is dominated by speckled alder, willow (<i>Salix</i> spp.), grey birch (<i>Betula populifolia</i>), and red maple saplings.
FA 55	FFA, S&TR, NR&R, S&S	PUB	Hydrologic connection to unnamed tributary of Middle Bay Cove	Ponded area adjacent to golf course culverted under roadway into a perennial tributary of Middle Bay Cove.

Table 3-1 Wetlands Summary, NAS Brunswick Wetland					
Wetland ID	Primary Functions and Values	Community Type ¹	Hydrologic Connection	Additional Comments	
Cluster '	11				
FA 73	GWR, S&TR, PE, REC, WLH	PFO	Possible hydrological connection to Miller Brook	Forested wetland dominated by red maple bordering seasonal stream flowing south.	
FA 74	FFA, WLH	PSS	Possible hydrological connection to Miller Brook	Scrub/shrub wetland dominated by speckled alder bordering seasonal stream flowing south.	
Cluster '	12	•	<u>'</u>		
FA 54	S&TR, NR&R, WLH, ED/S	PEM	No Apparent Surface Water Connection to Waters of the U.S.	This is a large isolated emergent wetland that serves as a significant vernal pool.	
FA 72	FFA, S&TR, WLH	PSS		Red maple swamp within forested depression adjacent to Harpswell Road. TRC significant vernal pools 42 & 44.	
FA 75	GWR/D, WLH	PFO	No Apparent Surface Water Connection to Waters of the U.S.	Isolated forested wetland within a topographic depression.	
FA 82	GWR, WLH	PFO		Small forested wetland area in depression between to upland ridges. Wetland is bisected by dirt road cutting off hydrologic connection to FA 73 and 74.	
FA 83	GWR, S&TR	PFO		Small forested wetland in a depression by dirt road. Cut off from a possible hydrologic connection with FA 72 by the roadway.	
FA 84	S&TR, NR&R, WLH	PFO	No Apparent Surface Water Connection to Waters of the U.S.	Small forested wetland in a depression within upland forested area.	
Cluster '	13				
FA 81	GWR, FFA, WLH	PFO	Possible hydrologic connection to Mere Brook	Forested wetland dominated by red maple and cinnamon fern.	
FA 86	GWR	PFO	Possible hydrologic connection to Mere Brook	Forested wetland depression dominated by red maple.	

	-1 Wetlands Summary, N	Wetland		
Wetland ID	Primary Functions and Values	Community Type ¹	Hydrologic Connection	Additional Comments
FA 87	WLH	PFO	Possible hydrologic connection to Mere Brook	Large forested wetland that functions as valuable vernal pool habitat.
FA 88	S&TR	PSS	Possible hydrologic connection to Mere Brook	Scrub-shrub swamp adjacent to airfield.
FA 89	GWD, FFA, PE	PEM	Possible hydrologic connection to Mere Brook	Emergent wetland adjacent to airfield.
FA 90	S&TR	PFO	Possible hydrologic connection to Mere Brook	Forested wetland adjacent to airfield.
Cluster 1	14	-		
FA 91	S&TR	PFO		Small isolated linear wetland in a topographic depression along road. Dominated by red maple.
FA 92	FFA, S&TR	PSS		Small isolated wetland in a topographic depression along road. Dominated by willow, meadowsweet, and steeplebush.
FA 93	S&TR, WLH	PSS	* *	Small isolated wetland in a topographic depression within an open field. Maintained areas nearby. Dominated by leatherleaf (<i>Chamaedaphne calyculata</i>), willow, meadowsweet, and steeplebush.
FA 99	F&SH, REC, WLH	PSS	No Apparent Surface Water Connection to Waters of the U.S.	Ponded area bordered by scrub-shrub wetland dominated by willow.
Cluster 1	15	•		
FA 85	WLH	PFO	Hydrologic connection to unnamed tributary of Mere Brook	Large forested wetland that functions as valuable vernal pool habitat.
FA 94	GWR/D, FFA, PE, WLH	PSS	Hydrologic connection to unnamed tributary of Mere Brook	Forested wetland dominated by red maple. Converges with FA 95 and drains into FA 100.

Wetland		Wetland Community	Hydrologic	
ID	and Values	Type ¹	Connection	Additional Comments
FA 95	GWR/D		Hydrologic connection to unnamed tributary of Mere Brook	Narrow forested wetland bordering small stream. Dominated by red maple. Small seepage from steeply sloping sides. Drains into FA 100.
FA 96	GWR/D, FFA, S&TR, NR&R, WLH	PEM	Hydrologic connection to unnamed tributary of Mere Brook	Emergent wetland in maintained field with antennae site. Site of TRC Vernal pools 29B and 29C.
FA 97	GWR, FFA, PE, WLH, S&S	PSS	Hydrologic connection to Mere Brook	Scrub-shrub wetland dominated by willow and speckled alder bordering Mere Brook.
FA 100	GWR,/D, F&SH, S&TR, PE, WLH	PFO	Hydrologic connection to unnamed tributary of Mere Brook	Narrow forested wetland bordering small stream. Dominated by red maple, skunk cabbage, and jewelweed. Drains from FA 95 into Mere Brook.
FA 101	GWR/D, FFA. F&SH, S&TR, NR&R, WLH	PFO	Hydrologic connection to unnamed tributary of Mere Brook	Narrow forested wetland bordering small stream. Dominated by red maple and skunk cabbage. Drains in to Mere Brook.
FA 102	GWR/D, FFA, S&TR, PE, WLH, S&S	PSS	Hydrologic connection to Mere Brook	Shrub wetland broadly bordering Mere Brook. Dominated by speckled alder with red maple along the forested edges.
FA 103	GWR, S&TR, PE, WLH		Hydrologic connection to unnamed tributary of Mere Brook	Forested wetland bordering a small stream. Dominated by red maple, skunk cabbage, and cinnamon fern.
FA 104	GWR, FFA, WLH	PFO	Hydrologic connection to Mere Brook	Forested wetland dominated by red maple.
FA 105	WLH	PFO	Hydrologic connection to Mere Brook	Forested wetland area within a white pine plantation.

Wetland ID	Primary Functions and Values	Wetland Community Type ¹	Hydrologic Connection	Additional Comments
FA 106	GWR, S&TR, PE, WLH			Narrow scrub-shrub wetland bordering a tributary to Mere Brook.
			connection to	
			unnamed tributary of	
			Mere Brook	
FA 107	GWR, S&TR, PE, WLH	PEM	Hydrologic	Emergent wetland bordering a tributary draining from the airfield.
			connection to	
			unnamed tributary of	
			Mere Brook	
FA 108	GWR, FFA, S&TR, WLH,	PSS	Hydrologic	Scrub-shrub wetland dominated by speckled alder, willow, and sensitive
			connection to	fern.
			unnamed tributary of	
			Mere Brook	

Note:

Key:

Functions and Values

ED/S = Educational/scientific value. ESH = Endangered species habitat. F&SH = Finfish habitat.

FFA = Floodflow attenuation. GWD = Groundwater discharge. GWR = Groundwater recharge.

NR&R = Nutrient removal/retention/transformation.

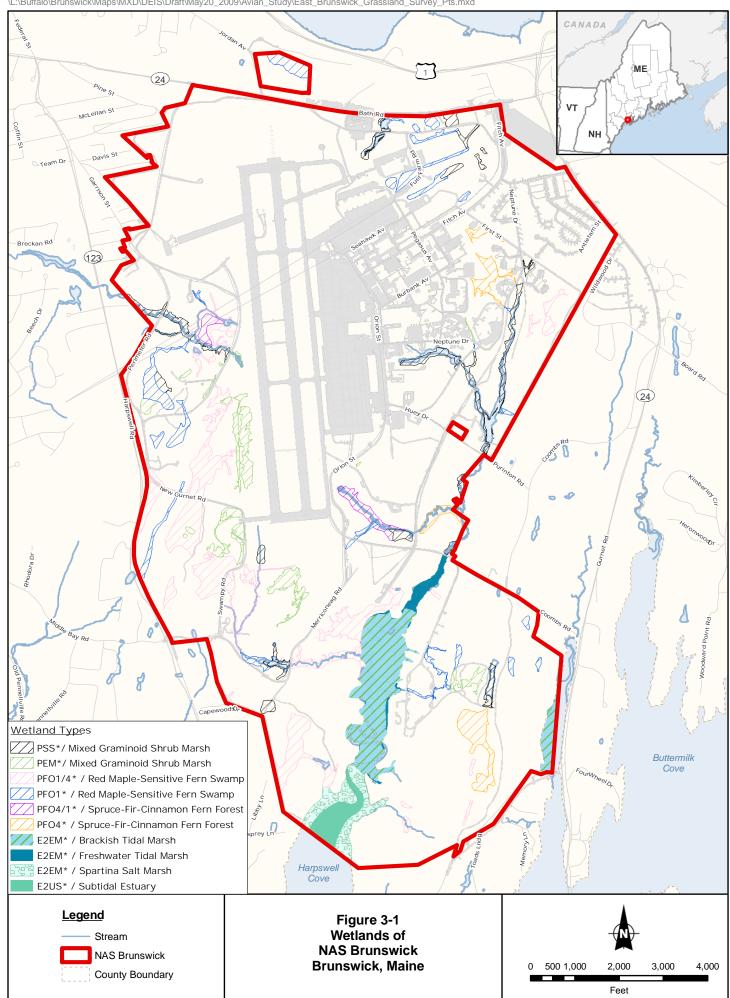
PE = Production export.

REC = Recreation.

S&S = Sediment/shoreline stabilization. S&TR = Sediment/toxicant/pathogen retention.

U/H = Uniqueness/heritage. WLH = Wildlife habitat.

¹ Based on Cowardin et al. 1979.



4

Wetlands Types

According to the 2008 reconnaissance-level survey, there are approximately 280 acres of freshwater wetlands, 109 acres of tidal wetlands, and 9 acres of ponds at NAS Brunswick (E & E 2008). Figure 3-1 identifies the wetland types at NAS Brunswick according to the Cowardin et al. (1979) classification system and the *Natural Landscapes of Maine* (Gawler and Cutko 2004). The Cowardin et al. system classifies wetland vegetation according to the community structure.

The freshwater, or palustrine, wetlands were generally classified as emergent (PEM), shrub-scrub (PSS), and forested (PFO) wetlands. The forested wetlands (PFO) were composed of predominantly deciduous tree species (hardwoods) (PFO1), coniferous species (PFO4), or a mixture of both (PFO1/4 or PFO 4/1). Tidal, or estuarine, wetlands were generally classified as subtidal (E1) or intertidal wetlands (E2). The classification of the wetlands according to Cowardin et al. (1979) was then compared to the descriptions of the ecological communities for freshwater wetlands in *Natural Landscapes of Maine* (Gawler and Cutko 2004). Typically, the Cowardin et al. (1979) classification is broader than Gawler and Cutko (2004) and is not detailed enough for determining species composition of a specific wetland community. Below is a brief description of each of the wetland community types identified by E & E in July 2008. A more detailed description can be found in the Ecological Communities and Wetland Resources Report (E & E 2008).

4.1 Spruce-Fir-Cinnamon Fern Forest

Spruce-fir-cinnamon fern forests are forested wetlands dominated by black spruce (*Picea mariana*) or red spruce and balsam fir. These systems are defined as PFO4, and approximately 40 acres of this wetland type are present on the installation. This community occurs within the maritime spruce-fir forest in the southeastern portion of NAS Brunswick in a long, poorly drained valley between two ridges. This community has pronounced pit and mound topography. The herb layer is productive and dominated by cinnamon fern, but it also contains a variety of sedges, grasses, and other herbs such as three-seeded sedge (*Carex trisperma*), mannagrasses (*Glyceria* spp.), golden thread (*Coptis trifolia*), saxifrage (*Saxifraga pensylvanica*), and skunk cabbage. There are a few scattered shrubs, mainly wild raison (*Viburnum cassinoides*) and winterberry (*Ilex verticillata*). The forest floor is blanketed with sphagnum mosses.

4.2 Red Maple-Sensitive Fern Swamp

Red maple-sensitive fern swamps are a common forested wetland community type in Maine. Red maple-sensitive fern swamps have been identified at NAS Brunswick in several areas, including along the edges of the retention ponds in the eastern portion of the installation; adjacent to Mere Brook in the northwest portion of the installation; in the weapons compound; and in the northern clear zone parcel, north of Bath Road. There are approximately 162 acres of this wetland type at NAS Brunswick, comprising 5% of the installation's area.

The structure of this community varies, with the canopy ranging from open to closed and the shrub layer ranging from prominent to nonexistent. Red maple-sensitive fern swamps with balsam fir as a co-dominant tree species are classified as PFO1/4 or PFO 4/1 in the Cowardin et al. (1979) classification system. Wetlands in which balsam fir is dominant over the deciduous tree species but still comprises approximately less than 75% are classified as PFO4/1. Wetlands in which the deciduous trees species comprise more than 50% of the coverage, with balsam fir comprising enough cover to be considered dominant, are classified as PFO1/4. Red maple-sensitive fern swamps in which balsam fir is not a dominant species are classified as PFO1.

4.3 Mixed Graminoid-Shrub Marsh

Mixed graminoid-shrub marsh, a common community in Maine, is present throughout NAS Brunswick. These areas may be transitional to other wetland types or to open water, or they may occur as a large wetland complex. The plant community structure ranges from containing only herbs and no shrubs to having a dominant shrub layer (Gawler and Cutco 2004). In the Cowardin et al. (1979) classification system, the wetlands with predominately herbaceous cover are classified as PEM wetlands, and those with predominately shrubs as cover are classified as PSS wetlands. At NAS Brunswick, these communities range from being dominated by herbs to dominated by shrubs. There are an estimated 78 acres of mixed graminoid-shrub marsh at NAS Brunswick. Mixed graminoid-shrub marshes dominated by herbs were observed at the southern end of the airfield; in a meadow adjacent to an antenna field on the west side of the airfield; and in a wetland located in the south-central portion of the installation. Mixed graminoid-shrub marshes dominated by shrubs were observed in the weapons compound.

4.4 Freshwater Tidal Marsh

Freshwater tidal marshes are found in the upper reaches of tidal influence and are typically fed by a freshwater stream or river. The salinity is typically less than 0.5 parts per thousand (ppt) (Gawler and Cutco 2004). In the Cowardin et al. (1979) classification system, these wetlands are classified as E2EM. Freshwater tidal marshes are found in small areas where Mere Brook and other smaller tributaries empty into Harpswell Cove and Buttermilk Cove. There are approximately 9 acres of freshwater tidal marshes on NAS Brunswick. This wetland community type is dominated by herbaceous vegetation, including cattails, rice cutgrass (*Leersia oryzoides*), northern water plantain (*Alisma triviale*), and pickerelweed (*Pontederia cordata*).

4.5 Brackish Tidal Marsh

Large expanses of brackish tidal marshes are located along the coastal areas of NAS Brunswick. In the Cowardin et al. (1979) classification system, these wetlands are classified as E2EM. These marshes were identified in the upper portion of Harpswell Cove and Buttermilk Cove, downgradient of the freshwater tidal marsh communities, and were also identified along the edges of the estuaries. Salinity levels within this community can range from 0.5 to 18 ppt (Gawler and Cutko 2004). The vegetation consists of a mixture of saltmeadow cordgrass (*Spartina patens*), smooth cordgrass (*Spartina alternifloria*), and a variety of rushes and sedges. Approximately 77 acres of brackish tidal marsh are located at NAS Brunswick.

4.6 Spartina Salt Marsh

Spartina salt marshes are dominated by smooth cordgrass and are often referred to as "high marshes." In the Cowardin et al. (1979) classification system, these wetlands are classified as E2EM. The name "high marsh" comes from the higher elevation in which the salt marsh forms. They are typically found on elevated plateaus in which organic matter can build up to several meters thick. Spartina salt marshes are able to tolerate high levels of salinity. This coastal wetland community is found on the southern portion of NAS Brunswick, in Harpswell Cove. Approximately 23 acres of spartina salt marshes are located at NAS Brunswick.

4.7 Subtidal Estuary

Brunswick is a coastal area that boarders Casco Bay of the Atlantic Ocean. Harpswell Cove and Buttermilk Cove are subtidal estuaries within Casco Bay. Subtidal estuaries are characterized as open-water areas heavily influenced by the tide. They support submerged and floating plants but, due to the varying conditions, not emergent vegetation. These areas include tidal flats, which serve as important feeding areas for shorebirds and habitat for a variety of fish and crustaceans. The locations of the estuaries were visually noted during the 2008 field surveys, but surveys for plant community composition were not conducted. Approximately 18 acres of subtidal estuaries are located at NAS Brunswick.

5

Wetland Functions and Values

5.1 Functions and Values Assessed

Wetland functions are the dynamic ecological properties provided or performed by a wetland. These functions are developed by biotic and abiotic means within the wetland, with self-sustaining properties that are not gauged or affected by human values. The benefits that society derives from one or more of the wetland functions are the wetland values. The following sections outline the functions and values that the USACE takes into account during the Section 404 permit process. These definitions were taken directly from the *Highway Methodology Workbook* (USACE 1993).

5.1.1 Functions

Groundwater Recharge/Discharge

This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration

This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion- and/or flood-prone areas.

Fish and Shellfish Habitat

This function considers the effectiveness of seasonal watercourses or permanent waterbodies associated with wetlands for fish habitat.

Sediment/Toxicant/Pathogen Retention

This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation

This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of

the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

Production Export

This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization

This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat

This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

5.1.2 Values

Recreation (Consumptive and Non-consumptive)

This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting, or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland. Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value

This value considers the suitability of the wetland as a site for an "outdoor class-room" or as a location for scientific study or research.

Uniqueness/Heritage

This value considers the effectiveness of the wetland or its associated water bodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, and its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation, and habitat diversity.

Visual Quality/Aesthetics

This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat

This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

In total, 103 wetland areas at NAS Brunswick were assessed for the functions and values listed above (see Table 5-1). Attachment 3 includes a series of figures identifying wetlands assessed by cluster.

Table 5-1 Wetland Functions and Values

Functions	Values
Groundwater Recharge/Discharge	Recreation
Floodflow Alteration	Education/Scientific Value
Fish and Shellfish Habitat	Uniqueness/Heritage
Sediment/Toxicant/Pathogen Retention	Visual Quality/Aesthetics
Nutrient Removal/Retention/Transformation	Endangered Species Habitat
Production Export	
Sediment/Shoreline Stabilization	
Wildlife Habitat	

5.2 Cluster 1

Eleven wetlands (FA 5, 6, 7, 11, 13, 15, 16, 17, 18, 19, 78) in the northern portion of NAS Brunswick have a possible hydrologic connection with the Androscoggin River (see Figure 1 of Attachment 3). These wetlands are predominately classified as forested wetlands (FA 11 and FA 16 are PSS, and FA 15 is PEM) within upland communities of white pine plantation or mixed forest dominated by white pine, red oak, and red maple. Many of these wetlands have been highly impacted by development within and adjacent to NAS Brunswick and the construction of the storm water system on the site and are generally of low quality. Primary functions of these wetlands include groundwater recharge, floodflow alteration, sediment/toxicant/pathogen retention, and nutrient removal/retention/transformation.

5.3 Cluster 2

Four wetlands (FA 8, 9, 10, 12) in the northern portion of NAS Brunswick do not have an apparent surface water connection to waters of the U.S (see Figure 2 of Attachment 3). These isolated wetlands still perform many of the same functions as other wetlands; however, they may not be considered jurisdictional by the USACE and, therefore, would not be regulated under the Clean Water Act. These are forested wetlands formed in topographic depressions dominated by red maple within upland communities of white pine plantation or mixed forest dominated by white pine, red oak, and red maple. These wetlands exhibit many of the functions normally associated with wetlands; however, due to their position in the landscape and the degradation caused by adjacent development, the level of functionality is minimal and these wetlands are therefore of low quality. The primary functions of these wetlands include groundwater recharge, floodflow alteration, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation and limited wildlife habitat.

5.4 Cluster 3

Eleven wetlands (FA 14, 25, 26, 27 32, 33, 34, 35, 36, 37, 38) in the northeastern portion of NAS Brunswick have a hydrologic connection to an unnamed tributary of Mere Brook (see Figure 3 of Attachment 3). These are forested wetlands or emergent wetlands primarily bordering the unnamed tributary of Mere Brook.

Adjacent upland communities are forested areas of red oak-northern hardwoods-white pine, or maritime spruce-fir habitat. Many of these wetlands have been highly impacted by development on the site. The wetlands within the developed areas (FA 14, 32, 33, 34, 35, 36, 37, 38) are generally of low quality due to habitat fragmentation and alteration. Their primary functions include groundwater recharge, floodflow alteration, sediment/toxicant/pathogen retention, nutrient removal and retention, production export, wildlife habitat, and sediment/shoreline stabilization. The wetlands within the forested portions (FA 25, 26, 27) are less impacted and have greater function and value, including groundwater discharge, floodflow alteration, wildlife habitat, recreation, and production export.

5.5 Cluster 4

Six wetlands (FA 20, 21, 22, 23, 24, 47) in the eastern-central portion of NAS Brunswick have a hydrologic connection to an unnamed tributary of Mere Brook (see Figure 4 of Attachment 3). These are forested, emergent, and scrub-shrub wetlands primarily bordering the unnamed tributary of Mere Brook. Adjacent upland communities are forested areas of red oak-northern hardwoods-white pine, white pine plantations, or maritime spruce-fir habitat. These wetlands have been highly impacted by development on the site. The wetlands within the developed areas (FA 20, 21, 22) are generally of low quality due to habitat fragmentation and alteration. Their primary functions include groundwater recharge, floodflow alteration, sediment/toxicant/pathogen retention, and sediment/shoreline stabilization, with some limited functions as wildlife habitat. The wetlands within the forested portions (FA 23, 24, 47) are less impacted and provide greater function and value, including groundwater recharge, floodflow alteration, sediment/toxicant/pathogen retention, wildlife habitat (including finfish habitat), and sediment/shoreline stabilization. The upland forest bordering these wetlands currently provides recreational value with a picnic area, ball fields, and hiking trails; however, activities within the wetlands and open water, such as fishing and swimming, are prohibited.

5.6 Cluster 5

Four wetlands (FA 28, 29, 30, 31) in the eastern portion of NAS Brunswick do not have an apparent surface water connection to waters of the U.S (see Figure 5 of Attachment 3). These are forested wetlands formed in topographic depressions dominated by red maple within upland maritime spruce-fir communities. While these wetlands exhibit many of the functions normally associated with wetlands, the degree of functionality is minimal due to their position in the landscape and degradation caused by nearby development. Primary functions of these wetlands include groundwater recharge, floodflow alteration, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, and wildlife habitat. In addition, these wetlands serve an important function as vernal pools, providing crucial habitat for breeding amphibians such as spotted salamanders (*Ambystoma maculatum*) and wood frogs (*Rana sylvatica*) (E & E 2009).

5.7 Cluster 6

Eight wetlands in the east-central (FA 48, 49, 60, , 61, 63, 64, 65, 66, 67) and southeastern (FA 1, 2) portions of NAS Brunswick have a surface hydrologic connection.

tion to Mere Brook where it reemerges to the surface from under the eastern side of the airfield (see Figure 6 of Attachment 3). The northern six wetlands are forested, emergent and scrub-shrub wetlands primarily bordering Mere Brook (FA 48, 49, 60, 65) or alternately draining into Mere Brook through an adjacent wetland or small tributary (FA 61, 63, 64, 66, 67). Adjacent upland communities are forested areas of red oak-northern hardwoods-white pine, or maritime spruce-fir habitat. These wetlands provide a variety of functions and values, including groundwater recharge and discharge, floodflow alteration, production export, and wildlife habitat, including vernal pool habitat and potentially finfish habitat (E & E 2009). These wetlands are currently located within a fenced area with restricted access and, therefore, provide limited recreational value. In addition, there are potential safety concerns due their proximity to an explosive ordnance disposal pit.

Two of these wetlands are located adjacent to Mere Brook in the southeastern portion of the site, where they are tidally influenced: FA 1 (a spartina salt marsh) and FA 2 (a brackish tidal marsh). The adjacent upland is maritime spruce-fir forest. The primary functions of these wetlands include floodflow alteration, production export, and wildlife habitat. In addition, this large forested area remains undeveloped and has the potential to provide recreational value for hiking.

5.8 Cluster 7

Ten wetlands (FA 3, 4, 40, 41, 42, 43, 44, 45, 46, 62) in the southeastern portion of NAS Brunswick do not have an apparent surface water connection to waters of the U.S (see Figure 7 of Attachment 3). These are forested and scrub-shrub wetlands formed in topographic depressions within upland communities of mixed red oak-northern hardwoods-white pine, or maritime spruce-fir forest. While these wetlands exhibit many of the functions normally associated with wetlands, the functions they perform may be limited due to the lack of hydrologic connections resulting from their position in the landscape. The primary functions of these wetlands include groundwater recharge, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, and wildlife habitat (including significant vernal pool habitat) (E & E 2009). In addition, this large forested area remains undeveloped and has the potential to provide recreational value for hiking and educational/scientific value for the study of vernal pools and their inhabitants.

5.9 Cluster 8

Three wetlands (FA 50, 51, 52) in the southern portion of NAS Brunswick are hydrologically connected to each other by a small stream and culverts, which have a hydrologic connection to Harpswell Cove (see Figure 8 of Attachment 3). The adjacent upland community is maritime spruce-fir forest. While these wetlands have been altered (FA 51 is impounded by a berm and outflow is culverted into FA 50), these wetlands provide a variety of functions. Their primary functions include floodflow alteration, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, and wildlife habitat (including significant vernal pool habitat and potential finfish habitat) (E & E 2009). In addition, this large forested area remains undeveloped and has the potential to

provide recreational value for hiking and educational/scientific value for the study of vernal pools and their inhabitants.

5.10 Cluster 9

Twelve wetlands (FA 56, 57, 58, 59, 68, 69, 70, 71, 76, 77, 79, 80) in the southern portion of NAS Brunswick have a surface hydrologic connection to Mere Brook from the western side of the installation through several unnamed tributaries (see Figure 9 of Attachment 3). Surrounding forested upland communities include mixed red oak, northern hardwoods and white pine, and aspen-birch woodlands. Many of these wetlands border the main tributary that flows through the golf course and have been highly altered to drain runoff from the course. In addition, several impounded areas within the golf course are bordered by wetlands.

Wetlands FA 56, 57, 58, 59, 68, and 77 are relatively narrow, directly bordering unnamed perennial tributaries. These are forested, emergent, and scrub-shrub wetlands. Their primary functions include groundwater recharge and discharge, floodflow attenuation, sediment/toxicant/pathogen retention, production export, and wildlife habitat, and they also provide value for recreation.

Wetlands FA 69, 70, 71, 76, 79, and 80 are larger areas of forested, scrub-shrub and emergent wetlands that drain into unnamed perennial tributaries of Mere Brook. Their primary functions include groundwater discharge, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, wildlife habitat, and sediment and shoreline stabilization.

In addition, in 2008 and 2009, Cluster 9 wetlands were found to contain 12 vernal pools, some of which are considered significant (TRC 2008; E & E 2009).

5.11 Cluster 10

Two wetlands (FA 53, 55) in the southwestern portion of NAS Brunswick have surface hydrologic connections to unnamed tributaries of Middle Bay Cove (see Figure 10 of Attachment 3). Wetland FA 53 is a large scrub-shrub wetland bordered by forested upland communities, including maritime spruce fir and mixed red oak, northern hardwoods, and white pine. This wetland, which is located adjacent to the golf course, is formed in a depression within the forest landscape and is bisected by a dirt road. It is connected to an ephemeral tributary of Middle Bay Cove by a system of culverts. While this wetland is highly altered, its primary functions include nutrient removal/retention/transformation, production export, and wildlife habitat, including significant vernal pool habitat (E & E 2009).

FA 55 is a large ponded area within a mixed red oak, northern hardwoods, and white pine forest. Located adjacent to the golf course, this area is culverted under the roadway into a perennial tributary of Middle Bay Cove. Due to its highly altered condition, this area provides limited wetland functions, but does provide some level of floodflow alteration, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, and sediment/shoreline stabilization.

5.12 Cluster 11

Two wetlands (FA 73, 74) in the southwestern portion of NAS Brunswick have a potential surface hydrologic connection to Miller Brook (located outside of the installation boundaries) were it flows from an impoundment on the western side of Harpswell Road (see Figure 11 of Attachment 3). Both wetlands border a seasonal stream that is culverted under the roadway. Wetland FA 73 is a forested wetland dominated by red maple and speckled alder. Wetland FA 74 is a scrubshrub wetland dominated by speckled alder. The surrounding upland is red oak, mixed hardwoods, and white pine forest. These wetlands appear to be of high quality due to limited impacts resulting from the development at NAS Brunswick; however, construction of a roadway to the north of these wetlands appears to have isolated FA 82 from this drainage. The primary functions of these wetlands are groundwater recharge, floodflow alteration, wildlife habitat, production export. These wetlands have the potential for recreational value by providing hiking opportunities.

5.13 Cluster 12

Six wetlands (FA 54, 72, 75, 82, 83, 84) in the southwestern and western portions of NAS Brunswick do not have an apparent surface water connection to waters of the U.S (see Figure 12 of Attachment 3). These wetlands are primarily forested wetlands (FA 54 is emergent and FA 72 is scrub-shrub) formed in topographic depressions dominated by red maple within upland communities of maritime spruce fir. While these wetlands exhibit many of the functions normally associated with wetlands, the level of functionality is minimal due to their position in the landscape and degradation caused by adjacent development; therefore, these wetlands are of low quality. Though limited, the primary functions these wetlands provide include groundwater recharge, floodflow attenuation, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, and wildlife habitat. In addition, this cluster of wetlands serves an important function in terms of wildlife habitat and were found to contain significant vernal pool habitat (TRC 2008; E & E 2009). These wetlands also have potential value for recreation and educational opportunities.

5.14 Cluster 13

Six wetlands (FA 81, 86, 87, 88, 89, 90) in the western portion of NAS Brunswick have a potential hydrologic connection to Mere Brook (see Figure 13 of Attachment 3). These wetlands are located in low-laying areas to the west of the airfield and, based on topography, appear to drain northward and converge at a location that either links underground to Cluster 12 or drains under the airfield into Mere Brook. These wetlands are predominantly forested (FA 88 is scrub-shrub and FA 89 is emergent) surrounded by upland forested communities of red oak-northern hardwoods-white pine, or aspen-birch forest. These wetlands have been altered and degraded due to the development of the airfield and other facilities at NAS Brunswick. However, they do provide the primary functions of groundwater recharge, floodflow alteration, sediment/toxicant/pathogen retention, production export, and wildlife habitat. In addition, these wetland provide valuable vernal pool habitat for breeding amphibians (TRC 2008).

Disposal and Reuse of NAS Brunswick, Maine

5.15 Cluster 14

Four wetlands (FA 91, 92, 93, 99) in the western portion of NAS Brunswick do not have an apparent surface water connection to waters of the U.S (see Figure 14 of Attachment 3). These isolated wetlands still perform many of the same functions as other wetlands; however, they are not considered jurisdictional by the USACE and are not protected by the Clean Water Act. These wetlands are predominantly scrub-shrub wetlands (FA 91 is forested) formed in topographic depressions within upland communities of white pine plantation or aspen-birch woodland. While these wetlands exhibit many of the functions normally associated with wetlands, the level of functionality is minimal due to their position in the landscape and degradation caused by adjacent development; therefore, these wetlands are of low quality. The primary functions they provide include floodflow alteration, sediment/toxicant/pathogen retention, and wildlife habitat. In addition, FA 99 surrounds a pond that may provide finfish habitat and limited opportunities for recreation.

5.16 Cluster 15

Fourteen wetlands (FA 85, 94, 95, 96, 97, 100, 101, 102, 103, 104, 105, 106, 107, 108) in the western portion of NAS Brunswick have a surface hydrologic connection to unnamed tributaries of Mere Brook or directly to Mere Brook (see Figure 15 of Attachment 3). Many of these wetlands have been highly impacted by development of the airfield. Mere Brook flows under the airfield and reemerges on the eastern side. The primary functions of these wetlands include groundwater recharge and discharge, floodflow alteration, sediment/toxicant/pathogen retention, production export, and wildlife habitat. In addition, in 2008 this cluster of wetlands was found to contain a significant vernal pool (TRC 2008).

6

Conclusions and Summary

Considering these wetlands as individual units or smaller groupings would minimize their functionality and reduce their value to the ecosystem. Alternatively, considering all of the site's wetlands as one large unit with tidal and non-tidal components, including forested, scrub-shrub, and emergent cover types and the interspersed upland communities, would unnecessarily increase their assessed value to the ecosystem. Therefore, it was concluded that assessing these wetlands in functionally related clusters based on their degree of hydrologic connection/interdependence and/or physical location and proximity within the landscape was the most effective way in which to assess the functionality of the site's wetlands.

Owing to the unique nature of the site as a limited-access naval base, the site's wetlands do not currently provide recreational or educational value. However, following redevelopment of the installation, several areas could provide high recreational or educational value.

No known endangered or threatened species are known to utilize the wetlands on the installation. However, many of the wetland areas provide valuable wildlife habitat, including significant vernal pools that serve as primary breeding habitat for amphibians (TRC 2008; and E & E 2009).

At many locations the visual/aesthetic appeal of the landscape has been compromised by significant site development. In addition, many wetlands have been highly altered to provide for the storm water detention and drainage system on the site. These alterations, while necessary for prior development on the site, have limited the ability of many wetlands to provide functions such as groundwater recharge and discharge, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, and wildlife habitat by channelizing drainages and artificially directing the flow of water on the site.

The primary wetland functions identified include groundwater recharge, flood-flow alteration, sediment/toxicant/pathogen retention, nutrient removal/retention/transformation, production export, wildlife habitat, and sediment/shoreline stabilization. All of these functions are served to some extent by the installation's wetlands. Future site development that would impact site wetland functions may require further analysis and quantification of wetland functions.

7

References

- Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.
- Ecology and Environment (E & E). 2008. Ecological Communities and Wetland Resource Report for the Environmental Impact Statement for the Disposal and Reuse of NAS Brunswick. Prepared for Naval Air Station Brunswick, Brunswick, Maine. December 2008.
- Ecology and Environment, Inc (E & E). 2009. Vernal Pool Survey Report. May 2009.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- Gawler, S.C. and A.R. Cutko. 2004. *Natural Landscapes of Maine: A Classification of Vegetated Natural Communities and Ecosystems*. Maine Natural Areas Program, Maine Department of Conservation. Augusta, Maine.
- McNab, W.H. and E.A. Avers. 1994. *Ecological Subregions of the United States*. Washington, DC. USDA Forest Service, Washington Office.
- Normandeu Associates. 1998. *Naval Air Station Brunswick Wetland Survey*. Report No. P-16674.0000. Yarmouth, Maine.
- TRC Environmental Corporation (TRC). 2008. *Naval Air Station Brunswick Vernal Pool Summary Report*. Prepared for Bowdoin College. May 2008.
- U.S. Army Corps of Engineers (USACE). 1993. The Highway Methodology Workbook: Integrating Corps Section 404 Permit Requirements with Highway Planning and Engineering and the NEPA EIS Process. United States Army Corps of Engineers, New England Division. NAEEP-360-1-30. Concord, Massachusetts.

Disposal and Reuse of NAS Brunswick, Maine

- U.S. Army Corps of Engineers (USACE). 1999. *Highway Methodology Workbook Supplement: Wetland Functions and Values, a Descriptive Approach*. U.S. Army Corps of Engineers, New England Division. NAEEP-360-1-30a. Concord, Massachusetts.
- U.S. Army Corps of Engineers (USACE). 2007. Modified Functions and Values Assessment for Significant Nexus. Retrieved May 15, 2009, from U.S. Army Corps of Engineers, New York Division, Web site: http://www.nan.usace.army.mil/business/buslinks/regulat/formdocs/functions.pdf.

Photographs of the Wetlands for Functional Assessment



Wetland 1 - Photo 251 Southwest



Wetland 2 – Photo 183 Northwest



Wetland 3 - Photo 184 North





Wetland 5 - Photo 192 Southwest



Wetland 6 - Photo 193 Southwest



Wetland 7 - Photo 194 Northwest



Wetland 8 - Photo 195 North



Wetland 9 - Photo 196 North



Wetland 10 - Photo 197 North





Wetland 12 - Photo 199 North northwest



Wetland 13 - Photo 200 South southwest



Wetland 14 - Photo 201 Northwest



Wetland 15 - Photo 202 North



Wetland 16 - Photo 203 Southwest



Wetland 17 - Photo 204 Southwest



Wetland 18 - Photo 205 South



Wetland 19 - Photo 206 Southeast



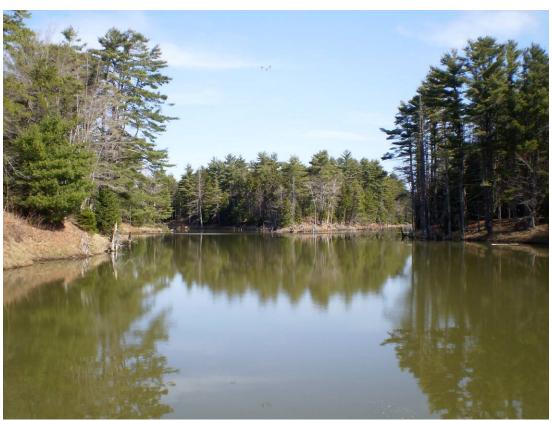
Wetland 20 - Photo 207 South



Wetland 21 - Photo 208 East



Wetland 22 - Photo 209 South



Wetland 23 – Photo 210 Northeast





Wetland 25 – Photo 212 West





Wetland 27 - Photo 214 Northeast



Wetland 28a - Photo 215 Northeast



Wetland 28b - Photo 216 Southwest



Wetland 29 - Photo 217 Northwest



Wetland 30 - Photo 218 Northeast



Wetland 31 - Photo 219 East



Wetland 32 - Photo 220 Northeast



Wetland 33 - Photo 221 South



Wetland 34 - Photo 222 South



Wetland 35 - Photo 223 South southeast



Wetland 36 - Photo 224 Southeast



Wetland 37 - Photo 225 South



Wetland 38 - Photo 226 North northwest



Wetland 39 - Photo 227 North





Wetland 41 - Photo 229 North





Wetland 43 - Photo 231 South



Wetland 44 - Photo 232 South



Wetland 45 - Photo 233 South



Wetland 46 - Photo 234 North northeast



Wetland 47 - Photo 235 Southeast



Wetland 48 - Photo 236 West



Wetland 49 - Photo 237 West



Wetland 50 - Photo 238 Southwest



Wetland 51 - Photo 239 Northwest



Wetland 52 - Photo 240 North



Wetland 53 - Photo 241 South



Wetland 54 - Photo 242 East



Wetland 55 - Photo 243 North



Wetland 56 - Photo 244 Northwest



Wetland 57 - Photo 245 North



Wetland 58 - Photo 246 East



Wetland 59 - Photo 247 Northwest



Wetland 60 - Photo 248 North



Wetland 61 - Photo 249 Southeast



Wetland 62 - Photo 256 North



Wetland 63 - Photo 257 North



Wetland 64 - Photo 258 West



Wetland 65 – Photo 259 Northwest



Wetland 66 - Photo 260 East



Wetland 67 - Photo 262 West



Wetland 68 - Photo 263 North



Wetland 69 - Photo 264 Southwest



Wetland 70 - Photo 265 South



Wetland 71 - Photo 266 East



Wetland 72 - Photo 267 Southwest



Wetland 73 - Photo 268 Northeast



Wetland 74 - Photo 269 Southwest



Wetland 75 - Photo 270 West



Wetland 76 - Photo 271 Northwest



Wetland 77 - Photo 272 North northeast



Wetland 78 - Photo 274



Wetland 79 - Photo 275 North northeast



Wetland 80 - Photo 276 East



Wetland 81 - Photo 277 Northeast



Wetland 82 - Photo 278 Northeast



Wetland 83 - Photo 279 North



Wetland 84 - Photo 280 Northeast



Wetland 85 - Photo 281 South



Wetland 86 - Photo 282 Northeast



Wetland 87 - Photo 283 South



Wetland 88 - Photo 284 North



Wetland 89 - Photo 285 North



Wetland 90 - Photo 286 Southwest



Wetland 91 - Photo 287 Southwest



Wetland 92 - Photo 288 Northwest



Wetland 93 - Photo 289 West



Wetland 94 - Photo 290 Northeast



Wetland 95 - Photo 291 South southwest



Wetland 96 - Photo 292 Southwest



Wetland 97 - Photo 293 Southeast



Wetland 98 - Photo 294 Northwest



Wetland 99 - Photo 295 Northwest





Wetland 101 - Photo 297 West



Wetland 102 - Photo 298 Southeast



Wetland 103 - Photo 299 East



Wetland 104 - Photo 300 Southwest



Wetland 105 - Photo 301 Southwest



Wetland 106 - Photo 302 North



Wetland 107 - Photo 303 Northwest



Wetland 108 - Photo 304 Northwest

Wetland Functional Assessment Datasheets **Datasheets**

Photo # 251 Divection: SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Destant Name : Despositely MAC Mart 12th	i,	ED FUNCTIONS AND V / / // N/A Functional Unit:		sunny	Time Start: N/A	Time Stop: N/A
				Above Average		TBD □
Site investigator:Amy Goodstine & Chris Aklos Ro		_	Scat 🛛	_	Minnow Traps □	Electro-shocking
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐	Auditory 🛛	ocai 🖸	Hacks 🔼	Malifold Haba 🖂	Elected Stilletining E
Wetland Types(s) Cowardin/Golet Classification	<u> </u>				<u>. </u>	_
Class	Subclass					<u></u>
POW/ Open water	Vegetated	Non-Vegetated	<u> </u>	· · · · · · · · · · · · · · · · · · ·		<u> </u>
PEM/PSS Deep Marsh	Dead Woody Shr	rub Sub-shrub	Robust_	Narrow-leav	ed Broad-leav	ed
PAB/ Shallow Marsh	Robust Na	rrow-leaved Bro	oad-leaved	Floating leaved		
PFL/(Seasonally Flooded Flats)	Emergent	Shrub	Salt-march,	tidal influ	ene	<u></u> .
PEM / Wet Meadow	Ungrazed	Grazed		<u>. </u>	· · ·	
PSS / Shrub Swamp	Sapling But	shyCo	mpact	Aquatic		
PFO / Wooded Swamp	Deciduous	Evergreen	<u> </u>		·	
Bog	Compact shrub	Bushy shrub	Wooded		ergent	
Water Regimes (Cowardin Modifier):			Seasonally saturated season but are upsa	(Y) - soils saturated turated by end of se	l to surface, especially e eason in most years; sur	early in growing face water absent
Permanently flooded (H) - water covers land surfa			except for ground wa	ter seepage and ov	erland flow	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year e	xcept in years	Temporarily flooded season, but water tal	(A) - surface water p ble usually lies well i	resent for brief periods below soil <u>surface for m</u>	during growing ost of the season
Semi-permanently flooded (F) - surface water persmost years	sists throughout growi	ing season in	Intermittently flooded variable periods with	(J) - substrate usua out detectable seas	ully exposed, but surface onal periodicity—	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods esp most years	pecially early in	Artificially flooded (K) - amount/duration	of flooding controlled by	dikes dams, pumps,
Hydrology:						
	es No		Depth to fr	ee water:		
If Present: Slope or Depressional			Depth to s	aturation:		
	verage -	maximum -	Signs of al	tered hydrology?	Yes	®
Hydrology indicators: Inundated 6	aturated in upper 12	Water marks Drift i	ines Sediment d	eposits <u>Oraina</u>	ge patterns within wetla	nds Other
Plant Adaptations to Hydrology: Pneumal	tophores Polym Rhizospheric oxidation		,	pertrophied lenticels ating leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Some	what Poorly	Poorly Ver	ry Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep	•			•
Upland Border:						
•	Gentle	Moderate	Steep		•	
Cover Types: Mature forest	Sapling forest	t Shrub thicket	Meadow	Mowed lawn	Farm .	
Vegetation Density(S/M/D): Trees	D Saplin	ngs M Shru	bsNA Herbs S	Grass S		
Soils: Bucz - Buxton silt	loam		•			

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments	· · ·
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge		
Wetland associated w/ perennial or seasonal watercourse	Yes	No No		
Slope	Gentle	Moderate or Steep		
Function Present	Yes No		· · ·	
Degree of Function	High (Mod	Low		_

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments	-
Soits	clardpan, shallow ledge	 		
Seeps, springs observed?	Yes	No		
Wetland microrelief	Well developed	Non/Poorly		
Wetland contains an outlet, no inlet	Yes	developed No		_ _ _
Function Present	Yes	No		
Degree of Function	High Mod	Low		

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Smail	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	 -	Steep
Wetland characterized by variable water level?	(Yes)	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	Yes /	No	
Wetland vegetation density	(High	Low	
Wetland microrelief	Well	None/Poorly developed	

Function Present	 Yes	No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	4			Comments
Dominant land-use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	. The Control of the
Waterbody at least 10' deep	Yes		No .	- I I I I I I I I I I I I I I I I I I I
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	Market Ma	Yes	
Sandbar present at inlet?	No		Yes	<u> </u>
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algai bleoms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	·

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas-present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	<u> </u>
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees. shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ent	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	(No)	- Comments
Duration of water retention in wetland	Long	Short	Tidal
Evidence of sediment trapping in wetland	Yes)	Low	11000
Vegetation density	High	No No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse		
Ponded water present	Yes	Channelized	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	No	(Syes)	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	COMMENS
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Nes	No	
Water flow through wetland	Diffuse	(Channelized)	
Vegetation density	High	Low	
Potential for sediment trapping exists	Ves	No	
Deep or open water habitat is present	Yes	- No)	
Soil type	Organic/high clay	<u> </u>	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

·				·
Function Present	Yes	No	<u></u> :	·
	High	Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	(fligh	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	(Tes)	No	·
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	Yes	No	Insects + birds
Fish or shellfish develop/occur in wetland	Yes	No	
Function Present	Yes	No	
Degree of Function	High Mod	Low	,

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	Yes	No	<u>.</u>
Wetland border >10' adjacent to pond or water	(Tes	No	
Distinct shoreline or bank evident between wetland and water	(No	Yes	
Open water fetch present	Yes	No	
Boating activity present	Yes	(No)	<u> </u>
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes	No	
Function Present	Yes	. No	
Degree of Function	HighN	flod Low	some erosion

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No No	
Fishing is available in or from the wetland	Yes	No.	· · ·
Hunting is permitted in wetland	Yes	(No.X)	
Hiking occurs or has potential to occur in wetland	Yes	No _	
Wetland is a valuable wildlife habitat	(Yes)	No	

Wetland has high visual/aesthetic quality	Yes	4(No.)	
Boating or canoeing feasible in wetland	Yes	No	-
Off-road public parking near wetland available	Yes	&:No	
Safety Hazards (if present list them)	Yes	(No)	
Function Present	Yes	No >	No recreation allowed
Degree of Function	High	Mod Hew	- auowen

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists/F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Pes) F	No ·	
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(CYes	No	70 estuary
Size of landscape block in which wetland is located	Large	Small	10 20100 -
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	elcow	
Upland islands	Present /	Ábsent	<u> </u>
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	
Vegetation density	High	Low	<u> </u>
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	HOLL		
Wetland plant species diversity	High Mod Low	_	
Vernal pool	Yes a	No	
Edge diversity (List types)			Mature forest - softwood
Water regime	Wetter	Drier	Maria Terest Serricoda
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant SE	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundanit	Few	
Flat rocks in/near watercourse (stream salamanders)	Present (Absent)	
Sphagnum hummocks next to shallow pools	Present 4	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present I	Absent	
Abundance of invasive exotic flora	None or Low	High	
unction Present	Yes	No	
Degree of Function	High Mod	Low	

Criteria	+		Comments	<u></u>
Wetland contains listed species	Yes	No		
Wetland provides valuable wildlife habitat	Yes	No		
Wetland class diversity	High	Low		<u> </u>
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest	
Off-road parking near wetland available	Yes	(No)		
Proximity to schools	Near	Far	<u>_</u>	<u> </u>
Wetland contains perennial watercourse	Yes	No		
Wetland contains pond/lake	Yes	No		
Safety hazards (if present list them)		No	<u>_</u>	
Site currently used for educational/scientific purposes	Yes	(No.		<u> </u>
Function Present	Yes	≪No.)	No public access	
Degree of Function	High Mod	Low	<u></u>	
U/H/UNIQUENESS/HERITAGE		<u>.</u>	·	
Criteria	+		Comments	
Wetland contains listed species	Yes	(No		 _
Wetland identified as exemplary natural community	Yes	(40)		<u> </u>
Wetland locally/regionally significant	Yes	(No		
Function Present	Yes	√No >	!	

VQA/VISUAL QUALITY/AESTHETICS

Degree of Function

Criteria		+		Comments
Visible from primary viewing locations	Yes		(No)_	<u> </u>
Views absent trash, debris, sign of degradation	(Yes		No	
Low noise level	Yes		(No)	Airplanes
Visual landuse contrast with wetland	Yes		No	
Function Present	Yes			
Degree of Function	High	Mod	Low	·

Mod

High

ESH/ENDANGERED SPECIES HABITAT

Criteria	+				Comments
Wetland contains or known to contain federal listed species or habitat	Yes		No	<u>)</u>	
Wetland contains critical habitat for state or federal listed species	Yes	•	No		
Area appears in state or national database	Yes		No)	

Function Present	Yes	_	(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X-present, P-Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
 	High		Mod	High	High	Low	14 gh	Loro	low	mol	tow

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceling, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo 183 Northwest MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA2 7 Date: N/A	runctional Unit:	Weather: N/A	Time Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation: N/A	Below average 🗌 🐪	Average 🗌 Above Averag	pe ☐ Don't Know 🂢 TBD 🕱
Wildlife Investigation Method: Cover search	Dip netting ☐	Auditory 🛛	Scat 🖾 💮 Tracks 🖾	Minnow Traps ☐ Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classification	1			
Class	Subclass	·		
POW/ Open water	Vegetated	Non-Vegetated	<u> </u>	<u> </u>
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust Narrow-lea	aved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-	eaved Broad-leaved	Floating leaved	
PFL/ Seasonally Flooded Flats	Emergent	Shrub Tidally	influenced	<u> </u>
PEM / Wet Meadow	Ungrazed	Grazed	<u> </u>	·
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquatic	
PFO / Wooded Swamp	Deciduous	Evergreen		
Bog	Compact shrub	Bushy shrub		mergent
Water Regimes (Cowardin Modifier):	· <u>-</u>	Seasonal	lly saturated (Y) - soils saturate	ed to surface, especially early in growing season in most years; surface water absent
Permanently flooded (H) - water covers land surfa-	ce throughout year in all ye	ears except fo	r ground water seepage and o	
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the year except	in years Tempora season, I	rily flooded (A) - surface water but water table usually lies wei	present for brief periods during growing Il below soil surface for most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout growing se		ently flooded (3) - substrate uso periods without detectable sea	ually exposed, but surface water is present for sonal periodicity—
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods especia most years	lly early in Artificially etc	/ flooded (K) - amount/duration	n of flooding controlled by dikes dams, pumps,
Hydrology:				
	es No	• •	Depth to free water:	
If Present: Slope or Depressional	- `		Depth to saturation:	
Surface water depth:	verage ma	ximum -	Signs of altered hydrology?	Yes No
Hydrology indicators: inundated	aturated in upper 12" Wa	ter marks Drift lines	Sediment deposits Drain	nage patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumat	ophores Polymorphi Rhizospheric oxidation	ic leaves Buttressed trees Shallow root systems	Hypertrophied lentice Floating leaves	els Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderate	ely Well Somewhat	Poorly Poorly	Very Poorly	Mapped Hydric Soil
Slope: Nearly level . Genile	Moderate	Steep		
Upland Border:				·
•	Gentle Mo	derate Steep		
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow Mowed lawn	Farm
Vegetation Density(S/M/D): Trees	Ď Saplings	M Shrubs	Herbs M Grass	

Bucz - Buxton Silt loam

Cover objects:	Leaf litter:	Well developed) .	سلمما			
Evidence of Erosion: No Yes (Explain) Veg covered banks GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland) Criteria				woue	•	•	
GWIRGOUNDWATER RECHARGE (Excluding condition: Slope Wetland) Criteria	·	5					
Criteria	•		(Explain)	Yo	sa cove	shed h	banks
Soils Sand/grave outwash Stardpan, 19th fine-grained Soils, Stally ledge Seasonal watercourse		Excluding cond	tion: Slope Weti	and)			
Vestand associated w/ perennial or seasonal watercourse No	Criteria	+					
Vector V		Sand/gravel out	wash Rardp	an, ti « led	ght fine-grai ae	ned soils,	
Function Present	Wetland associated w/ perennial or seasonal watercourse	Yes	1		<u> </u>		
Degree of Function High Mod Low GWD/GROUNDWATER DISCHARGE Criteria	Slope	Gentle	Moder	ate o	r Steep	_	
GWD/GROUNDWATER DISCHARGE Criteria	Function Present	Yes No				•	
Criteria + Comments Soils Hardpan, shallow ledge Seeps, springs observed? Yes No Non/Poorly developed Welland microrelief Well developed Non/Poorly developed Seventian an outlet, no inlet Yes No Seps of Function Present Yes No Seps of Function High Mod Low Services of Function Fraction Stope Wetland Size in relation to watershed Large Small Welland Size in relation to watershed Large Small Welland Size in welland watershed Large Small Welland Size Seps No S	Degree of Function	High	Mod		Low	<u></u>	· · · · · · · · · · · · · · · · · · ·
Criteria + Comments Soils Hardpan, shallow ledge No Seeps, springs observed? Yes No Welland microrelled Well developed NontPoorty developed Welland contains an outlet, no inlet Yes No Function Present Yes No Degree of Function High Mod Low FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland) Criteria Comments Welland size in relation to watershed Large Small Welland Slope Gentle Moderate Steep Welland characterized by variable water level?							
Soils Hardpan, shallow ledge Seeps, springs observed? Yes No Non/Poorly Metland microreltef Well developed Non/Poorly Meveloped Seeps, springs observed? Yes No Non/Poorly Meveloped Seeps	GWD/GROUNDWATER DISCHARGE				•		•
Soils Hardpan, shallow ledge Seeps, springs observed? Yes No Non/Poorty Metland microreltef Well developed Non/Poorty Non	Cuitania						
Seeps, springs observed? Wetland microrelief Wetl developed Wetland contains an outlet, no inlet Yes No Punction Present Degree of Function High Mod Low Criteria High Wetland size in relation to watershed Amount of impervious surface in wetland watershed Large Small Wetland Slope Wetland characterized by variable water fever? Wetland in floodplain of adjacent watercourse Wetland in floodplain of adjacent watercourse Ves No Wetland in floodplain of adjacent watercourse Ves No Wetland shas a history of economic loss due to flooding Wetland outlet restricted Wetland vegetation density Wetland vegetation density Wetland microrelief Wetland microrelief Wetland reportly Wetland microrelief Wetland reportly Wetland microrelief Wetland reportly Wetland microrelief Wetland microrelief							Comments
Wetland microrelief Well developed Wetland contains an outlet, no inlet Yes No Degree of Function High Mod Low FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland) Criteria + Comments Wetland size in relation to watershed Large Amount of impervious surface in wetland watershed Large Wetland Slope Wetland characterized by variable water level? Wetland in floodplain of adjacent watercourse Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Wetland vegetation density Wetland microrelief Wetland representation in interventive flood in the properties of the properti	 		shallow ledge				
Welland contains an outlet, no inlet Yes No Degree of Function High Mod Low FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland) Criteria + Comments Wetland size in relation to watershed Large Small Welland Slope Welland Slope Welland Characterized by variable water level? Welland in floodplain of adjacent watercourse Ves No Welland in floodplain downstream from welland Watershed has a history of economic loss due to rone of floodplain downstream from welland Wetland vatershed has a history of economic loss due to Yes No Wetland vegetation density Welland vegetation density Welland microrelief Well monor/Poorly Welland microrelief	Seeps, springs observed?	Yes /		<u> </u>			
Wetland contains an outlet, no inlet Yes No Degree of Function High Mod Low FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland) Criteria + Comments Wetland size in relation to watershed Large Small Wetland Slope Wetland Slope Wetland Characterized by variable water level? Wetland characterized by variable water course Wetland in floodplain of adjacent watercourse Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to Wetland vegetation density Wetland pricorelief Wetland microrelief No No No No No Wetland microrelief	Wetland microreftef	Well deve	ioped			<i>i</i> ·	
Function Present Pegree of Function High Mod Low FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland) Criteria + Comments Wetland size in relation to watershed Large Small Wetland Slope Wetland characterized by variable water level? Wetland characterized by variable water level? Wetland in floodplain of adjacent watercourse Ves No Wetland in floodplain of adjacent watercourse or near floodplain downstream from wetland Watershed has a history of economic loss due to Wetland outlet restricted Wetland vegetation density Wetland microrelief Wetland microrelief	Wetland contains an outlet, no inlet	Yes	·	7			
Degree of Function High (Mod Low FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland) Criteria + - Comments Wetland size in relation to watershed Large Small Amount of impervious surface in wetland watershed Large Small Wetland Slope Gentle Moderate Steep Wetland characterized by variable water level? Yes No Wetland in floodplain of adjacent watercourse Yes No Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Yes No Wetland outlet restricted Yes No Wetland microrelief Wetl None/Poorly Wetland microrelief	Function Present	Yes		~	_		
Criteria	Degree of Function		(Mod)	1	Low	_	-
Criteria	***						
Wetland size in relation to watershed Amount of impervious surface in wetland watershed Large Small Wetland Slope Gentle Wetland characterized by variable water level? Wetland in floodplain of adjacent watercourse Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Wetland vegetation density Wetland microrelief Wetland microrelief Wetland None/Poorly	FFA/FLOODFLOW ALTERATION (Exc	luding condition	: Slope Wetland)			
Wetland size in relation to watershed Amount of impervious surface in wetland watershed Large Small Wetland Slope Gentle Wetland characterized by variable water level? Wetland in floodplain of adjacent watercourse Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Wetland vegetation density Wetland microrelief Wetland microrelief Wetland None/Poorly	Critoria			, -			
Amount of impervious surface in wetland watershed Large Small Wetland Slope Gentle Moderate Steep Wetland characterized by variable water level? Wetland in floodplain of adjacent watercourse Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Yes No Wetland vegetation density Wetland microrelief Wetland microrelief			-	<u> </u>	<u> </u>		Comments
Wetland Slope Wetland characterized by variable water level? Wetland in floodplain of adjacent watercourse Ves No Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Yes No Wetland vegetation density Wetland microrefief Moderate Steep No No Valuable properties, structures, or resources located in Yes No No Valuable properties, structures, or resources located in Yes No No Wetland oversteen from wetland Yes No No Wetland outlet restricted Yes No No Wetland microrefief		 		┺			<u> </u>
Wetland characterized by variable water level? Wetland in floodplain of adjacent watercourse Ves No Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Yes No No Wetland vegetation density High Low Wetland microrelief		d watershed		S	mall		
Wetland in floodplain of adjacent watercourse Ves No Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Yes No Wetland vegetation density Wetland microrelief No No No No No No No No No N				M	oderate	Steep	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Wetland vegetation density Wetland microrelief Well No No No No No No No No No				N	o		
or near floodplain downstream from wetland Watershed has a history of economic loss due to flooding Wetland outlet restricted Yes No Wetland vegetation density Wetland microrelief Well None/Poorly			Yes	N	<u> </u>		
Wetland vegetation density Wetland microrelief Wetland was a history of economic loss due to Yes No Yes No No Yes No No Wetland restricted Yes No	r near floodplain downstream from wetland		Yes	N	No		
Wetland outlet restricted Yes No Wetland vegetation density Wetland microrelief Well None/Poorly	Watershed has a history of economic los	ss due to		l N			
Wetland vegetation density High Low Wetland microrelief Well None/Poorly		<u> </u>	<u> </u>	سي- إ			
Wetland microrelief Welt None/Poorly			High				
			Weil				
		_	developed				

		. <u>—.</u>			
Function Present	Ye	:5	No		
Degree of Function		gh	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes	_	No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	*No		Yes	
Sandbar present at inlet?	No	A ALLENSON	Yes	`
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes .		No	· · · · · · · · · · · · · · · · · · ·
Pond experiences dense algal bleoms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	, - ·	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+ .	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	(No)	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	/ Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent of Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	· · ·
Cover objects (fallen logs; boulders, undercut banks)	Many	Absenttew	
Riparian zone	Wide	Narrow	Absent
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intol	erant	Mostly tolerant	· · · · · · · · · · · · · · · · · · ·
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	(No)	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No	(Yes	
Water flow through wetland	Diffuse	Channelized	-
Ponded water present	Aes)	No	
Wetland basin topographic gradient	Low	High	-
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	No	Yes	
Function Present	Yes	No	-
Degree of Function	High KM		-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	- 100	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	-
Water flow through wetland	Diffuse	Ghannelized	-
Vegetation density	High2	Low	-
Potential for sediment trapping exists	Yes	No.	-
Deep or open water habitat is present	Yes)	No	
Soil type	Organic/high/clay	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	 Yes	No		
Degree of Function	High (Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Yes	_ √No	
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	Yes	No No	<u> </u>
Fish or shellfish develop/occur in wetland	Yes	No	·
Function Present	Yes	No_	
Degree of Function .	High Mod	Low	

. S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments		
Topographical gradient in wetland	Yes	No			
Potential sediment sources upstream or upslope	Yes	(No)			
Wetland border >10' adjacent to pond or water	Yes	No.			
Distinct shoreline or bank evident between wetland and water	No	Yes	<u> </u>		
Open water fetch present	Yes	No			
Boating activity present	Yes	(No			
Floodplain stabilizing trees and shrubs present	Yes	No			
Indications of erosion or siltation present	Yes	No	<u></u>	<u> </u>	
Function Present	Yes	No 2			
Degree of Function	High Me	od (Low			<u> </u>

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No.	
Fishing is available in or from the wetland	Yes .	No	
Hunting is permitted in wetland	Yes	No.	
Hiking occurs or has potential to occur in wetland	Yes	(No)	
Wetland is a vaiuable wildlife habitat	Yes	No	

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canceing feasible in wetland	Yes	(Ne)	
Off-road public parking near wetland available	Yes	No	
Safety Hazards (if present list them)	Yes	No	
Function Present	Yes	No	
Degree of Function	High	Mod (Low	No public access

WLH/WILDLIFE HABITAT

Criteria	+	T -	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High_ No	
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Tidal
Vegetation density	High	Low	NGA.
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	41, 11		
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	No	
Edge diversity (List types)			
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	<u> </u>
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant		Logs
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	43
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

Criteria		÷	-	Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		No	
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	
Off-road parking near wetland available	Yes	· · · · · ·	No.	
Proximity to schools	Near	. (Far	
Wetland contains perennial watercourse	(Yes)		No	
Wetland contains pond/lake	Yes		No	
Safety hazards (if present list them)				<u> </u>
Site currently used for educational/scientific purposes	Yes		No)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments	<u> </u>	
Wetland contains listed species	Yes		No			
Wetland identified as exemplary natural community	Yes		(No)	<u>_</u>	·	
Wetland locally/regionally significant	Yes		No.		·	
Function Present	Yes		(No)			
Degree of Function	High	Mod	Low			

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	
Visible from primary viewing locations	Yes	(No)		
Views absent trash, debris, sign of degradation	Yes	No	· <u></u>	<u>.</u>
Low noise level	Yes	No)		<u></u>
Visual landuse contrast with wetland	(Yes)	No		
Function Present	(Yes	No	No public access	
Degree of Function	High Mo	d (Low)	·	<u> </u>

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	
Wetland contains critical habitat for state or federal listed species	Yes	Ng	
Area appears in state or national database	Yes	N ₉	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
mos/map	High	المراهيا	mod	Mod	High	Low	High	low	low	Low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Refertion/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo 184

	MODIFIED	FUNCTIONS AND VA	LUES ASSESSMENT	Sunny		
Project Name: Brunswick NAS Wet Id#: F	A3 2-7 Date: N/	A Functional Unit:	Weat	_	ime Start: N/A T	ime Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Re	cent Precipitation: N/	A Below average [Average 🗌	Above Average	Don't Know ☐ T	BD 🔲 🤇
Wildlife Investigation Method: Cover search	Dip netting ☐	Auditory 🛛	Scat 🔀	Tracks ☑ N	linnow Traps ☐ E	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification						
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated			. <u> </u>	
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leaved	d Broad-leaved	<u> </u>
PAB/ Shallow Marsh	Robust Narro	w-leaved Broa	d-leaved Fl	oating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub	<u></u> .			
PEM / Wet Moadow	Ungrazed	Grazed			<u> </u>	
₱SS / Shrub Swamp	Sapting Bushy	Com	pact A	quatic	<u> </u>	
PFO / Wooded Swamp	Deciduous	Evergreen	<u>_</u>			
Bog	Compact shrub	Bushy shrub	Wooded	Emen		# · t · · · · · · · · · · · · · · · · ·
Water Regimes (Cowardin Modifier):			season, but are unsalu	irated by end of sea:	o surface, especially ear son in most years; surfac	ry in growing ce water absent
Permanently flooded (H) - water covers land surface		years ₆	except for ground water	er seepage and over	land flow	•
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the year exce	ept in years	Femporarily flooded (A season, but water table	 surface water pre e usually lies well be 	esent for brief periods du blow soil surface for most	ring growing t of the season
Semi-permanently flooded (F) - surface water pers most years	ists throughout growing	season in	ntermittently flooded (variable periods withou	J) - substrate usually ut detectable season	y exposed, but surface w nal periodicity~	rater is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods espec most vears	cially early in	•		flooding controlled by dil	kes dams, pumps,
Hydrology:	<u> </u>					
Ground water discharges present:	es No		Depth to free	e water:		
If Present: Slope or Depressional			Depth to sat			
	verage - 4- " r	maximum - 1"	•	ered hydrology?	Yes (N	10)
	•	Water marks Drift line	es Sediment de	posits Drainage	patterns within wetlands	s Other
Plant Adaptations to Hydrology: Pneumate	ophores Polymor hizospheric oxidation	ohic leaves Buttres Shallow root sy		ertrophied lenticels ting leaves l	Stooling I Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	<u> </u>	at Poorly		Poorly i	Mapped Hydric Soll	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:		•		•		
	entle !	Moderate	Steep	7	, Adj to wea	pons area
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawii	Farm	•
Vegetation Density(S/M/D): Trees	Saplings	Shrubs	M Herbs S	Grass D	•	
WrB-woodbridge sand	ly loan		•			

Leaf litter:	Well developed	Moderat	ely well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)	,	
GWR/GROUNDWATER RECHA	RGE (Excluding condit	ion: Slope Wetland)		
Criteria		T		

Criteria	+	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils.
Wetland associated w/ perennial or seasonal watercourse	Yes	No
Slope	Gentle	Moderate or Steep
Function Present	Yes (No	
Degree of Function	High Mod	(Low)

GWD/GROUNDWATER DISCHARGE

+		Comments
Hardpan, shallow ledge		
Yes	No No	
Weil developed	Non/Poorly developed	
Yes	No	trade to a halas and a line
Yes	No	Both an inlet and outlet
High Mod	Low	
	Yes Well developed Yes Yes	Yes No Well developed Non/Poorly developed Yes No Yes No

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	&mail)	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	(No)	
Wetland outlet restricted	Yes	(No	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	,

Function Present	Yes	No		
Degree of Function	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	,	+		Comments
Dominant land-use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Olber	
Direct stormwater discharge via culvert?	No	A CONTRACTOR OF THE PARTY OF TH	Yes	
Sandbar present at inlet?	No.	-	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl)-present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No _	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	_Sand/silt	
Substrate embeddedness by sand & silt		High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Łow	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	Unknown
Function Present	Yes	<u> </u>	No	
Degree of Function	High	Mod	Low	

\$&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No.	Comments
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	ar Yes	Low	
Vegetation density	fligh	No.	Northern end
Wetland edge broad and intermittently aerobic	Yes	(Low)	
Drainage ditches in wetland	/ No)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	No	-
Wetland basin topographic gradient	Tow	High	
Fine grained mineral or organic soils present	Yes	No.	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	No	Yes	MA
Function Present	(Yes	No	NA
Degree of Function	(High) Moo		-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria .	+		Comments
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	(Diffuse)	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists		No	
Deep or open water habitat is present	Yes	No No	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	(content	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)	No	
Degree of Function		Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

	-	Comments
Abundant	Few	
High	Low	
Yes	No	Egg masses
Yes	No	
Yes	No	
High) Mod	Low .	
	Yes Yes Yes Yes Yes Yes Yes Yes	High Low Yes No

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+			Comments
Topographical gradient in wetland	Yes	No		
Potential sediment sources upstream or upstope	(Yes)	No.	1	
Wetland border >10' adjacent to pond or water	Yes .	No)	
Distinct shoreline or bank evident between wetland and water	No	Yes	. <u></u>	
Open water fetch present	Yes	No)	
Boating activity present	Yes	(No)	
Floodplain stabilizing trees and shrubs present	(Yes	No		·
Indications of erosion or siltation present	Yes	(No)	
Function Present	Yes	No)	
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	. 4		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No	
Fishing is available in or from the wetland	Yes	/ No \	
Hunting is permitted in wetland	Yes	No _	
Hiking occurs or has potential to occur in wetland	Yes	No /	
Wetland is a valuable wildlife habitat	Yes	MO	

Wetland has high visual/aesthetic quality	Yes	Ne		
Boating or canoeing feasible in wettand	Yes	No		
Off-road public parking near wetland available	Yes	No No		.
Safety Hazards (if present list them)	Yes	No /		
Function Present	Yes	No		
Degree of Function	High	Mod (Low)		

WLH/WILDLIFE HABITAT

Criteria	+	<u> </u>	Community
Wetland degradation by human activity		Moderate to	Comments
	Little or None	High	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes F/L	No	·
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	(High)	Low	
Upland islands	Present	(Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	
Vegetation density	(fligh)	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	SHS H LL		· · · · · · · · · · · · · · · · · · ·
Wetland plant species diversity	(High) Mod Low		
Vernal pool	Yes	No	
Edge diversity (List types)			
Water regime	Wetter)	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant		
Coursell Late 1	Abundant)	Few	Snags + Logs Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	Logs/ branches
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Decree of F	High Mod	Low	•

Criteria		+	-	Comments
Wetland contains listed species	Yes		(No)	
Wetland provides valuable wildlife habitat	(Yes)		No	
Wetland class diversity	High		(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest
Off-road parking near wetland available	Yes		No	
Proximity to schools	Near `		Far	
Wetland contains perennial watercourse	Yes		No	
Wetland contains pond/lake	Yes	_	No	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No)	<u> </u>
Function Present	Yes		No	No public access
Degree of Function	High	Mad	Low	

U/H/UNIQUENESS/HERITAGE

Criteria.		+	- <u> </u>	-Commeπts_	
Wetland contains listed species	Yes	·-	(OM)		
Wetland identified as exemplary natural community	Yes		No		
Wetland locally/regionally significant	Yes	<u>-</u>	(No		
Function Present	Yes	_	(No)		
Degree of Function	High	Mod	Low		<u>. </u>

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments	<u></u>
Visible from primary viewing locations	Yes		(No)		<u>_</u>
Views absent trash, debris, sign of degradation	Yes		No_		
Low noise level	Yes		(No)	Airfield	
Visual landuse contrast with wetland	Yes		No	<u> </u>	<u>_</u>
Function Present	Yes		No		
Degree of Function	High	Mod	Low	_	<u> </u>

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	1	
Wetland contains critical habitat for state or federal listed species	Yes	(SZ)	
Area appears in state or national database	Yes	No _	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Louymes	Mod	No	thigh	wan	Works	No	High	Low	No	No	ND

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

	MODIFIED	FUNCTIONS AND V	'ALUES ASSESSMI	ENT Scenny		
Project Name: Brunswick NAS Wet Id#:	FA4-20ne Date: N/A	Functional Unit:	W	leather: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation: N/A	Below average	e 🗌 💮 Average [Above Average [☐ Don't Know ☐	T8D □
Wildlife Investigation Method: Cover search 🛛	Dip netting 🗌	· Auditory 🛛	Scat 🛛	Tracks 🛛 🔠	vlinnow Traps □	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n					
Class	Subclass				·	-
POW/ Open water	Vegetated	Non-Vegetated		<u>-</u> ,		
PEM/PSS Deep Marsh	Dead Woody Shrub	. Sub-shrub	Robus	t Narrow-leave	d Broad-leave	ed
PAB/ Shallow Marsh	Robust Narroy	v-leaved Br	oad-leaved	Floating leaved	_	
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed				<u> </u>
PSS / Shrub Swamp	Sapling Bushy		ompact	Aquatic	<u>.</u>	
PFO / Wooded Swamp	Deciduous	Evergreen CO	nifers			
Bog	Compact shrub	Bushy shrub	Wood		rgent	
Water Regimes (Cowardin Modifier):			Seasonally saturat	ed-(Y.) - soils saturated saturated by end of sea	to sufface, especially t ison in most years; sur	ariy in growing face water absent
Permanently flooded (H) - water covers land surfa	ice throughout year in all	years		water seepage and ove		
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year exce	pt in years	Temporarily floode season, but water	d (A) - surface water pr table usually lies well b	esent for brief periods elow soil surface for m	during growing ost of the season
Semi-permanently flooded (F) - surface water per- most years	sists throughout growing	şeason in	Intermittently flood variable periods w	ed (J) - substrate usual ithout detectable seaso	ly exposed, but surface nal periodicity~	water is present fo
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods espec n most years	ially early in	Artificially flooded etc	(K) - amount/duration o	f flooding controlled by	dikes dams, pumps
Hydrology:	_					
Ground water discharges present:	Yes No		Depth to	free water:		
If Present: Slope or Depressional			Depth to	saturation:		
Surface water depth:	average - n	aaximum -	Signs o	faltered hydrology?	Yes	No
Hydrology indicators: Inundated	Saturated in upper 12" V	Vater marks Drift	ines Sedimen	t deposits Dealinag	e patterns within wetla	ods Other
	tophores Polymorp Rhizospheric oxidation	ohic leaves Buttr Shallow root		Hypertrophied lenticels Floating leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Somewh	at Poorly	Poorly	/ery Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:		•		•		
Slope: Nearly level	Gentie A	Aoderate	Steep			
Cover Types: Mature forest	Sapling forest	Shrub thicke		_	Farm	
Vegetation Density(S/M/D); Trees	D Saplings	M Shru	bs S Herbs	√ Grass		
WrB-Woodbridge sand	ly loan			•		

Leaf litter:	Well developed	Mode	erately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	e es	No	
Slope	CÉDIE >	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	(240)	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	No	
Degree of Function	High Mod	Low	- -

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large (Small	
Amount of impervious surface in wetland watershed	Large (Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No I	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	Unknow h
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High (Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	No		
Degree of Function .	High	Mod	(Low)	<u> </u>

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments
Dominant land use adjacent to Waterbody	Forest, Shru	b, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	- <u></u>	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algai bleoms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	·
Substrate embeddedness by sand & silt	Low	High	·
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees. shrubs)	Low	
Cover objects (fallen legs, boulders, undercut banks)	Many	Absent/few	
Riparian zope	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good .	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	Mostly intolerant		ant Mostly tolerant		
Function Present	Yes		No			
Degree of Function	High	Mod	Low	{		

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	weapons Area
Duration of water retention in wetland	Long	Short	weapons men
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse	Channelized	<u> </u>
Ponded water present	(Yes)	No	
Wetland basin topographic gradient	ct.ow)	High	· · · · · · · · · · · · · · · · · · ·
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	
Indicators of erosion or high water velocities are present	No	Yes	
Function Present	Yes	No	
Degree of Function	High Mod		<u>-</u>
NASSA			<u> </u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Smail	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Xes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	(No)	-
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed)	None, poorly developed	

Function Present (Yes	No	<u>-</u>	
Degree of Function	High	(Mod)	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Yes	(No)	<u> </u>
Detritus development is present within this wetland	(Ýes)	No	
Flowering plants used by nectar gatherers present	Yes	(No)	
Evidence of wildlife use in wetland	Yes	No	Insects, Birds
Fish or shelifish develop/occur in wetland	Yes	(No)	
Function Present	Yes	No	_
Degree of Function	High Mod	<u> </u>	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria		+		-	Comments
Topographical gradient in wetland	Yes	_	No		
Potential sediment sources upstream or upslope	Yes	_	No		
Wetland border >10' adjacent to pond or water	Yes		No		
Distinct shoreline or bank evident between wetland and water	No		Yes		·
Open water fetch present	Yes		No		
Boating activity present	Yes		No		·
Floodplain stabilizing trees and shrubs present	Yes		No	. <u>.</u>	
Indications of erosion or siltation present	Yes	<u> </u>	No		
Function Present	Yes		No	•	
Degree of Function	High	Mod	3	Low	

REC/RECREATION

Criteria	+			Comments
Wetland is part of recreation area, park, refuge, etc.	Yes		No \	
Fishing is available in or from the wetland	Yes	/	No \	
Hunting is permitted in wetland	Yes		No	
Hiking occurs or has potential to occur in wetland	Yes	11	No	
Wetland is a valuable wildlife habitat	Yes		No /	

Wetland has high visual/aesthetic quality	Yes No	
Boating or canoeing feasible in wetland	Yes No	· ·
Off-road public parking near wetland available	Yes No	
Safety Hazards (if present list them)	Yes No	·
Function Present	Yes \No	
Degree of Function	High Mod Low	-

WLH/WILDLIFE HABITAT

Criteria			Comments
Wetland degradation by human activity	Little or None	Moderate to High	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	res	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High _V	Low	
Vegetation density	High (Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	T,S,H,U		
Wetland plant species diversity	High Mod Low		
Vernał pool	Yes	(No)	
Edge diversity (List types)			<u> </u>
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	(Abundant) 1	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant L	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wettand (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	
Degree of Function	r High) Mod	Low	

Criteria	+		<u> </u>	Comments
Wetland contains listed species	Yes		No	· .
Wetland provides valuable wildlife habitat	Yes	_	No	
Wetland class diversity	High		Low	Wooded swamp
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	,	Low	Wooded swamp Forest
Off-road parking near wetland available	Yes		N ₀	
Proximity to schools	Near		Far	
Wetland contains perennial watercourse	Yes	_(No	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(140)	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	<u></u>

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments			
Wetland contains listed species	Yes		No	_			
Wetland identified as exemplary natural community	Yes		/ No)			<u>.</u>	
Wetland locally/regionally significant	. Yes		(No /	_			_
Function Present	Yes						
Degree of Function	High	Mod	Low	 <u></u>	. <u></u>	<u></u>	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	<u> </u>	<u>_</u> .
Visible from primary viewing locations	Yes	No			
Views absent trash, debris, sign of degradation	(Yes	No			<u>_</u>
Low noise level	Yes	(N)			
Visual landuse contrast with wetland	Yes	(NO)			<u></u>
Function Present	Yes .	No)			
Degree of Function	High Mo	d Low	·		

ESH/ENDANGERED SPECIES HABITAT

Criteria		+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	_	(No)	
Wetland contains critical habitat for state or federal listed species	Yes		(No)	
Area appears in state or national database	Yes		(No)	

Function Present	Yes		(No)
egree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Highlmod	low		High	mod	mod		High				
STIBBIA A DV C	E ELIMOTIONS		V.				70	·		· · · · · · · · · · · · · · · · · · ·	

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

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Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

		ED FUNCTIONS AND VA	LUES ASSESSMENT	Sumy		
Project Name: Brunswick NAS Wet ld#: 2	FA5 ZOUR Date:	N/A Functional Unit:	Weat		me Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation:	N/A Below average	☐ Average ☐	Above Average		TBD 🗌
Wildlife Investigation Method: Cover search \boxtimes	Dip netting 🗌	Auditory 🖾	Scat 🛚	Tracks 🗵 M	innow Traps 🗌	Electro-shocking L
Wetland Types(s) Cowardin/Golet Classification	ר					
Class	Subclass		<u> </u>			
POW/ Open water	Vegetated	Non-Vegetated	. <u> </u>		<u> </u>	
PEM/PSS Deep Marsh	Dead Woody Sh	nrub Sub-shrub	Robust	Narrow-leaved	Broad-leave	ed
PAB/ Shallow Marsh	Robust Na	arrow-leaved Bro	ad-leaved F	loating leaved		<u> </u>
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed		<u>_</u>		·
PSS / Shrub Swamp	Sapling Bu	ushy Cor	npact _ A	quatic		_
PFO / Wooded Swamp	Deciduous	Evergreen				
Bog	Compact shrub	Bushy shrub	Wooded	Emerg		
Water Regimes (Cowardin Modifier):	· · ·		Seasonally saturated ((Y) - soils saturated to grated by end of seas) surface, especially e son in most vears; sur	arly in growing face water absent
Permanently flooded (H) - water covers land surfa	ce throughout year ir	n all years	except for ground wat	er seepage and over	and flow	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year e	except in years	Temporarily flooded (/ season, but water tabl	A) - surface water pre le usually lies well bei	sent for brief periods of ow soil surface for mo	during growing ost of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout grow	ving season in	Intermittently flooded variable periods witho	(J) - substrate usually ut detectable season	exposed, but surface al periodicity—	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods es most years	specially early in	Artificially flooded (K) etc	- amount/duration of I	flooding controlled by	dikes dams, pumps,
Hydrology:			·			
Ground water discharges present:	res (No)		Depth to fre	e water:		
If Present: Slope or Depressional			Depth to sa	turation:		
Surface water depth:	everage -	maximum -	Signs of alt	ered hydrology?	Yes	No
Hydrology indicators: Inundated S	Saturated in upper 12	2" Water marks Drift lin	nes Sediment de	posits Drainage	patterns within wetlar	nds Other
Plant Adaptations to Hydrology: Pneuma- stems, or roots Adventitious roots	tophores Polyi Rhizospheric oxidatio	ttotbytto toettoe		ertrophied lenticels ting leaves F	Stooling Floating stems _.	Inflated leaves,
Soil Drainage classes Well Moderate	ely Well Some	ewhat Poorly	Poorly Very	Poorly N	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep	•			
Upland Border:						
Slope: Nearly level	Gentle	Moderate <	Steep			
Cover Types: Mature forest	Sapling fores	st Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	M Sapl	ings 🃉 Shrub	s 🤇 Herbs	Grass D		
Soil: 30D - Udonthents -	Adams Co	mplex		-		

Leaf litter:	Well developed	\supset	Mod	erately well	developed	Absent
. Cover objects:	Logs	Bar	k		Boulders	Rocks
Evidence of Erosion:	No Yes	(Ex	plain) S	table	laa n k s	around pond
GWR/GROUNDWATER RECHARGE (E	xcluding condit	ion: Slope	Wetland)	e wrones	would pond
Criteria	+					Comments
Soils	Sand/gravel outy	vash H	ardpan, t	ight fine gra	ined soils,	
Wetland associated w/ perennial or	Yes	<u>s</u>	hallow led	dge		
ol scasonar watercourse			(o			
	Gentle No		loderate i	or Steep		
		<u> </u>			_	
29,50 0,1 11,011,011	High	Mod		Low		Ponded Area
GWD/GROUNDWATER DISCHARGE						
Criteria		+		<u> </u>		Comments
Soils	Hardpan, s	hallow ledg	je		_	
Seeps, springs observed?	Yes		((No)		
Wetland microrelief	Well devel	pped		Non/Poorl	ly)	-
Wetland contains an outlet, no inlet	Yes	· · · -		developed No		
Function Present	Yes		·	No		Inlet & Outlet
Degree of Function	High	Mod	<u>-</u>	Low		Ponded Area
FFA/FLOODFLOW ALTERATION (Excl	uding condition:	Slope Wet	lland)			·
Criteria	-	-				
Wetland size in relation to watershed	<u> </u>	+	_			Comments
		Large	<u>~</u> ~	imall)	<u></u>	
Amount of impervious surface in wetland Wetland Slope	watershed (Large	S	mall		
		Gentie		loderate	Steep	
Wetland characterized by variable water in		Yes		روا		
Wetland in floodplain of adjacent watercon Valuable properties, structures, or resource	res Incated in	Yes.)	N	o		
or near floodplain downstream from wetland	nd (I	(Yes	N	o		
Watershed has a history of economic loss flooding	due to	Yes	N	0	_	

Yes

High Wel[developed

Wetland outlet restricted

Wetland microrelief

Wetland vegetation density

No

None/Poorly developed

Function Present	Yes)	No		
Degree of Function	High	Mod	Low	- - -

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	No	
Waterbody at least 10' deep	Yes	No	·
% of pond covered by submerged or emergent vegetation	15-40%	Other	No emergent rea
Direct stormwater discharge via culvert?	No	Yes	, <u> </u>
Sandbar present at inlet?	No)	Yes	<u> </u>
Water transparency	High	Low	<u> </u>
Significant nutrient source (fertilizers, waterfowl) present in watershed?	(No)	Yes	
Pond size ≥0.5 acre	Yes	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	Yes	
Function Present	(Yes)	No	
Degree of Function	High (Mod	Low_	·

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	Hìgh	<u> </u>
Instream habitat diversity (riffle, run, pool, shailow, deep)	High	Low	· · · · · · · · · · · · · · · · · · ·
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riperian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	•
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	_	Comments
Sources of sediments or toxicants upstream	(Yes)	No	
Duration of water retention in wetland	Long	(Short)	Potential runoff from fuel field
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	(No.)	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	(Yes	No	
Wetland basin topographic gradient		High	
Fine grained mineral or organic soils present	Ves)	No No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	Johnnesta
Potential sources of excess nutrients upstream	Yes	(No.)	
Wetland is saturated most of the season	Yes	No_	₽ . (]
Emergent vegetation and/or dense woody stems are dominant	Yes	(No	Ponded
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Tow	
Potential for sediment trapping exists	Yes	(No)	
Deep or open water habitat is present	(Yes)	No	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	₹No _)		
Degree of Function	High	Mod	Low	<u> </u>	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)					
Criteria		÷	-	Comments	
Wildlife food sources in wetland	Abunda	nt	Few	<u> </u>	
Vegetation density	High		Low		<u>-</u>
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No	<u> </u>	<u>.</u>
Welland has high degree of plant community structure and species diversity	Yes		(No)	<u></u>	<u>-</u>
Detritus development is present within this wetland	Yes	<u></u>	No	Some leaf litter	at bottom
Flowering plants used by nectar gatherers present	Yes		NO.		
Evidence of wildlife use in wetland	Yes	_	(No	·	<u></u>
Fish or shellfish develop/occur in wetland	Yes		No	Potentially _	
Function Present	Yes	•	No		
Degree of Function	High	Mod	Łow	<u></u>	
S&SS/SEDIMENT/SHORELINE STABILIZATION					
Criteria	+		-	Comments	<u>-</u>
Topographical gradient in wetland	res	No			<u> </u>
Potential sediment sources upstream or upslope	Yes	₹No)		
Wetland border >10' adjacent to pond or water	Yes	(No)			<u>_</u> .
	(No	Yes	. <u>.</u> .		
Distinct shoreline or bank evident between wetland and water	\ <u>-</u> -			ļ	
Distinct shoreline or bank evident between wetland and water Open water fetch present	Yes	No	<u> </u>		
	Yes Yes	No No	>	_	
Open water fetch present			<u>-</u>		
Open water fetch present Boating activity present	Yes	(No	>		

Degree of Function REC/RECREATION

Criteria	+			Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	/	No \		<u> </u>
Fishing is available in or from the wetland	Yes		No \		<u> </u>
Hunting is permitted in wetland	Yes		No		
Hiking occurs or has potential to occur in wetland	Yes		No /		<u> </u>
Wetland is a valuable wildlife habitat	Yes	-/	No /		

[Mog

Low

-High

Wetland has high visual/aesthetic quality	Yes		0	
Boating or canoeing feasible in wetland	Yes	/\ _N	0	
Off-road public parking near wetland available	Yes	- / N	- } -	
Safety Hazards (if present list them)	Yes	- \\ N		
Function Present	Yes			
Degree of Function	High	Mod	Low	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	/Moderate to)	0-1/ 1-10
Buffer exists (F=forest) M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	Road/culverts
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	(Small)	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	(Low)	100 -11 - 0 - 1 -
Upland islands	Present	Absent	Mosfly open water
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	
Vegetation density	High	(low)	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		1	
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	(No	
Edge diversity (List types)			
Water regime	(Wetter	Drier	
Habitat features (S=Snags/ L=Fallen logs) SE=seep/spring)	Abundant	Few	Chance / Caston Line
Cover objects (L=Logs/branches-R=Rocks B=Bark)	Abundant	Few	Snags/factenlogs
lat rocks in/near watercourse (stream salamanders)	Present	Absent	Logs
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes)	No No	Birds (120 tax)
Degree of Function	High Mod	Low	Birds, waterfowl stopover

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	Yes	No	
Wetland class diversity	High	Low	
Adjacent upland cover types (E=fereet M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest/mowed fields-roadways
Off-road parking near wettand-available	Yes	No	
Proximity to schools	Near	(Fag.)	
Wetland contains perennial watercourse	Yes	No	
Wetland contains pond/lake	Yes	No	Pond
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	Yes	No	
Degree of Function	High Mod	Low	Limited access

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments	
Wetland contains listed species	Yes		(No)		<u> </u>
Wetland identified as exemplary natural community	Yes	_	(No)_		
Wetland locally/regionally significant	Yes		No		
Function Present	Yes	_	No 2		
Degree of Function	High	Mod	Low		

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		-	Comments
Visible from primary viewing locations	Yes		No	Seen from road
Views absent trash, debris, sign of degradation	Yes		(No)	Litter
Low noise level	Yes		(No)	Road noise [airplanes
Visual landuse contrast with wetland	Yes		No	
Function Present	Yes		No	
Degree of Function	High	(Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	No	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
High/No	Mod	wog	mod	Low	mod		mod	No	No	mod	Nο

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

	MOD	IFIED FUN	CTIONS AND VALUES	S ASSESSMENT			
Project Name: Brunswick NAS Wet Id#:	FA 6 Zone Dat	ት/ ነራ te: N/A Fur	ictional Unit:	Weatl	her: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation	on: N/A	Below average 🗌	Average 🗌	Above Average	e ☐ Don't Know [_ TBD □
Wildlife Investigation Method: Cover search ⊠	Dip netting		Auditory ⊠	Scat 🛛	Tracks 🗵	Minnow Traps 🗌	Electro-shocking \square
Wetland Types(s) Cowardin/Golet Classification	י						. <u> </u>
Class	Subclass						
POW/ Open water	Vegetated	(No	n-Vegetated		<u> </u>		
PEM/PSS Deep Marsh	Dead Woody	Shrub	Sub-shrub	Robust_	. Narrow-lea	ved Broad-lea	ved
PAB/ Shallow Marsh	Robust	Nапоw-lea	ved Broad-lea	ved Fi	oating leaved	<u></u>	
PFL / Seasonally Flooded Flats	Emergent	Shi	rub	<u>_</u>		. <u>-</u>	<u>_;</u>
PEM / Wet Meadow	Ungrazed	Gra	azed	<u>_</u>	. <u>-</u>	<u></u>	
PSS / Shrub Swamp	Sapling	Bushy	Compact	Ac	quatic	: ,	
PFO / Wooded Swamp	Deciduous	Ev	ergreen		 :	<u>_</u>	
Bog	Compact shrub	_Bu	shy shrub	Wooded		nergent	
Water Regimes (Cowardin Modifier):			seaso	onally saturated (on, but are unsatu	Y) - soils saturate irated by end of s	ed to surface, especially eason in most years; s	v early in growing urface water absent
Permanently flooded (H) water covers land surface			excet	ot for ground water	er seepage and o	verland flow	
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the yea	ar except in	years Temp seaso	orarily flooded (A on, but water table	t) – surface water e usually lies well	present for brief period below soil surface for	ls during growing most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout gr	rowing seas	on in Intern variat	nittently flooded (ble periods withou	J) - substrate usu ut detectable seas	ally exposed, but surfa sonal periodicity—	ce water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods most years	especially (early in Artific	ially flooded (K) -	- amount/duration	of flooding controlled i	by dikes dams, pumps,
Hydrology:							•
Ground water discharges present: Y	es (No	5)		Depth to free	e water:		
If Present: Slope or Depressional		_		Depth to sat	turation:		
Surface water depth:	iverage -	maxin	ium -	Signs of alte	ered hydrology?	Yes	No
Hydrology indicators: Inundated S	Saturated in upper	12" Water	marks Drift lines	Sediment de	posits Draina	age patterns within wel	Jands Other
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	ophores Po Rhizospheric oxida	olymorphic le ation	eaves Buttressed t Shallow root system	*•	ertrophied lentice ting leaves	ls Stooling Floating stems	Inflated leaves,
Soil Drainage classes Well Moderate	ely Well So	omewhat Po	orly Poo	rly Very	Poorly	Mapped Hydric Soil	_
Slope: Nearly level Gentle	Moderate		Steep				
Upland Border:							
Stone: Nearly level (Gentle	Mode	rate Stee	ep)			

Meadow

Herbs

Shrubs 5

Mowed lawn

Grass

Farm

Soil: 30D - Udorthents - Adams Complex

Sapling forest

Saplings S

Cover Types:

Leaf litter:	Well developed	Mode	Absent					
Cover objects:	Logs	Bark	Boulders	Rocks				
Evidence of Erosion:	No Yes	(Explain)						
GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)								

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	-
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	(High) Mo	đ Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments	
Soils	Hardpan, shallow ledge	-		
Seeps, springs observed?	Yes	No.		_
Wetland microrelief	Well developed	Non/Poorly		
Wetland contains an outlet, no inlet	Yes	developed No		
Function Present	Yes	[No)	·	-
Degree of Function	High Mod	Low		

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	<u> </u>
Wetland Slope	Gentle	Moderate Steep	<u> </u>
Wetland characterized by variable water level?	Yes	No)	
Wetland in floodplain of adjacent watercourse	Yes	No	D lel A - O
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	Ponded Area
Watershed has a history of economic loss due to flooding	Yes	No-	
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	CLOW	
Wetland microrelief	Well developed	None/Poorly -developed	

Function Present	Yes	No		 ·	<u>-</u> .
Degree of Function	High	Mod)	Low	 	<u> </u>

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	140	·
Waterbody at least 10' deep (Yes	No	
% of pond covered by submerged or emergent vegetation	15-40%	Other	No emergent veg.
Direct stormwater discharge via culvert?	No	(Yes)	
Sandbar present at inlet?	(d)(e)	Yes	. <u> </u>
Water transparency		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	(No.)	Yes	<u> </u>
Pond size ≥0.5 acre	Yes	(No)	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	Yes	
Function Present	Yes	No	Culverts.
Degree of Function	High (Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	<u>-</u>	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & slit	-Law	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low _	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, andercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Med	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	_	Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short	Rondway/Airfield/Evel field
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	Hìgh	I No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	Diffuse	7 Channelized	
Ponded water present	(Yes)	No	1
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	
ndicators of erosion or high water velocities are present	No	Yes	
Function Present	Yes	No .	
Degree of Function	High Mod		-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	(Ves	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	(Channelized)	
Vegetation density	High	(Low)	-
Potential for sediment trapping exists	(es_)	No	<u> </u>
Deep or open water habitat is present	-Yes	No -	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Eow	High	-
Wetland microrelief	Well developed	None, poorly developed	

							_
Function Present	(Yes			No			
Degree of Function	High		Mod		Low	·	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)			<u> </u>				
Criteria			+		-	Comments	
Wildlife food sources in wettand	/	Abunda	ant)		Few		
Vegetation density	_	High			Low		
Nutrients and/or organic matter flushed out of wetland into watercourse		Ves)		No		
Wetland has high degree of plant community structure and species diversity		Yes			No		
Detritus development is present within this wetland		Ves	,		No		
Flowering plants used by nectar gatherers present		Yes			No		
Evidence of wildlife use in wetland		Yes			No	WF egg mass, green frog tadpoles	Red-Spo
Fish or shellfish develop/occur in wetland		Yes			No		1 1075
Function Present		Yes)	_	No	Potentially,	
Degree of Function		High	Мо	g/	Low	<u> </u>	
S&SS/SEDIMENT/SHORELINE STABILIZATION			٠				_
Criteria		+			-	Comments	
Topographical gradient in wetland	Yes)		No			
Potential sediment sources upstream or upslope	Yes)		No			
Wetland border >10' adjacent to pond or water	Yes			No		Ponded area	
Distinct shoreline or bank evident between wetland and water	(No)			Yes			
Open water fetch present	Yes	ノ		No		· · · · · · · · · · · · · · · · · · ·	
Boating activity present	Yes			(MO)			
Floodplain stabilizing trees and shrubs present	Yes		(No)			
Indications of erosion or siltation present	Yes			(N_{\circ})			
Function Present	Yes	}		No			
Degree of Function	High	/	Wod		Low		
REC/RECREATION							
Criteria		+				Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes		/	No			
Fishing is available in or from the wetland	Yes		7	No			
Hunting is permitted in wetland	Yes		Ī	No	/		
Hiking occurs or has potential to occur in wetland	Yes		/	No	/		
Wetland is a valuable wildlife habitat	Yes			No/			

Wetland has high visual/aesthetic quality	Yes	N			
Boating or canoeing feasible in wetland	Yes	/ No	-)	 	 - .
Off-road public parking near wetland available	Yes	No.	, / _		
Safety Hazards (if present list them)	Yes	\ N	· /	 	
Function Present	Yes	- Vi		 -	 _
Degree of Function	High	Mod	Low	-	• '

WLH/WILDLIFE HABITAT

Criteria	_		
	_ +		Comments
Wetland degradation by human activity	Little or None	Moderate to High	culvertina
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest) M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No	
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(Yes	No	Through culverts
Size of landscape block in which wetland is located	Large	Small	Kird and Control 15
Wildlife food sources in wetland	(Abundant)	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	(Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	08
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			T/s/sH
Wetland plant species diversity	High Mod (Low)		19/811
Vernal pool	Yes	(No)	
Edge diversity (List types)			T/c/SH/LL
Water regime	Wetter_2	Drier	
	Abundant	Few	
Cover objects & Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present (Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present.	Absent	
Abundance of invasive exotic flora	None or Low	High	<u> </u>
Function Present	Yes	No	
Degree of Function	High Mod	Low	

Criteria		+	-	Comments	
Wetland contains listed species	Yes		No		
Wetland provides valuable wildlife habitat	(Yes)		No		
Wetland class diversity	High	-	(Low)		
Adjacent upland cover types (F=forest M=Meadow ; S=Sapling/shrub thicket A=Agriculture)	High	_	Low	F/S	
Off-road parking near wetland available	Yes	_	No		
Proximity to schools	Near		Far		
Wetland contains perennial watercourse	(Yes		No		
Wetland contains pond/lake	Yes		No		
Safety hazards (if present list them)					
Site currently used for educational/scientific purposes	Yes		(No)		_
Function Present	Yes		No)		
Degree of Function	High	Mod	Low		

U/H/UNIQUENESS/HERITAGE

Criteria	ŀ	+	<u> </u>	Comments
Wetland contains listed species	Yes		No	
Wetland identified as exemplary natural community	Yes		/ No	
Wetland locally/regionally significant	Yes		(No_	
Function Present	Yes		No	
Degree of Function	High	Mod	Low_	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	†	-	Comments
Visible from primary viewing locations	Yes	No	
Views absent trash, debris, sign of degradation	Yes	No	
Low noise level	Yes	(No)	
Visual landuse contrast with wetland	(Yes)	No	<u> </u>
Function Present	Yes	No	
Degree of Function	High (Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	No]	
Area appears in state or national database	Yes	No	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

<u> </u>				- -				•			
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	\$&\$	ESH
High/No	mod	Mos	Mod	mod	mod	No	mal	No	Ale	mod	No
SUMMARY O	E FUNCTIONS	•					1 1 200		100	1.100	1.00

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable welland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

	MOE	DIFIED FUNCTIONS AN	ND VALUES A	SSESSMENT	Sunny		
Project Name: Brunswick NAS Wet Id#:	FA7 ZONE Da	H [() ite: N/A Functional Ur	it:	Weat	her: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitati	on: N/A Below ave	erage 🗌 💮	Average 🗌	Above Average	□ Don't Know □	TBD 🗌
Wildlife Investigation Method: Cover search	Dip netting	Auditory [₫ :	Scat 🛛	Tracks ⊠	Minnow Traps	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	1						
Class	Subclass	<u> </u>					
POW/ Open water	Vegetated	Non-Vegetate	. .				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	hrub	Robust	Narrow-leav	ved <u>Br</u> oad-leav	ed
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leaved	<u>F</u>	loating leaved	<u></u>	
PFL / Seasonally Flooded Flats	Emergent	Shrub					_
PEM / Wet Meadow	Ungrazed	Grazed		<u> </u>			·
PSS / Shrub Swamp	Sapling	Bushy	Compact _	Α	quatic		
PFO7 Wooded Swamp	Deciduous	Evergreen			<u> </u>		
Bog	Compact shrub	Bushy shrub		<u>Wooded</u>		ergent	
Water Regimes (Cowardin Modifier):			Season	ily saturated (Y) - soils saturated urated by end of si	d to surface, especially eason in most years; su	early in growing rface water absent
Permanently flooded (H) - water covers land surface	ce throughout yea	ar in all years	except fo	r ground wate	er seepage and ov	erland flow	
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the ye	ar except in years	Tempora season, l	rily flooded (A but water tabl	A) - surface water le usually lies well	present for brief periods below soil surface for m	during growing ost of the season
Semi-permanently flooded (F) - surface water persmost years	ists throughout g	rowing season in			(J) - substrate usua ut detectable seas	ally exposed, but surfac onal periodicity~	e water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		s especially early in	Artificially etc	/ flooded (K)	- amount/duration	of flooding controlled by	dikes dams, pumps,
Hydrology:							
Ground water discharges present:	es No	0		Depth to fre	e water:		
If Present: Slope or Depressional				Depth to sa	turation:		
Surface water depth: a	verage -	maximum -		Signs of alto	ered hydrology?	Yes	No_No
Hydrology indicators: Inundated S	aturated in upper	12 Water marks [Drift lines	Sediment de	posits <u>Praina</u>	ge patterns within wetta	ends Other
Plant Adaptations to Hydrology: Pneumatestems, or roots Adventitious roots F	ophores Po Rhizospheric oxid		Buttressed trees root systems		ertrophied lenticel ting leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: (Well) Moderate	ly Well S	omewhat Poorly	Roorly	> Very	Poorly	Mapped Hydric Soil	
Slope: (Nearly level Gentle	Moderate	Steep					
Upland Border:	•						
Slope: Nearly level	entle	Moderate	Steep	>			
Cover Types: Mature forest	Sapling fo	rest Shrub th	ske t	Meadow	Mowed lawn	Farm	•
Vegetation Density(S/M/D): Trees	m. &	aplings m	Shrubs 5	Herbs $\gamma \gamma$	Grass		

Sail : 30D - Uderthents - Adams Complex

	Leaf litter:	Well d	eveloped	M	oderately well	develo	ped	Absent	
-	Cover objects:	Togs	_	Bark		Boulde	ers	Rocks	
	Evidence of Erosion:	No	(es)	(Explain)	Stream	15	somewhat	incipal	
GMP/GE	MINDINATED DECHARC	të /Essalssali		A1			0-0.204	11101764	

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Griteria	<u> </u>		Comments	
Soils	(Hardpan, shallow ledge			<u> </u>
Seeps, springs observed?	Yes	No	-	
Wetland microrelief	Well developed	Non/Poorly	_	
Wetland contains an outlet, no inlet	Yes	developed	Alexander	-
Function Present	Yes	No	Along stream	<u> </u>
Degree of Function	High Mod	Low	-	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief (Weil developed	None/Poorly developed	

Function Present	Yes		No		
Degree of Function	High	9		Low	Relatively small area

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shro	ıb, Meadow	Lawn	Also near roadway
Shallow littoral zone with emergent vegetation present?	Yes		(No)	
Waterbody at least 10' deep	Yes		(No)	
% of pond covered by submerged or emergent vegetation	15=40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No _		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	·
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream) Seasonal Stream

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt_	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	·
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly intolerant Mostly to		Mostly tolerant	
Function Present	Yes .	_	No			
Degree of Function	High	Mod	Low			

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	(Yes)	No No	
Duration of water retention in wetland	Long	Short	Roadway
Evidence of sediment trapping in wetland	(ES)	Low	
Vegetation density	digh	No	-
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	No	(Yes)	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	- >	<u> </u>
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	Yes	No No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	
Indicators of erosion or high water velocities are present	No	(Yes)	
Function Present	Yes	No	
Degree of Function	High Mod	J	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria .	+		Comments
Wetland size in relation to watershed	Large	Small	Sommens
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	(No)	<u> </u>
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No -	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high ctay	Sand/gravel	
Wetland basin topographic gradient	content	High	
Wetland microrelief	Well developed	None, poorly developed	

· ·					
Function Present	 Yes)	No			
Degree of Function	 High	Mod	Low		

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+		Comments
Wildlife food sources in wettand	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	·
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	(Yes)	No	Insects
Fish or shellfish develop/occur in wetland	Yes	No /	
Function Present	Yes	No	
Degree of Function	High Mod	Low/	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	÷	-	Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	Yes	No	
Wetland border >10' adjacent to pond or water	Yes	No	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	(No)	
Boating activity present	Yes	No	
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes	No	water not clear
Function Present	Yes	No	
Degree of Function	High	vlod (Low)	<u> </u>

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No)	
Fishing is available in or from the wetland	Yes	No \	
Hunting is permitted in wetland	Yes	No	
Hiking occurs or has potential to occur in wetland	Yes	No/	
Wetland is a valuable wildlife habitat	Yes	N9	

Yes	No				
Yes	No	<u> </u>			
Yes	No				_
Yes	No	-/	-		
Yes	No.	/ _			
High			-		
	Yes Yes Yes	Yes No Yes No Yes No Yes No	Yes No No Yes No Yes No No Yes No No Yes No	Yes No Yes No Yes No No No Yes No No No Yes No	Yes No No Yes No Yes No No No Yes No

WLH/WILDLIFE HABITAT

MCH/MITOTILE HABITA!		•	`	
Criteria	+			Comments
Wetland degradation by human activity	Little or None		Moderate to	Stormwater culvert at end
Wetland fragmentation by development	Little or None		Moderate to	Road ways / culverts
Buffer exists (E=forest) M=Meadow (S=Sapling/shrub thicket)=Lawn A=Agriculture)	Yes	_	No	Troops ways / curver 15
Buffer width	Good to Excel	llent	Eair to Poor	Ne con al
Connectivity with other wetlands	Yes		No)	Narrow border-
Size of landscape block in which wetland is located	Large_		Şmall	Culverted
Wildlife food sources in wetland	Abundant		Few	
Interspersion of vegetation and open water	High		Low)	
Upland islands	Present		Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	·	Low	M
Vegetation density	(Ligh)	-	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)				Sh/H
Wetland plant species diversity	High Mod	Low		ои/ H
Vernal pool	Yes		(No	
Edge diversity (List types)				
Water regime	Wetter		Drier	
Habitat features (S=Snags (L=Fallen logs SE=seep/spring)	Abundant		(Few)	
Cover objects (= Logs/branches R=Rocks B=Bark)	Abundant		Eew	1 cost 1 modes
Flat rocks in/near watercourse (stream salamanders)	Present	_	Absent	Loas/branches
Sphagnum hummocks next to shallow pools	Present		Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	—— (Absent	
Abundance of invasive exotic flora	None or Low)	High	
Function Present	(M)	_	No 🙃	
Degree of Function	- -	l fod	Low	

Criteria		+		Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes	(No	
Wetland class diversity	High	,	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	Hìgh		Low	F/s
Off-road parking near wetland available	Yes	((No)	
Proximity to schools	Near	- ''	Far	
Wetland contains perennial watercourse	Yes	((No)	<u> </u>
Wetland contains pond/lake	Yes		(No.)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes	(No	
Degree of Function	High	Mod .	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes	<u>. </u>	(No)	
Wetland identified as exemplary natural community	Yes		No	
Wetland locally/regionally significant	Yes		No	<u></u>
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	<u> </u>	+		Comments
Visible from primary viewing locations	Yes		(No	
Views absent trash, debris, sign of degradation	Yes		(No)	
Low noise level	Yes	(No _	Airplanes/Roadway
Visual landuse contrast with wetland	Yes		No	
Function Present	Yes	(No)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+				Comments
Wetland contains or known to contain federal listed species or habitat	Yes		No	\setminus	
Wetland contains critical habitat for state or federal listed species	Yes		No	/	
Area appears in state or national database	Yes	1	No/		

CONCLUSION: SUMMARY TABLE (X-present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
mod/mod	mod	<u></u>	Low	Lew	, Low		low			low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the welland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the welland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 8 Date	e: N/A Functional Un	it:	Weath	er: N/A	Time Start: N	/A Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Re	ecent Precipitatio	n: N/A Below ave	erage 🗌	Average 🗌	Above Average	e ☐ Don't Kno	w 🗌 TBD 🗒
Wildlife Investigation Method: Cover search ⊠	Dip netting [☐ Auditory [ব	Scat 🛛	Tracks 🛛	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n						·
Class	Subclass		<u></u> .				
POW/ Open water	Vegetated	Non-Vegetated	d		·		.=.
PEM/PSS Deep Marsh	Dead Woody	ShrubSub-sl	hrub	Robust	Narrow-leav	ved Broad	-leaved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Flo	ating leaved		<u> </u>
PFL / Seasonally Flooded Flats	Emergent_	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed	_				
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aq	uatic		·
PFO / Wooded Swamp	Deciduous	Evergreen	Mixe	<u>.</u> d		. <u></u>	
Bog	Compact shrub	Bushy shrub		Wooded		ergent	
Water Regimes (Cowardin Modifier):			(Seasona	lly saturated (Y but are unsatur	') - soils saturated ated by end of se	d to surface, especi eason in most year:	ially early in growing—— s; surface water absent
Permanently flooded (H) - water covers land surfa-			except fo	or ground water	seepage and ov	erland flow	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the yea	r except in years	Tempora season,	rily flooded (A) but water table	- surface water j usually lies well	present for brief per below soil surface l	riods during growing for most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout gro	owing season in	Intermitte <i>variabl</i> e	ently flooded (J periods without) - substrate usu: t detectable seas	ally exposed, but su conal periodicity~	ırface water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		especially early in	Artificially etc	y flooded (K) -	amount/duration	of flooding controlle	ed by dikes dams, pumps,
Hydrology:							
Ground water discharges present:	es No			Depth to free	water:		
If Present: Slope or Depressional				Depth to satu	iration:		
Surface water depth:	iverage -	maximum -		Signs of alter	ed hydrology?	Yes	No
Hydrology indicators: Inundated (5	Saturated in upper	12" Water marks L	Orift lines	Sediment dep	osits Draina	ige patterns within v	wetlands Other
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	ophores Pol Rhizospheric oxida	,	Buttressed tree root systems		rtrophied lenticel ng leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well (Soi	mewhat Poorly	Poorly	Very I	Poorly	Mapped Hydric S	oil
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:							
Slope: (Nearly level)	Sentle	Moderate	Steep				
Cover Types: Mature-forest	Sapling for	est Shrub thi	cket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	₩1 Sa	plings 5	Shrubs	Herbs	Grass		
Soil: 11A - Hapladuents -1	Finch con	aplex					•

			•				
Leaf litter:	Well developed	N	Moderately well developed		Absent		
Cover objects:	Logs	Bark	Boulders		Rocks		
Evidence of Erosion:	(No) Yes	(Explain)					
GWR/GROUNDWATER RECHARGE	(Excluding condition	on: Slope Wetl	and)				
Criteria	+		· •	Comments			_ ·
Soils	Sand/gravel outwa	ash Hardpa	an, tight fine-grained soils, v ledge				
Wetland associated w/ perennial or seasonal watercourse	Ŷes	(No)	, isago				
Slope	Gentle)	Modera	ate or Steep				
Function Present.	(Yes) No	<u> </u>		-			
Degree of Function	High	Mod	Low				
Criteria		+		Comments			
Soils	Hardpan, st	nallow ledge				-	
Seeps, springs observed?	Yes	 -	(No)			·	
Wetland microrelief	Well develo	ped	Non/Poorly developed		-	<u> </u>	
Wetland contains an outlet, no inlet	Yes		No)	-			 :
Function Present	Yes		(No)			_ 	
Degree of Function	High	Mod	Low	<u>.</u>			
FFA/FLOODFLOW ALTERATION (Ex	cluding condition:	Slope Wetland)	_			
Criteria .		+	-	Comments			 '
Wetland size in relation to watershed		Large	Small		<u> </u>		
Amount of impervious surface in wettar	nd waterched	Largo	C-2				

Small Large Wetland Slope Gentle Moderate Steep Wetland characterized by variable water level? (No) Yes Wetland in floodplain of adjacent watercourse No. Yes Valuable properties, structures, or resources located in or near floodplain downstream from wetland Watershed has a history of economic loss due to No Yes Yes No flooding Untrown Wetland outlet restricted Yes No No inlot/outlet Wetland vegetation density (Low High None/Foorty developed Well Wetland microrelief developed

Function Present	Yes (No)		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition Not associated with pond/lake)

Criteria		+	-	Comments			
Dominant land use adjacent to Waterbody	Forest, Shru	b, Meadow	Lawn	<u>.</u>			
Shallow littoral-zone with emergent vegetation present?	Yes		No		<u></u>		
Waterbody at least 10' deep	Yes	•	No				
% of pand covered by submerged or emergent vegetation	15-40%	<u> </u>	Other		_		
Direct stormwater discharge via culvert?	No	<u> </u>	Yes			<u>-</u> .	<u> </u>
Sandbar present at inlet?	No		Yes			_	
Water transparency	High-		Low				
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes		<u>-</u>		<u> </u>
Pond size ≥0.5 acre	Yes		No				
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	_	Yes		Market Comments	•	, <u></u>
Function Present	Yes		No				
Degree of Function	High	Mod	Low				

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition, Not associated with perennial stream)

Criteria	Ť	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No _	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	The Residence of the State of t
Dominant bottom substrate	Gravei/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	The state of the s
Watershed development	Low	High	1
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes	""	No)	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria		- +			Comments
Sources of sediments or toxicants upstream	Yes		N		- Commonto
Duration of water retention in wetland	Long '		-	ort	
Evidence of sediment trapping in wetland	Yes		Lo		
Vegetation density	High	_	No.		
Wetland edge broad and intermittently aerobic	Yes		Lo	<u> </u>	
Drainage ditches in wetland	No		Ye		
Water flow through wetland	Diffuse		┼	annelized	
Ponded water present	Yes	- -	No	-	
Wetland basin topographic gradient	Low	<u> </u>	Hig		
Fine grained mineral or organic soils present	Yes	<u>-</u> -	No		
Watercourse, if present, has visible velocity decreases in wetland	Yes	-	No	<u> </u>	
Indicators of erosion or high water velocities are present	No		Ye		
Function Present	Yes		No		
Degree of Function	High	Mod	1,10	Low	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	4		Comments
Wetland size in relation to watershed	Large	Smali	Continents
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No.	
Deep or open water habitat is present	Yes	No	·
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	No	
Degree of Function	High	Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition No Outlet)

Criteria		+	-	Comments	<u> </u>	
Wildlife food sources in wetland	Abundant		Few			. <u>.</u> .
Vegetation density	High		Low			
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No		<u>_</u>	
Wetland has high degree of plant community structure and species diversity	Yes		No			
Detritus development is present within this wetland	Yes		No			
Flowering plants used by nectar gatherers present	Yes		No			
Evidence of wildlife use in wetland	Yes		No	·		
Fish or shellfish develop/occur in wetland	Yes		No		<u> </u>	. <u></u>
Function Present	Yes		-No-			
Degree of Function	High	Mod	Low			

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+			Comments
Topographical gradient in wetland	Yes] !	No	
Potential sediment sources upstream or upslope	Yes	i	No	
Welland border >10' adjacent to pond or water	Yes		No	
Distinct shoreline or bank evident between wetland and water	No		Yes	
Open water fetch present	Yes		No	
Boating activity present	Yes		No	
Floodplain stabilizing trees and shrubs present	Yes		No	
Indications of erosion or siltation present	Yes		No	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No	
Fishing is available in or from the wetland	Yes	No	
Hunting is permitted in wetland	Yes	No	
Hiking occurs or has potential to occur in wetland	Yes	No	
Wetland is a valuable wildlife habitat	Yes	No	

Wetland has high visual/aesthetic quality Boating or canoeing feasible in wetland		Yes N		 .	 	 	
Off-road public parking near wetland available	Yes	Yes !		· · ·	<u> </u>	 	
Safety Hazards (if present list them)	Yes	-		_	 - .	 	
Function Present	Yes		No		 	 	
Degree of Function	High	Mod	•	Low	1		

WLH/WILDLIFE HABITAT

Criteria			T	Comments
Wetland degradation by human activity	Little or No	· -	Moderate to	Comments
Wetland fragmentation by development		-	High Moderate to	
L	Little or No	ne	High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes		No	
Buffer width	Good to Ex	cellent	Fair to Poor	
Connectivity with other wetlands	Yes		No	
Size of landscape block in which wetland is located	Large		Small	
Wildlife food sources in wetland	Abundant		Few	
Interspersion of vegetation and open water	High		Low	
Upland islands	Present	-	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Low	
Vegetation density	High		Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb Lt_Leaf litter)			_	
Wetland plant species diversity	High Mod	Low	_	<u> </u>
Vernal pool	Yes		No	
Edge diversity (List types)	 -			
Water regime	Wetter		Drier -	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	<u> </u>	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	_	Few	
Flat rocks in/near watercourse (stream salamanders)	Present		Absent	
Sphagnum hummocks next to shallow pools	Present		Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Absent	
Abundance of invasive exotic flora	None or Lov		High	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

Criteria		+	-	Comments
Wetland contains listed species	Yes	Yes		
Wetland provides valuable wildlife habitat	Yes		No	
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	High		
Off-road parking near wetland available	Yes	Yes		
Proximity to schools	Near	Near		
Wetland contains perennial watercourse	Yes		No	
Wetland contains pond/lake	Yes	_	No	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes	Yes		
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		l		Comments
Wetland contains listed species	Yes	Yes		
Wetland identified as exemplary natural community	Yes	Yes		
Wetland locally/regionally significant	Yes	Yes		
Function Present	Yes	Yes		
Degree of Function	High .	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	Yes		No	
Views absent trash, debris, sign of degradation	Yes		No	
Low noise level	Yes		No	
Visual landuse contrast with wetland	Yes		No	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	No	

Function Present	Yes		No	
Degree of Function	High	Mod	Low	ļ

CONCLUSION: SUMMARY TABLE (X≃present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/NO	No	No_	No _	No_	No	No	LOW	No	No	70	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shelffish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	A9 Zone Date: N/A Func	tional Unit:	Weather: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation: N/A	Below average □	Average Above Avera	age 🗌 Don't Know 🗖	TBD 🔲
Wildlife Investigation Method: Cover search	Dip netting [Auditory 🛛	Scat 🛛 🗼 Tracks 🖾	Minnow Traps	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n			. <u></u>	
Class	Subclass	,			·
POW/ Open water	Vegetated Non-	Vegetated			
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust Narrow-k	eaved Broad-leave	ed
PAB/ Shallow Marsh	Robust Narrow-leave	d Broad-leave	d Floating leaved		
PFL / Seasonally Flooded Flats	Emergent Shru	<u> </u>			
PEM / Wet Meadow_	Ungrazed Graz	ed			
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquatic	_ _ .	<u> </u>
PFO / Wooded Swamp	Deciduous Ever	green Mikea	s conifer		-
Bog	Compact shrub Bush	y shrub		mergent	
Water Regimes (Cowardin Modifier):		\season.	ally saturated (Y) - soils satura but are unsaturated by end o	f season in most years; sur	ariy in growing \ face water absent}
Permanently flooded (H) - water covers land surfa-		except for	or ground water seepage and	overland flow	
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the year except in ye	ears Tempora season,	arily flooded (A) - surface wald but water table usually lies w	er present for brief periods ell below soil surface for m	during growing ost of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout growing seasor	rin Intermitt variable	ently flooded (J) - substrate u periods without detectable se	sually exposed, but surface pasonal periodicity—	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods especially ea most years	rly in Artificial etc	ly flooded (K) - amount/duration	on of flooding controlled by	dikes dams, pumps,
Hydrology:					
Ground water discharges present; Y	es No		Depth to free water:		
If Present: Slope or Depressional			Depth to saturation:		
Surface water depth:	iverage - maximu	m -	Signs of altered hydrology?		No
Hydrology indicators: Inundated \$	aturated in upper 12" Water n	narks Drift lines	Sediment deposits Dra	inage patterns within wetla	
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	lophores Polymorphic lea Rhizospheric oxidation	ves Buttressed tree Shallow root systems	es Hypertrophied lenti Floating leaves	cels Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Somewhat Poor	ly Poorly	Very Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep			
Upland Border:	•				
Slope: Nearly level (Gentle Modera	te Steep			•
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow Mowed law	n Farm .	
Vegetation Density(S/M/D): (Trees	M Saplings S	Shrubs	Herbs Grass		
Soil: WWB - windsor	Loamy Sand			,	

Leaf litter:	Well developed	Mode	Absent	
Cover objects:	togs	Bark	Boulders	Rocks
Evidence of Erosion:	No. Woo	/Evalai-1		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Crîteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	1	No.	
Slope	Gentie	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow	ledge	
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet Yes		,No	No obs. inlet or outles
Function Present	Yes		THE DESCRIPTION OF BUILDING
Degree of Function	High !	Mod Low	Isolated wetland?

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	_	Comments
Wetland size in relation to watershed	Large	Small)	
Amount of impervious surface in wetland watershed	Large	Small	('
Wetland Slope	Gentie	Moderate Ste	ep
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	Yes	No	No outlet
Wetland vegetation density	High	Low	Vio Overtee.
Wetland microrelief	Well developed	None/Poorty developed	

Function Present Yes No		(N)			
Degree of Function	High	Mod	Low		

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land-use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	·
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No	-	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/siit	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	<u></u>
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable; eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (failen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	·

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria		İ	+	-	Comments
Sources of sediments or toxicants upstream		Yes		No	Roadway
Duration of water retention in wetland		Long		Short	No outlet
Evidence of sediment trapping in wetland		Yes		Low	770 0 00710 1
Vegetation density		High		(NO) ow	
Wetland edge broad and intermittently aerobic		Yes		Low	
Drainage ditches in wetland		(No)		Yes	
Water flow through wetland		Diffuse		Channelized	
Ponded water present		Yes		No	Spacentill
Wetland basin topographic gradient	·	Low		High	scasonally pended
Fine grained mineral or organic soils present	<u> </u>	Yes		No	-
Watercourse, if present, has visible velocity decreases in wetland		Yes		No	No watercourse
Indicators of erosion or high water velocities are present	<u> </u>	No)		Yes	100 000, 0 0000
Function Present		Yes		No	-
Degree of Function		 High	Mod	Low	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+ .		Comments
Wetland size in relation to watershed	Large	(Small)	_
Potential sources of excess nutrients upstream	Yes	No.	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Qiffuse)	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Town	High	
Wetland microrelief	Well developed	None, poorly developed)	

							<u> </u>
Function Present	Yes				No		
Degree of Function	High	Mo		d Low			
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)							
Criteria			. +				Comments
Wildlife food sources in wetland	<	Abunda	int)			Few	
Vegetation density	(Low	
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes				(No)	
Wetland has high degree of plant community structure and species diversity		Yes				No	Forested wetland
Detritus development is present within this wetland	((Yes)				No	
Flowering plants used by nectar gatherers present		Yes				No ·	
Evidence of wildlife use in wetland		Yes				No	Birdslinsects
Fish or shellfish develop/occur in wetland		Yes			((No)	
Function Present		Yes	,			No	
Degree of Function		High	Мо	d	<u> </u>	_ow	
S&SS/SEDIMENT/SHORELINE STABILIZATION							
Criteria		+			-	-	Comments
Topographical gradient in welland	Yes			No			·
Potential sediment sources upstream or upslope	Yes			No			<u> </u>
Wetland border >10' adjacent to pond or water	Yes			No			_
Distinct shoreline or bank evident between wetland and water	No	·		Ye	5		
Open water fetch present	Yes			No			
Boating activity present	Yes			No			
Floodplain stabilizing trees and shrubs present	Yes			No	· ·		
Indications of erosion or siltation present	Yes			No			
Function Present	Yes			(No	_ د		
Degree of Function	High	·	Mod		Lov	N	
REC/RECREATION							
Criteria		+				- .	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes			N	9/		
Fishing is available in or from the wetland	Yes			N	o]		
Hunting is permitted in wetland	Yes			N	0		
Hiking occurs or has potential to occur in wetland	Yes			N	o <u> </u>		
Wetland is a valuable wildlife habitat	Yes		/	Į N	9		

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Wetland has high visual/aesthetic quality	Yes		vo \	
Boating or canoeing feasible in wetland	Yes	/ N	vo /	
Off-road public parking near wetland available	Yes		vo i	
Safety Hazards (if present list them)	Yes		10	
Function Present	Yes	1/4		
Degree of Function	High	Mod	Low	No public access

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to High—	Roadways / Pipeline area
Wetland fragmentation by development	Little or None	Moderate to High	Roadways
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No No	1.64(10) 37(3)
Buffer width	Good to Excellent	Fair to Poor	Fragmented
Connectivity with other wetlands	Yes	(No)	The difference of the second
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(ow)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	
Vegetation density	High	Low	· · · · · · · · · · · · · · · · · · ·
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		<u> </u>	
Wetland plant species diversity	High Mod Low	<u> </u>	
Vernal pool	Yes	(No)	
Edge diversity (List types)			
Water regime	Wetter	Orier	
Habitat features (S=Snags /=Fallen logs SE=seep/spring)	Abundant <	Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent)	
Abundance of invasive exotic flora	None or Low	High	· ·
Function Present	/Yes)	No	
Degree of Function	High Mod	Low	

Criteria		+		Comments
Wetland contains listed species	Yes		(No)	
Wetland provides valuable wildlife habitat	Yes		(No)	
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	No access
Wetland contains perennial watercourse	Yes		(No)	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)			1	
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes	,	(No)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes	/	No	
Wetland identified as exemplary natural community	Yes.	(No	
Wetland locally/regionally significant	Yes	\	No	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments
Visible from primary viewing locations	Yes		(No)	
Views absent trash, debris, sign of degradation	Yes		No	
Low naise level	Yes .		(No)	Roadway
Visual landuse contrast with wetland	Yes		No	
Function Present	Yes	Yes (
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	No /	
Area appears in state or national database	Yes	W)	<u> </u>

Function Present	Yes		(No)
Degree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	, F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Low/No	No	No	Low	Lew	No	No	Low	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

	2	conel mo	DIFIED F	UNCTIONS	AND VALUES	ASSESSMENT	•		
	Project Name: Brunswick NAS Wet Id#:	FA 10 D	ate: N/A	Functional	Unit:	Weat	her: N/A	Time Start: N/A	Time Stop: N/A
	Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitat	ion: N/A	Below a	average 🗌	Average 🗌	Above Average	e ☐ Don't Know ☐] TBD ∏
	Wildlife Investigation Method: Cover search 🛛	Dip netting	g 🔲	Auditor	y 🛛	Scat 🗵	Tracks 🛛	Minnow Traps 🗌	Electro-shocking
	Wetland Types(s) Cowardin/Golet Classification	n		-					
	Class .	Subclass	·			1			
Ì	POW/ Open water	Vegetated		Non-Vegeta	ted				
	PEM/PSS Deep Marsh	Dead Woody	Shrub	Sub	-shrub	Robust	Narrow-leav	ved Broad-lea	ved
	PAB/ Shailow Marsh	Robust	Narrow	-leaved	Broad-leav	ed Flo	oating leaved		
	PFL / Seasonally Flooded Flats	Emergent .		Shrub					
ļ	PEM / Wet Meadow	Ungrazed		Grazed					
Ĵ	PSS / Shrub Swamp	Sapling	Bushy	>	Compact	Ac	quatic		
\leq	PFO / Wooded Swamp	Deciduous		Evergreen			· .		
Į	Bog	Compact shrub)	Bushy shrut		Wooded		ergent	
	Water Regimes (Cowardin Modifier):							d to surface, especially eason in most years; su	
	Permanently flooded (H) - water covers land surface	• ,	-				r seepage and ov		
	Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the ye	ear excep	t in years				present for brief periods below soil surface for n	
	Semi-permanently flooded (F) - surface water pers most years	ists throughout g	rowing s	eason in			J) - substrate usua it detectable seas	ally exposed, but surfac onal periodicity~	ce water is present for
	Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		s especia	ally early in	Artificia etc	lly flooded (K) -	amount/duration	of flooding controlled b	y dikes dams, pumps,
	Hydrology:								
	Ground water discharges present: Y	es . No	0			Depth to free	water:		
	if Present: Slope or Depressional					Depth to sate	uration:		
	Surface water depth:	verage -	ma	aximum -		Signs of alter	red hydrology?	Yes	No
	Hydrology indicators: Inundated §	aturated in upper	r 12") W	ater marks	Drift lines	Sediment dep	osits Draina	ge patterns within wetla	ands Other
	Plant Adaptations to Hydrology: Pneumato stems, or roots Adventitious roots R	ophores Po Rhizospheric oxida		ic leaves Shallov	Buttressed tree v root systems		ertrophied lenticels ing leaves	s Stooling Floating stems	inflated leaves,
	Soil Drainage classes: Well Moderate	ly Well S	omewhat	t Poorly	Poorly	Very	Poorly	Mapped Hydric Soil	
	Slope: Nearly level Gentle	Moderate		Steep	<u> </u>				
	Upland Border:								
	Slope: Nearly level G	Sentle	Me	oderate	Steep				
	Cover Types: Mature forest)	Sapling fo	rest	Shrub	thicket	Meadow	Mowed lawn	Farm	
	Vegetation Density(S/M/D): Trees		aplings	M	Shrubs	Herbs	Grass		
	Wa - Walpole fine sandy	loom - h.	ydri(

Leaf litter:	Well developed,	Modera	ately well developed	Absent
Cover objects:	Logs	Bark	Boulders .	Rocks
Evidence of Erosion:	No Yes	(Explain)	•	

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments	
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge		•
Wetland associated w/ perennial or seasonal watercourse	Yes	(P)		
Stope	Gentle	Moderate or Steep		· · · · · · · · · · · · · · · · · · ·
Function Present	Yes No			
Degree of Function	High Mod	Low	<u> </u>	

GWD/GROUNDWATER DISCHARGE

Criteria	. 4		Comments
Soils	Hardpan, shallow le	dge	
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	(Weil developed)	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	(No)	tsolated, notifiet or outlet
Function Present	Yes	No)	(320.6. 47) continue of Oblite.
Degree of Function	High M	od Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-		Comments
Wetland size in relation to watershed	Large	(Small)		
Amount of impervious surface in wetland watershed	Large)	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	(Yes)	No		
Wetland in floodplain of adjacent watercourse	Yes	No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		
Watershed has a history of economic loss due to flooding	Yes	No		Unknown.
Wetland outlet restricted	Yes	No		No outlet
Wetland vegetation density	(High)	Low		
Wetland microrelief	(Well developed	None/Poorly developed		

Function Present	Yes	No		
Degree of Function	Hìgh	Mod	Low	·

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments
Dominant-land use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn .	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	The same same same same same same same sam
% of pond covered by submerged or emergent vegetation	15-40%		Other	- Andrew Control of the Control of t
Direct stormwater discharge via culvert?	No		Yes	-
Sandbar present at inlet?	·No		Yes	
Water transparency ,	High	Care in the Control of the Control	Low-	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	-	Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	<u></u>
Degree of Function	High	Mod	Low	·

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition) Not associated with perennial stream)

Criteria	-‡-	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	- Control of the Cont
Barriers to anadromous fish (dams/high culverts)-present in stream reach	No	Yes	- Company of the Comp
Dominant bottom substrate	Gravel/cobbles	Sand/silt	THE REPORT OF THE PARTY OF THE
Substrate embeddedness by sand & silt	-i_ow_	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide -	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	÷		Comments
Sources of sediments or toxicants upstream	(Yes)	No	Runoff from roadways
Duration of water retention in wetland	Long)	Short	ierror in the stage
Evidence of sediment trapping in wetland	Yes	(Low)	
Vegetation density	(High	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	/Low\	High	
Fine grained mineral or organic soils present	(Yes)	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	No watercourse.
Indicators of erosion or high water velocities are present	N6)	Yes	V-0
Function Present	//es)	No	
Degree of Function	(High) (Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Smail)	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	(Yes)	No ·	-
Emergent vegetation and/or dense woody stems are dominant	Yes)	No	
Water flow through wetland	(Diffuse)	Channelized	
Vegetation density	(High	Low	
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	(Well developed)	None, poorly developed	

Function Present	(Yes)	No		
Degree of Function	(High)	Mod Lov	N	

PE/PRODUCTION EXPORT (Excluding Condition:/No Outlet)

Criteria		+	-	Comments
Wildlife Tood sources in wetland	Abundant		Few	The state of the s
Vegetation density	High		Low	a large transmission of the same of the sa
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	· markette Sales and Markette Sa	No	
Wetland has high degree of plant community structure and species diversity	Yes		No	
Detritus development is present within this wetland	Yes	···	-No	
Flowering plants used by nectar gatherers present	Yes		No	
Evidence of wildlife use in wetland	Yes		No	
Fish or shellfish develop/occur in-welland	Yes		No	and the second s
Function Present	Yes		No	
Degree of Function	High	Mod	Low	<u></u>

\$&\$\$/\$EDIMENT/SHORELINE STABILIZATION

Criteria	+		-	Comments
Topographical gradient in wetland	Yes	(No)		
Potential sediment sources upstream or upslope	Yes	No		
Wetland border >10' adjacent to pond or water	Yes	No)	
Distinct shoreline or bank evident between wetland and water	No	Yes		
Open water fetch present	Yes	N ₀		
Boating activity present	Yes	(No)		<u></u>
Floodplain stabilizing trees and shrubs present	(Yes)	No		
Indications of erosion or siltation present	Yes	(No)		
Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	+		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	202	
Fishing is available in or from the wetland	Yes	(No)		
Hunting is permitted in wetland	Yes	(No)		
Hiking occurs or has potential to occur in wetland	Yes	No		
Wetland is a valuable wildlife habitat	Yes	No)		

Wetland has high visual/aesthetic quality	Yes	(No		<u> </u>		
Boating or canoeing feasible in wetland	Yes	No	<u> </u>			
Off-road public parking near wetland available	Yes	No	7		-	
Safety Hazards (if present list them)	Yes	No			··· ·	· · · ·
Function Present	Yes	No				
Degree of Function	High	Mod	Low	_		

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	/Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	(High No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	(No)	
Size of landscape block in which wettand is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Wooded swamp + Sarub swamp
Vegetation density	High	Low	p streep you bring
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, sapling, shrub, herb, leaflitter
Wetland plant species diversity	High Mod) Lo	w	- say say state there i ear little
Vernal pool	Yes	(No)	
Edge diversity (List types)			The Contino Love
Water regime	(Wetter	Drier	Tree, saping herb
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few)	Fall on load
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few)	Fallen logs Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	(Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	(None of Low)	High	
Function Present	(Yes)	No	
Degree of Function	High Mod	Low	

Criteria		+		Comments		_	_
Wetland contains listed species	Yes		NO_		<u></u>		<u>-</u>
Wetland provides valuable wildlife habitat	Yes	_	(No)		<u>.</u>		_
Wetland class diversity	High	_	Low	<u>_</u> .			
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	<u>_</u>	Toy	Forest.			<u></u>
Off-road parking near wetland available	Yes		(No)_				 .
Proximity to schools	(Near		Far	Rawdoin	college		
Wetland contains perennial watercourse	Yes		No)			<u>-</u>	_
Wetland contains pond/lake	Yes		_ (No) _				_
Safety hazards (if present list them)				<u></u>			
Site currently used for educational/scientific purposes	Yes	<u>_</u>	(No)			_	
Function Present	Yes	<u> </u>	<u>√vô</u>				
Degree of Function	High	Mod	Low_		<u>-</u>		_

U/H/UNIQUENESS/HERITAGE

Criteria		÷	<u> </u>	Comments
Wetland contains listed species	Yes		No	
Wetland identified as exemplary natural community	Yes		ক্রিপ্	
Wetland locally/regionally significant	Yes		(P)	
Function Present	Yes		<u> </u>	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments	<u> </u>
Visible from primary viewing locations	Yes		No		
Views absent trash, debris, sign of degradation	Yes		₩.		
Low noise level	Yes		(No)		
Visual landuse contrast with wetland	Yes		(NO)_		<u></u>
Function Present	Yes		(vo)		
Degree of Function	High	Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria		÷	-	Comments
Wetland contains or known to contain federal listed species or	Yes		(No)	
habitat Wetland contains critical habitat for state or federal listed species	Yes		M)	
Area appears in state or national database	Yes		[N)	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

					, <u> </u>					•	
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Low/No	mod	No	High	High	NO	No	الموا	No	1/2	No	Na
SUMMARY C	DE ELINCTIONS	2	₹	- i		J	<u> </u>				NO

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

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Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

	cone i) FUNCTIONS AND V			Time Start	: N/A	Time Stop: N/A
Project Name: Brunswick NAS Wet Id#:		/A Functional Unit:	·	eather: N/A		n't Know □	TBD □
Site investigator:Amy Goodstine & Chris Akios R			_				
Wildlife Investigation Method: Cover search ⊠	Dip netting [Auditory 🛚	Scat 🖾	Tracks 🛛	Minnow Tra	aps 🖂	Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classificatio	n .						
Class	Subclass			<u></u>			
POW/ Open water	Vegetated	Non-Vegetated				_	
PEM/PSS Deep Marsh	Dead Woody Shrul	b Sub-shrub	Robus	t <u>Narrow-lea</u>	eved	Broad-leave	eđ
PAB/ Shallow Marsh	Robust Narro	ow-leaved Bro	oad-leaved	Floating leaved			
PFL / Seasonally Flooded Flats	Emergent	Shrub	<u> </u>	<u> </u>			
PEM / Wet Meadow	Ungrazed	Grazed			_		
PS\$// Shrub Swamp	Sapling Bush	· Cc	empact	Aquatic Sp	eckled	Alder	_ :
PFO / Wooded Swamp	Deciduous	Evergreen					
Bog	Compact shrub	Bushy shrub	Woode		nergent		
Water Regimes (Cowardin Modifier):	•	7	Seasonally saturate	ed (Y) - soils saturat saturated by end of :	ed to surface, season in mo:	especially e st years; sun	ariy in growing
Permanentily flooded (H) - water covers land surfa	ce throughout year in al	li years \	except for ground v	vater seepage and o	verland flow		
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year exc	ept in years	Temporarily flooder season, but water t	i (A) - surface water able usually lies wei	present for b Il below soil si	rief periods o urface for mo	during growing ost of the season
Semi-permanently flooded (F) - surface water per most years	sists throughout growing	g season in	Intermittently floods variable periods with	ed (J) - substrate us ihout detectable sea	ually exposed sonal periodic	l, but surface city~	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		cially early in	Artificially flooded (K) - amount/duratio	of flooding o	ontralled by	dikes dams, pumps,
Hydrology:							
Ground water discharges present:	res No		Depth to	free water:			
If Present: Slope or Depressional		-	Depth to	saturation:			
Surface water depth:	average -	maximum -	Signs of	altered hydrology?	Yes	3	No
Hydrology indicators: Inundated	Saturated in upper 12"	Water marks Drift I	ines Sediment	deposits Drain	age patterns	within wetlar	nds Other
	tophores Polymoi Rhizospheric oxidation	rphic leaves Buttre Shallow root		lypertrophied lentice loating leaves	els St Floating st	ooling 'ems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Somewi	nat Poorly	Poorly V	ery Poorly	Mapped H	ýdric Soil	
Slope: Nearly level Gentle	Moderate	Steep	•				-
Upland Border:			·				
Slope: Nearly level	Gentle	Moderate	Steep				
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Fa	arm	
Vegetation Density(S/M/D): (rees	\ D Sapling			Grass			
· pla	zntation	·		•			
Soil - 11A - Haplaguents	- Finch Cor	uplex - sa	ndy				

Leaf litter:	Well developed	(Moderately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks

Evidence of Erosion: No Yes (Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	Dit de system
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High (Mod	Low	

GWD/GROUNDWATER DISCHARGE

-	-	Comments	
Hardpan, shallow ledge		- John Mills	
Yes	No		
Well developed	Non/Poorly	U	<u> </u>
Yes		Hummoces	_
Yes	\		
High Mod			•
	Yes Well developed Yes Yes	Yes No Well developed Non/Poorly developed Yes No No	Ves No Non/Poorly developed Hummock S Ves No No

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate St	eep
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes	(No	Into another ditch
Wetland vegetation density	High	Low	LINTO A ROTHER WITCH
Wetland microrelief	Well	None/Paoriy developed	

Function Present	Yes	No		
Degree of Function	High <i>(</i>	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	-		Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn		
Shallow littoral zone with emergent vegetation present?	Yes		No	سميد	
Waterbody at least 10' deep	Yes	-	No	-	
% of pond covered by submerged or emergent vegetation	15-40%		Other		
Direct stormwater discharge via culvert?	No		Yes	A CHARLES OF THE PARTY OF THE P	
Sandbar present at inlet?	NO		Yes		
Water transparency	High		Low		
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes		The state of the s
Pond size ≥0,5 acre	Yes		No	<u>.</u>	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes		
Function Present	Yes		No.	:	
Degree of Function	High	Mod	Low		<u> </u>

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No :	<u> </u>
Gravel-spawning areas present	Yes	No	
Barriers to anadromous-fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, ereding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut-banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	·
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria		+	_	Comments
Sources of sediments or toxicants upstream	Yes	_ .	No	Roadway
Duration of water retention in wetland	Long		Short	Codaway
Evidence of sediment trapping in wetland	Yes		Low	
Vegetation density	High		No	
Wetland edge broad and intermittently aerobic	Yes		Low	
Drainage ditches in wetland	No		Yes	
Water flow through wetland	e Diffuse		Channelized	
Ponded water present	Yes		(No	
Wetland basin topographic gradient	Low		High	
Fine grained mineral or organic soils present	Yes		No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	_ ·	No	
Indicators of erosion or high water velocities are present	No	<u> </u>	Yes	
Function Present	(<u>)</u>	 .		
Degree of Function	High)	Mod	No	- ···

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	Johnneitz
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	(Yes	No No	
Deep or open water habitat is present	Yes	/ No	
Soil type	Organic/high clay		
Wetland basin topographic gradient	content	High	
Wetfand microrelief	Well developed)None, poorly developed	

Function Present	(Yes)	No	_
Degree of Function	High	Mod	Low •

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	<u> </u>
Wetland has high degree of plant community structure and species diversity	(Yes)	No	
Detritus development is present within this wetland	(Yes)	No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	Yes	No	
Fish or shellfish develop/occur in wetland	Yes	No	
Function Present	Yes	No	
Degree of Function	High (Mod)	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	(Yes)	No	·
Potential sediment sources upstream or upslope	Yes	No	
Wetland border >10' adjacent to pond or water	Yes	(No	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	No	
Boating activity present	Yes	(40)	
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes	(No	<u> </u>
Function Present	Yes	No	
Degree of Function	High M	lod Low	

REC/RECREATION

' .

Wetland has high visual/aesthetic quality	Yes		0	<u> </u>	
Boating or canceing feasible in wetland	Yes		<u> </u>		
Off-road public parking near wetland available	Yes	N	<u>ð</u>	<u> </u>	
Safety Hazards (if present list them)	Yes	(N			
Function Present	Yes	N _i	5		
Degree of Function	High	Mod	Low		

WLH/WILDLIFE HABITAT

		·		
Criteria	+			Comments
Wetland degradation by human activity	Little or Non	e	Moderate to	Ditchina / Plantation
Wetland fragmentation by development	Little or Non	e	-Moderate to	Ditching / Plantation DRoadways & Ditching
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes		No No	2 K OOG WALLS & DITCH MA
Buffer width	Good to Exc	ellent	Fair to Poor	
Connectivity with other wetlands	Yes		(No)	
Size of landscape block in which wetland is located	Large		(\$mali	
Wildlife food sources in wetland	Abundant		Few	
Interspersion of vegetation and open water	High	· · ·	Low	
Upland islands	Present	_	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		ŁOW	
Vegetation density	(High)	.	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			_	SH - Speckled Alden
Wetland plant species diversity	High Mod	Low	-	-4 -boo-oo Mage
Vernal pool	Yes	-	(NO)	·
Edge diversity (List types)				
Water regime	(Wetter)	· -	Drier	
Habitat features (S=Snags (L=Fallen logs SE=seep/spring)	Abundant		Few)	Pallen logs
Cover objects (L=Logs/branches) R=Rocks B=Bark)	Abundant		Eew	73
Flat rocks in/near watercourse (stream salamanders)	Present		Absent	
Sphagnum hummocks next to shallow pools	Present)		Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Absent	
Abundance of invasive exotic flora	None or Low	_	High	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

Criteria		+		Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		No	
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High :		Low	Plantation
Off-road parking near wetland available	Yes		(NO)	
Proximity to schools	Near		(Far)	
Wetland contains perennial watercourse	Yes		(Mo)	· ·
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	-	ŀ		Comments			
Wetland contains listed species	Yes		No	<u></u>		·	_
Wetland identified as exemplary natural community	Yes		No)				
Wetland locally/regionally significant	Yes		No			<u>_</u>	
Function Present	Yes		(No)				
Degree of Function	High	Mod	Low		<u> </u>	<u> </u>	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments
Visible from primary viewing locations	Yes		(No	
Views absent trash, debris, sign of degradation	Yes		No	
Low noise level .	Yes		(No)	Road / Airplanes
Visual landuse contrast with wetland	Yes	·	No	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria		+			_	Comments
Wetland contains or known to contain federal listed species or habitat	Yes			No `	V	
Wetland contains critical habitat for state or federal listed species	Yes			No	ļ	
Area appears in state or national database	Yes			No	7	
			_ `~	- /	/	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE -	REC	WLH	ED/S	U/H	S&S	ESH
Mod/Low	mod	No	High	Hagh	mod	No	Low	No	No	Low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

	CLINICATIONIO	A SUPS STATES	H.C.	ACCECCMENT
MACHINE I FILL	FUNCTIONS	AND VALU	ED.	ASSESSMENT

	FA 12 Date: N/A Functional Unit:	Weather: N/A Time S	Start: N/A Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Rec	_	Average Above Average	Don't Know ☐ TBD ☐
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory ☑		w Traps Electro-shocking
Wetland Types(s) Cowardin/Golet Classification			
Wettand Types(s) Cowardin/Objec Glassification			
Class	Subclass		
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leaved	Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Broad-k	eaved_ Floating leaved_	
PFL / Seasonally Flooded Flats	Emergent Shrub		
PEM / Wet Meadow	Ungrazed Grazed		
PSS / Shrub Swamp	Sapling Bushy Compa	et Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen	<u> </u>	
Bog	Compact shrub Bushy shrub	Wooded Emergent	11
Water Regimes (Cowardin Modifier):	Sea	sonally saturated (Y) - soils saturated to sur son, but are unsaturated by end of season ir	face, especially early in growing n most years; surface water absent
Permanently flooded (H) - water covers land surface	e throughout year in all years exc	ept for ground water-seepage and overland"	llaw
Intermittently Exposed (Z) -surface water present the of extreme drought	roughout the year except in years Ten	porarily flooded (A) - surface water present son, but water table usually lies well below s	for brief periods during growing coll surface for most of the season
Semi-permanently flooded (F) - surface water persis most years	sts throughout growing season in Inte	rmittently flooded (J) - substrate usually exp able periods without detectable seasonal pe	osed, but surface water is present for riodicity~
Seasonally flooded (C) - surface water present for e growing season, but is absent by end of season in n	extended periods especially early in Arti most years etc	icially flooded (K) - amount/duration of flood	ling controlled by dikes dams, pumps,
Hydrology:			
Ground water discharges present: Ye	es No	Depth to free water:	
If Present: Slope or Depressional		Depth to saturation:	• .
	verage - maximum -	Signs of altered hydrology?	Yes No
·	aturated in upper 12" Water marks Drift lines	Sediment deposits Drainage patt	erns within wetlands Other
Plant Adaptations to Hydrology: Pneumato	phores Polymorphic leaves Buttressed hizospheric oxidation Shallow root syste		Stooling Inflated leaves, ing stems
Soil Drainage classes; Well Moderately		oriy Very Poorly Mapp	ed Hydric Soil
Slope: (Vearly level) Gentle	Moderate Steep		
Upland Border:			
	entle Moderate Si	eep	
Cover Types: Mature forest	Sapling forest Shrub thicket	Meadow Mowed lawn	Farm
· · · · · · · · · · · · · · · · · · ·	Saplings Shrubs	Herbs Grass	• .
_		•	
Soil: Sz Swanton fine	Diantation		

Leaf litter:	Well developed	Mode	rately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	(No) Yes	/Evolain\		Notato

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(40)	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		Comments
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly	
Wetland contains an outlet, no inlet	Yes	No No	
Function Present	Yes	No	Isolated
Degree of Function	High Mod	Low	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	/ Small	COMMENTS
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle)	Moderate Steep	
Wetland characterized by variable water level?	Yes	No No	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	(00)	
Wetland outlet restricted	Yes	(No	A subtat
Wetland vegetation density	High)	Low	No outlet present
Wetland microrelief	Well developed	None/Poorly developed	

. :	Function Present	Yes	(No)	<u></u>	
	Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+ .		Comments
Dominant land use adjacent to Waterbody	Forest, Shru	ub, Meadow	Lawn	P
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10²-deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via cuivert?	No		Yes	
Sandbar present at inlet?	No		Yes	·
Water transparency	High		Low	·
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	<u>.</u>	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high-culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffie, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	>Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	·
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly into	erant	Mostly tolerant	
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	(Yes)	No	
Duration of water retention in wetland	Long	Short	Road runoff
Evidence of sediment trapping in wetland	Yes		
Vegetation density	High	No No	
Wetland edge broad and intermittently aerobic	Yes		<u> </u>
Drainage ditches in wetland	(No	Yes	
Water flow through wetland	Diffuse		
Ponded water present	Yes	Channelized	
Wetland basin topographic gradient	{ Low)	- <u>No</u>	
Fine grained mineral or organic soils present	Yes	High	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
ndicators of erosion or high water velocities are present	No	No	No watercourse
Function Present	Yes	Yes	
Degree of Function	 	No No	_
N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION	High Mod	\ Low	

Criteria	+		
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	Small	
Wetland is saturated most of the season	Yes	(No)	<u> </u>
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	No Charate d	
Vegetation density		Channelized	
Potential for sediment trapping exists	Yes	. Low	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay	(Sand/gravel	
Wetland basin topographic gradient	Low		
Wetland microrelief	Well developed	High None, poorly developed	

Function Present	Yes	,		No		
Degree of Function	High		Mod		Low)
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)						
Criteria			÷		•	Comments
Wildlife-food sources in wetland	,	Abundant	, d		Few	
Vegetation density		High			Low	
Nutrients and/or organic matter flushed out-of wetland into watercourse		Yes			No _	
Wetland has high degree of plant community structure and species diversity		Yes			No	
Detritus development is present within this wetland		Yes			No	
Flowering plants used by nectar gatherers present		Yes	To.	CAPACITY DE LOS DOCUMENTOS	No	
Evidence of wildlife use in wetland		Yes			No	
Fish or shellfish develop/occur in-wetland		Yes			No _	
Function Present		Yes			No	-
Degree of Function		High	Мос	d [Low	
\$&\$\$/\$EDIMENT/SHORELINE STABILIZATION		·			<u> </u>	·
Criteria		+	T		•	Comments
Topographical gradient in wetland	Yes		_	No		
Potential sediment sources upstream or upslope	Yes		4	(No) _		
Wetland border >10' adjacent to pond or water	Yes		7	No >		
Distinct shoreline or bank evident between wetland and water	No	-		Yes		
Open water fetch present	Yes			116)		
Boating activity present	Yes		k	√N6)		
Floodplain stabilizing trees and shrubs present	Yes			No		·
Indications of erosion or siltation present	Yes			No.		
Function Present	Yes			No)		
Degree of Function	High	Mod	i	Lo	w	
REC/RECREATION						
Criteria		+ 	_/	<u> </u>	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes		/	No		
Fishing is available in or from the wetland	Yes		{	No	\	
Hunting is permitted in wetland	Yes			No		
Hiking occurs or has potential to occur in wetland	Yes		1	No		
				1		

Yes

Wetland is a valuable wildlife habitat

	•			
Wetland has high visual/aesthetic quality	Yes	/ No	, \	
Boating or canoeing feasible in wetland	Yes	/ No	,	
Off-road public parking near wetland available	Yes	No	,	
Safety Hazards (if present list them)	Yes	\ No	, 	
Function Present	Yes	- "(-N	>	
Degree of Function	High	Mod —	Low	7

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to High	Planted white Pines surround
Wetland fragmentation by development	Little or None	Moderate to High	Planted white pines surround Roadwargs / Fine Plantation
Buffer exists (6=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	eres Forest	No	The Flancianion
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	NO	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	No open water
Upland islands	Present	Absent	14.0 Obest over ea
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	
Vegetation density	(High)	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		-	LL, H
Wetland plant species diversity	High (Mod) Low		
Vernal pool	Yes	(No	
Edge diversity (List types)			
Water regime	Wetter	Drier)	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant (Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present #	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes	No	
Degree of Function	High Mod	LOW .	

Criteria		+ .		Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		No \	
Wetland class diversity	High		Low	<u>-</u>
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	
Off-road parking near wetland available	Yes		No	
Proximity to schools	Near		Far	
Wetland contains perennial watercourse	Yes		No	
Wetland contains pond/lake	Yes		No /	
Safety hazards (if present list them)		/		<u> </u>
Site currently used for educational/scientific purposes	Yes		No	<u></u>
Function Present	Yes		(No)	·
Degree of Function	High	Mod	Low	<u>.</u>

U/H/UNIQUENESS/HERITAGE

Criteria	+		•	Comments
Wetland contains listed species	Yes		No	·
Wetland identified as exemplary natural community	Yes	1	No \	
Wetland locally/regionally significant	Yes	1	No /	
Function Present	Yes	X	TNO	
Degree of Function	High Mo	od \	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments	
Visible from primary viewing locations	Yes	/ No \	·	
Views absent trash, debris, sign of degradation	Yes	No		·
Low noise level	Yes	No /		
Visual landuse contrast with wetland	Yes	No		
Function Present	Yes	X 36)		
Degree of Function	High Mod	Low	<u> </u>	_

ESH/ENDANGERED SPECIES HABITAT

Criteria		+		<u></u>		Comments
Wetland contains or known to contain federal listed species or habitat	Yes			No	\prod	
Wetland contains critical habitat for state or federal listed species	Yes			No		<u></u>
Area appears in state or national database	Yes		7	No		<u> </u>

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WĽH	ED/S	U/H	S&S	ESH
L06/NO	No_	No	Mod	Low	NO	No	Low	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge, Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FAIB Zonel Date:	: N/A Functional Unit:	Weather:	N/A Time St	art: N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios R	ecent Precipitation:	: N/A Below average 🗌	Average Above A	Average 🗌	Don't Know 🔲	TBD □
Wildlife Investigation Method: Cover search ⊠	Dip netting 🗌] Auditory ⊠	Scat X Tracks	Minnow	Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classificatio	n		·			·
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated			· .	
PEM/PSS Deep Marsh	Dead Woody St	hrub Sub-shrub	Robust Nari	row-leaved	Broad-leave	d
PAB/ Shallow Marsh	Robust Na	arrow-leaved Broad-leav	ed Floating lear	ved		
PFL / Seasonally Flooded Flats	Emergent	Shrub	<u></u>	<u> </u>		
PEM / Wet Meadow	Ungrazed	Grazed				
PSS / Shrub Swamp	Sapling B	ushy Compact	Aquatic	·		
PFO / Wooded Swamp	Deciduous	Evergreen Red m	raple, speckled	Alder	· .	_
Bog	Compact shrub	Bushy shrub	Wooded naily saturated (Y) - soils s	Emergent		
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surfatintermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water permost years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	throughout the year or sists throughout grow	n all years seasor except in years Tempo seasor wing season in Intermi variabl	in, but are unsaturated by e for ground water seepage rarily flooded (A) - surface in, but water table usually li ttently flooded (J) - substr e periods without detectat ally flooded (K) - amount/o	end of season in it and overland flow water present for its well below soil ate usually exposoile seasonal perion	most years; surfa ow or brief periods d il surface for mo: sed, but surface odicity~	ace water absent luring growing st of the season water is present for
Hydrology:	-					
Ground water discharges present:	Yes No		Depth to free water:			
If Present: Slope or Depressional			Depth to saturation:			
Surface water depth:	average -	maximum -	Signs of altered hydro			No
,,,	Saturated in upper 14		Sediment deposits	Drainage patter		
Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots	tophores Polyi Rhizospheric oxidatio	morphic leaves Buttressed tre on Shallow root systems	*		Stooling g stems	Inflated leaves,
Soil Drainage classes: Well Moderat	ely Weli Som	sewhat Poorly Poorl	y Very Poorly	Mappe	d Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:						
Slope: Nearly level	Gentle	Moderate Steep				
Cover Types: Mature forest	Sapling fores	st Shrub thicket	Meadow Mowe	i lawn	Farm	
Vegetation Density(S/M/D): (rees	D Sapi	lings Shrubs	Herbs Grass			•
	thite pine	e plantation				
Soil: De A - Deerfier	d loamy	Sand			-	

Leaf litter:	Well developed	Mode	erately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	(No) Yes	(Explain)		
GWR/GROUNDWATER RECHAR	GF (Excluding condition:	Sione Wetland		

Criteria	+		Comments
Soils	Sand/gravel outwash (Hardpan, tight fine-grained soils, snallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

- GWD/GROUNDWATER DISCHARGE

		Comments
ardpan, shallow ledge		
es	No	
elj developed	Non/Poorly developed	
es)	No	
es)	No	
gh (Mod)	Low	-
	es elj developed ss	No Non/Poorly developed No No No No No

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments	
Wetland size in relation to watershed	Large	(Small)	_		
Amount of impervious surface in wetland watershed	Large	Small			
Wetland Stope	Gentle	Moderate	Steep		
Wetland characterized by variable water level?	Yes	No] ==== <u>p</u>		
Wetland in floodplain of adjacent watercourse	Yes	No		Ditch at SE end.	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(G)	No		Ditch at Se end.	
Watershed has a history of economic loss due to flooding	Yes	No	_	Chuknowin	
Wetland outlet restricted	Yes	(No)		(All the state of	
Wetland vegetation density	Fligh	Low			
Wetland microrelief	Well	None/Poorly developed	_	,	

Function Present	(Yes)	No			
Degree of Function	High	(MOR)	Low	·	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	<u> </u>	Comments
Dominant-land use adjacent to Waterbody	Forest, Shrui	o, Meadow	Lawn	white Pine Plantation
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		(NO)_	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	<u> </u>
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, pulsance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	_	(NO)	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No .	AN THE STATE OF TH
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	-Yeś	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & slit	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel atterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low _	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide.	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	·

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	
Function Present	Yes (No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

+		Comments
Yes	- No	o o managa
	- ~~ -	-
		
		
		
		
		SE end drains east
		
		
		
	 -	
_		
	X-1	
	Yes (Long Yes (Fligh Yes No (Diffuse Yes Low Yes No Yes No Yes	Yes (Long) Short Yes (Low) High No (Yes) Channelized (Yes) No (Low) High Yes No Yes No Yes No Yes No No Yes No No Yes No No Yes No No No Yes No No No Yes No No No Yes No

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Commont
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	No.	
Wetland is saturated most of the season	Yes		
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	o Diffuse	Channelized	
Vegetation density	(Fligh)	Low	·
Potential for sediment trapping exists	(es)	No.	
Deep or open water habitat is present	Yes	No	-
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	content		
Wetland microrelief	Weli developed	None, poorly developed	

Function Present	•	Yes	No	·	· .	
Degree of Function		High	Mod	Low	<u></u>	

Criteria	+	- Comments
Wildlife food sources in wetland	Abundant	Few
Vegetation density	₩figh .	Low
Nutrients and/or organic matter flushed out of wetland into watercourse	æs)	No
Wetland has high degree of plant community structure and species diversity	Yes	No
Detritus development is present within this wetland	(Ves)	No
Flowering plants used by nectar gatherers present	(es)	No
Evidence of wildlife use in wetland	Yes	
Fish or shellfish develop/occur in wetland	Yes	(No)
Function Present	Yes	No
Degree of Function	High Mod	(Low)

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	_	Comments	
Topographical gradient in wetland	Yes	No	- Annual Control of the Control of t	
Potential sediment sources upstream-or-upslope	Yes	No		
Wetland border >10' adjacent to pond or water	Yes	No		
Distinct shoreline or bank evident between wetland and water	No	Yes		
Open water fetch present	Yes	No		
Boating activity present	Yes	No		
Floodplain stabilizing trees and shrubs present	Yes	No		
Indications of erosion or siltation present	Yes	No		
Function Present	Yes	(No)		
Degree of Function	High	Mod Low		

REC/RECREATION

Criteria	+			Comments			
Wetland is part of recreation area, park, refuge, etc.	Yes	No	\				
Fishing is available in or from the wetland	Yes	No	<u> </u>		_		
Hunting is permitted in wetland	Yes	No				<u></u>	
Hiking occurs or has potential to occur in wetland	Yes	No					<u> </u>
Wetland is a valuable wildlife habitat	Yes	No					,

Wetland has high visual/aesthetic quality	Yes	7	No \		
Boating or canoeing feasible in wetland	Yes	_/	No	 	
Off-road public parking near wetland available	Yes	_ { }	No		
Safety Hazards (if present list them)	Yes	1	No /	-	
Function Present	Yes		No /		
Degree of Function	High	Mod	Low		

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	High Moderate to	white Pine Plantation/Housino
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	White Pine Plantation/Housing
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swarmp-SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	wooded swamp
Vegetation density	High	Low	00 000 ea Swarman
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			T, S, SH, H W
Wetland plant species diversity	High Mod Low		1, 3, 31, 14, 00
Vernal pool	Yes	(No)	
Edge diversity (List types)			
Water regime	Wetter	(Drier)	
Habitat features (S=Snags	Abundant	Few	
Cover objects (t=Logs/branches) R=Rocks B=Bark)	Abundant	∠¶ew	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(es)	No	
Degree of Function	High Mod	(Low)	

Criteria			+	1	\ .		Comments
Wetland contains listed species		Yes		1	No \		
Wetland provides valuable wildlife habitat		Yes	j		No \	١	
Wetland class diversity		High	- 1		Low		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)		High	ĺ		Low		
Off-road parking near wetland available		Yes			No		· ·
Proximity to schools		Near	1	l	. Far		·
Wetland contains perennial watercourse		Yes		\	No		·
Wetland contains pond/lake		Yes		/	No	$\int_{-\infty}^{\infty}$	
Safety hazards (if present list them)				1	/		
Site currently used for educational/scientific purposes		Yes		1	No/		
Function Present		Yes			No		
Degree of Function		High	Mod		Low		
U/H/UNIQUENESS/HERITAGE				pores	_		
Criteria		+_			<u> </u>		Comments
Wetland contains listed species	Yes		į	1	。 \		
Wetland identified as exemplary natural community	Yes			ı	0		
Wetland locally/regionally significant	Yes	i	}	1	o		
Function Present	Yes	i		1	o /		
Degree of Function	Higi	n .	Mod	Non.	Low		
VQA/VISUAL QUALITY/AESTHETICS							
Criteria		+		1	Cor	nmen	nts
Visible from primary viewing locations	Yes		N	0			·
Views absent trash, debris, sign of degradation	Yes	X-1990	N	0			
Low noise level	Yes	٦	No.	0	į		

Criteria		+ /	-1	Comments			
Visible from primary viewing locations	Yes		No \				·
Views absent trash, debris, sign of degradation	Yes	N. Salar	No }				
Low noise level	Yes	a var	No }		 		_
Visual landuse contrast with wetland	Yes	Ĭ	No /		 	<u>. </u>	
Function Present	Yes	Ì	No.			•	
Degree of Function	High	Mod	Low	}			

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		-/		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	[No	Ì	
Wetland contains critical habitat for state or federal listed species	Yes	1	No		
Area appears in state or national database	Yes	N ₂	No	/	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE .	REC	WLH	ED/S	U/H	8&8	ESH
mod/mod	moi	No	mad	Mod	Low	No	Low_	NO	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

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Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

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Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

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Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Ro Wildlife Investigation Method: Cover search Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/A Below average ☐ Dip netting ☐ Auditory ☒	Weather: N/A] Average □ Above Average Scat ⊠ Tracks ⊠	Time Start: N/A Time Stop: N/A Don't Know TBD Minnow Traps Electro-shocking
Class	Subclass	·	
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-lea	ved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Broad	I-leaved Floating leaved	
PFL / Seasonaily Flooded Flats	Emergent Shrub		
'PEM / Wet Meadow	Ungrazed Grazed	<u>_</u>	_
PSS / Shrub Swamp	Sapling Bushy Com	pact Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen γ	lixed Forest_	<u> </u>
Bog	Compact shrub Bushy shrub		nergent d to surface, especially early in growing
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surfal intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water permost years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in Hydrology: Ground water discharges present:	throughout year in all years throughout the year except in years sists throughout growing season in extended periods especially early in	except for ground water seepage and or emporarily flooded (A) - surface water eason, but water table usually lies well atermittently flooded (J) - substrate usu ariable periods without detectable seas	present for brief periods during growing below soil surface for most of the season ally exposed, but surface water is present for
If Present: Slope or Depressional	:	Depth to saturation:	Yes No
Surface water depth:	verage - maximum -	Signs of altered hydrology?	, ,
Plant Adaptations to Hydrology: Pneuma	Rhizospheric oxidation Shallow root sy:	sed trees Hypertrophied lentice	ago patterne manin
Slope: Nearly level	Gentle · Moderate	Steep	Form
Cover Types: Mature forest	Sapling forest Shrub thicket	Meadow Mowed lawn	Farm
Vegetation Density(S/M/D): Trees	Saplings Shrubs	Herbs Grass	•

Soil: 12A - Haplaquents - Naumburg Complex Sandy

Leaf litter:	Well developed	Mod	erately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)	·	, to dito

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils,	
Wetland associated w/ perennial or seasonal watercourse	(Fes)	shallow ledge No	
Slope	Gentile	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High (Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments	
Soils	Hardpan, shallow ledge		Comments	
Seeps, springs observed?	Yes	(No)		_
Wetland microrelief	Well developed	Non/Poorly		<u>. </u>
Wetland contains an outlet, no inlet	Yes	developed /		
Function Present	Yes		 	<u>_</u> .
Degree of Function	High Mod	Low	+	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	T +	<u> </u>	 :	Comments
Wetland size in relation to watershed	Large	Small		Contileties
Amount of impervious surface in wetland watershed (Large	Small		
Wetland Slope	(Gentle)	Moderate	Steep	
Wetland characterized by variable water level?	Yes)	No	Сеер	
Wetland in floodplain of adjacent watercourse	Yes	No No	_ _	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		
Watershed has a history of economic loss due to looding	Yes	No		
Wetland outlet restricted	Yes	(No		Makinow n_
Netland vegetation density	High	(Low)	_ .	
Netland microrelief	Well developed	None/Poorly developed		

:	_			· · · · · · · · · · · · · · · · · · ·	
Function Present	Yes	No		<u> </u>	
Degree of Function	High	Mod	Low		
<u> </u>					

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrul	o, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	The state of the s
Waterbody at least 10' deep	Yes		No	- Company of the Comp
% of pond covered by submerged or emergent vegetation	15-40%-		Other	- Company of the Comp
Direct stormwater discharge via culvert?	No	· Commence of the commence of	Yes	
Sandbar present at inlet?	No	The state of the s	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes	<u> </u>	No	
Pond experiences dense algal blooms, puisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	<u>-</u>	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream) Scasonal drainage

Criteria	+	<u></u>	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No _	- A Control of the Co
Gravel spawning areas present	Yes	No	- Carlotte Control of the Control of
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	- ALLE OF THE STATE OF THE STAT
Dominant bottom substrate	Gravel/cobbles	Sand/sill	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	·
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria		+	-	Comments
Sources of sediments or toxicants upstream	Yes		No No	Continents
Duration of water retention in wetland	Long	-	Short	
Evidence of sediment trapping in wetland	Yes		Low	
Vegetation density	High		No(Low)	
Wetland edge broad and intermittently aerobic	Yes	 -	(LOW)	
Drainage ditches in wetland	No	 .	(Yes)	
Water flow through wetland	Diffuse		Channelized	
Ponded water present	Yes		(No)	
Wetland basin topographic gradient	(Low)	, <u> </u>	High	
Fine grained mineral or organic soils present	Yes	<u></u>	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes		(No)	· · · · · · · · · · · · · · · · · · ·
Indicators of erosion or high water velocities are present	(No)	_	Yes	
Function Present	Yes	 :	No	Desir and different to Board and
Degree of Function	High	Mod	Low	Drainage ditches in PFO-drain Into stormwater system

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comment
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	Yes	(No)	<u> </u>
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	Yes	No -	
Water flow through wetland	Diffuse	(Channelized)	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No.	
Deep or open water habitat is present	Yes	(No _	
Soil type	Organic/high clay content	Sand/gravei	
Wetland basin topographic gradient	[Ow)	High	
Wetland microrelief	Well developed	(None, poorly developed	
		Name of the second	

Function Present	Yes	No		
Degree of Function	High	Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+		Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	(Ow)	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	Yes	(N ₀)	
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	Yes	No No	
Evidence of wildlife use in wetland	Yes	No	
Fish or shellfish develop/occur in wetland	Yes	No	
Function Present	Yes	(No)	
Degree of Function	High Mod	J Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments	<u></u>
Topographical gradient in wetland	(Fes	No		<u> </u>
Potential sediment sources upstream or upslope	Yes	(No		<u></u>
Wetland border >10' adjacent to pond or water	Yes	No		
Distinct shoreline or bank evident between wetland and water	No	(Yes)	<u></u>	
Open water fetch present	Yes	1	<u> </u>	
Boating activity present	Yes	No		_ <u>_</u>
Floodplain stabilizing trees and shrubs present	Yes	No		
indications of erosion or siltation present	Yes	(Ño)		<u>-,-</u>
Function Present	Yes	(%)		•
Degree of Function	High	Mod Low		· ·

REC/RECREATION

Criteria	÷		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No.	
Fishing is available in or from the wetland	Yes	No	
Hunting is permitted in wetland	Yes	No _	·
Hiking occurs or has potential to occur in wetland	Yes	No	
Wetland is a valuable wildlife habitat	Yes	No)·	

<u> </u>			
Wetland has high visual/aesthetic quality	Yes	No	
Boating or canoeing feasible in wetland	Yes	_	
Off-road public parking near wetland available	Yes	No	1-
Safety Hazards (if present list them)	Yes	\ No	!
Function Present	Yes	(No	[
Degree of Function	High	Mod	Low

WLH/WILDLIFE HABITAT

			
Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	/Moderate to/	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Ves)	High No	Cerost.
Buffer width	Good to Excellent	(Fair to Poor)	
Connectivity with other wetlands	Yes		
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	(Gyp)	wooded swamp
Vegetation density	High	16W)	woosessoup
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		1	T 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Wetland plant species diversity	High Mod (Low)	-	Tree, herb, Leaf litter
Vernal pool	Yes	(%)	
Edge diversity (List types)	-		
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Fey	1
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Pew	log s
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	logic
Sphagnum hummocks next to shallow pools	Present	Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
unction Present	(Yes)	No_	· ·
Degree of Function	High Mod	Low	

Criteria	+	-	Comments
Wetland contains listed species	Yes	6	·
Wetland provides valuable wildlife habitat	Yes	(No)	·
Wetland class diversity	High	(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(Low)	Forest, mowed fields
Off-road parking near wetland available	· Yes	(M)	,
Proximity to schools	Near	Far	Bowdoin College
Wetland contains perennial watercourse	Yes	(No)	Bowdoin College Drainege ditch
Wetland contains pond/lake	Yes	(No)	, o
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No	
Function Present	Yes	Ño	
Degree of Function	High	Mod Low	

U/H/UN!QUENESS/HERITAGE

Criteria	+		-	Comments
Wetland contains listed species	Yes		6	
Wetland identified as exemplary natural community	Yes	Yes		
Wetland locally/regionally significant	Yes	Yes		
Function Present	Yes		(M	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments				
Visible from primary viewing locations	Yes	Yes		Yes		Yes		
Views absent trash, debris, sign of degradation	Yes		No					
Low noise level	Yes			Yes		Near airfield & road		
Visual landuse contrast with wetland	Yes		Mo					
Function Present	Yes		MO					
Degree of Function	High	Mod	Low					

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	K (0)	-
Wetland contains critical habitat for state or federal listed species	Yes	/No)	
Area appears in state or national database	Yes	(e)	

Function Present	Yes		No	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/NO	mod	20	No	No	No	NO	Low	No	No ·	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, takes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 5 Date: N/A Functional Unit:	Weather: N/A	Time Start: N/A Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios R	ecent Precipitation: N/A Below average [🛘 Average 🗖 Above Averag	e 🗌 Don't Know 🔲 TBD 🔲
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory ☒	Scat 🛛 Tracks 🖾	Minnow Traps ☐ Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classificatio	n		<u> </u>
Class	Subclass	<u> </u>	
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-lea	aved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Broa	d-leaved Floating leaved	<u> </u>
PFL / Seasonally Flooded Flats	Emergent Shrub		
PEM / Wet Meadow	Ungrazed Grazed	<u></u>	
PSS / Shrub Swamp	Sapling Bushy Com	pact Aquatic_	<u>.</u>
PFO / Wooded Swamp	Deciduous Evergreen	<u></u>	
Bog	Compact shrub Bushy shrub		mergent
Water Regimes (Cowardin Modifier):		easonally saturated (Y) - soils saturate	ed to surface, especially early in growing season in most years; surface water absent
Permanently flooded (H) - water covers land surfa	ce throughout year in all years	eason, put are unsaturated by end of a xcept for ground water seepage and o	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	emporarily flooded (A) - surface water eason, but water table usually lies wel	r present for brief periods during growing Il below soil surface for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout growing season in	ntermittently flooded (J) - substrate us ariable periods without detectable sea	ually exposed, but surface water is present for isonal periodicity~
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	.1	rtificially flooded (K) - amount/duration to	n of flooding controlled by dikes dams, pumps,
Hydrology:			
Ground water discharges present:	res No	Depth to free water:	
If Present: Slope or Depressional	·	Depth to saturation:	
Surface water depth:	everage - maximum -	Signs of attered hydrology?	Yes No
Hydrology indicators: Inundated (Saturated in upper 12") Water marks Drift line	s Sediment deposits Drain	age patterns within wetlands Other
Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots	tophores Polymorphic leaves Buttres Rhizospheric oxidation Shallow root sy	sed trees Hypertrophied lentice stems Floating leaves	els Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderate	ely Well) Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep		
Upland Border:			
Slope: Nearly level	Gentle Moderate	Steep	
Cover Types: Mature forest	Sapling forest Shrub thicket	Meadow Mowed lawn	Farm
Vegetation Density(S/M/D): Trees	D Saplings Shrubs	Herbs Grass	·
weit	e pine		

Soil: DeA - Deerfield loamy sand

					•			
Leaf litter: .	Well d	evelopea.		M	oderately well	developed	Absent	
Cover objects:	Logs			Bark	1	Boulders	Rocks	
Evidence of Erosion:	No	Yes		(Explain)				
GWR/GROUNDWATER RECHARGE (Excludi	ing condi	ion: S	lope Wetla	nd)			
Criteria	_	+	_	_	-		Comments	
Soils	Sand/g	gravel out	vash o	ttardpar shallow	n, tight fine gra	ined soils,		
Wetland associated w/ perennial or seasonal watercourse	Yes	_		NO	10499	··	<u> </u>	·
Slope	Gentle	5		Moderat	te or Steep		<u> </u>	
Function Present	Yes)	No	_	 		_ _		<u> </u>
Degree of Function	High		Mo	_ 	(Low)			-
GWD/GROUNDWATER DISCHARGE								
Criteria		_	+		<u> </u>		Comments	
Soils	1	Hardpan,	shallow	ledge	 	.		
Seeps, springs observed?		Yes	_		(No)			
Wetland microrelief		Well devel	oped	>	Non/Poor		<u> </u>	
Wetland contains an outlet, no inlet		Yes		<u> </u>	developed No	1	<u> </u>	
Function Present		Yes	· <u> </u>		No			
Degree of Function	7	High	1	Mod	Low			·
FFA/FLOODFLOW ALTERATION (Exc	luding	condition	: Slope	Wetland)	<u></u>			
Criteria	_			+			Comments	
Wetland size in relation to watershed	_		Large	2	Small			
Amount of impervious surface in wetland	waters	hed	Large		Small			
Wetland Slope		(Gent	le	Moderate	Steep		
Wetland characterized by variable water			Yes		No			
Wetland in floodplain of adjacent waterco			Yes		(No)	_		
Valuable properties, structures, or resour or near floodplain downstream from wella	and		(Yes	> _	No			
Watershed has a history of economic los flooding	s due to)	Yes		No		Unierown	
Wetland outlet restricted			Yes		(No			
Wetland vegetation density		Č	High	\geq	Low		<u> </u>	
Wetland microrelief		Č	Well devel	oped	None/Poorly developed			

Function Present .	(Yes)	No.		
Degree of Function	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	-	Comments .
Dominant land use adjacent to Waterbody	Forest, Shr	ub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	· Yes		. No	
% of pand covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	№		Yes	
Sandbar present at inlet?	No	-	-Yes	· ·
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning-areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	-High	Low	<u> </u>
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (failen logs-boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide.	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	·

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	- Comments
Duration of water retention in wetland	(Long	Short	
Evidence of sediment trapping in wetland	(Yes)	Low	
Vegetation density	High	No No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No		
Water flow through wetland	Diffuse	Chamalizad	Sw end ditched
Ponded water present	Yes	Channelized	
Wetland basin topographic gradient	Low	No	
Fine grained mineral or organic soils present	< Yes	High No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	
Indicators of erosion or high water velocities are present	No		No watercourse
Function Present		Yes	
Degree of Function	High (Mod	No	_

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes		
Wetland is saturated most of the season	Yes	No No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	(Yes	No	<u> </u>
Deep or open water habitat is present	Yes	(No")	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	LOW	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	∕ Yes	No		
Degree of Function	High	(Mod)	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+		Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Yes	· No	
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	®	No _	
Evidence of wildlife use in wetland	Yes	No	Birds (Insects
Fish or shellfish develop/occur in wetland	Yes	(No)	_
Function Present	Yes	No	
Degree of Function	High Mod	Low	

\$&\$\$/\$EDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments	<u>-</u>
Topographical gradient in wetland	(Yes)	No	Slopes SW_	
Potential sediment sources upstream or upstope	(Yes)	No		
Wetland border >10' adjacent to pond or water	Yes	NO		<u> </u>
Distinct shoreline or bank evident between wetland and water	No	Yes		·
Open water fetch present	Yes	(No)	<u> </u>	<u>-</u> .
Boating activity present	Yes			
Floodplain stabilizing trees and shrubs present	Yes		· :	
Indications of erosion or siltation present	Yes	(No)		
Function Present	(es)	No _		
Degree of Function	High I	Mod (Low)		<u></u>

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No	<u>, , , , , , , , , , , , , , , , , , , </u>
Fishing is available in or from the wetland	Yes	No _	
Hunting is permitted in wetland	Yes	No .	
Hiking occurs or has potential to occur in wetland	Yes	No/	
Wetland is a valuable wildlife habitat	Yes	No	

Wetland has high visual/aesthetic quality	Yes		No	
Boating or canoeing feasible in wetland	Yes	/	No \	
Off-road public parking near wetland available	Yes		No -	
Safety Hazards (if present list them)	Yes	. /	No /	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

WLH/WILDLIFE HABITAT

Criteria	+		
Wetland degradation by human activity	-	Moderate to)	Comments
Troiled a degradation by Halitati activity	Little or None	(High	White pine plantation, ditching
Wetland fragmentation by development	Little or None	Woderate to	Whitepine plantation, ditching Baseball fields Fuel field/Roadway
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No	white pine
Buffer width	-Good to Excellent)	Fair to Poor	
Connectivity with other wetlands	Yes	(No	
Size of landscape block in which wetland is located	Large	Small	·
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			T,S,SH,H LL
Wetland plant species diversity	High Mod Low		1, 2, 3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
Vernal pool	Yes	No	
Edge diversity (List types)			T = 011
Water regime	Weiter	Drier	T, S, S1+
Habitat features (S=Snags) L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent)	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High (Mod)	Low	,

Criteria		+			Comments
Wetland contains listed species	Yes		No \		
Wetland provides valuable wildlife habitat	Yes	/	No \	\	
Wetland class diversity	High	/	Low		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low		
Off-road parking near wetland available	Yes		No		<u> </u>
Proximity to schools	Near		Far		
Wetland contains perennial watercourse	Yes	\	No		
Wetland contains pond/lake	Yes	/	No		
Safety hazards (if present list them)			\ /		
Site currently used for educational/scientific purposes	Yes		No		
Function Present	Yes		(1)		
Degree of Function	High	Mod	Low		

U/H/UNIQUENESS/HERITAGE

Criteria	+	· .	Comments
Wetland contains listed species	Yes /	No	·
Wetland identified as exemplary natural community	Yes	No \	
Wetland locally/regionally significant	Yes	No)	
Function Present	Yes	MO /	·
Degree of Function	High Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	-	+ /		Comments
Visible from primary viewing locations	Yes	(No	
Views absent trash, debris, sign of degradation	Yes		No	
Low noise level	Yes		(No)	
Visual landuse contrast with wetland	Yes		No	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria		+	-		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	/		4 0	
Wetland contains critical habitat for state or federal listed species	Yes	(N	/ ۱۷۰	
Area appears in state or national database	Yes	7	N	<u> </u>	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Low/mod	mod.	No	mod	Mod	mod	No	mod	No	Na	Cool	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Sheltfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, takes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/A	Functional Unit: Below average Auditory ⊠	_ ′	eather: N/A I Above Average Tracks ⊠	Time Start: N/A ☐ Don't Know ☐ Minnow Traps ☐	Time Stop: N/A TBD ☐ Electro-shocking ☐
Class	Subclass		·	-		,
POW/ Open water	Vegetated	Non-Vegetated				
PEMIPSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leav	red Broad-leave	ed
PAB/ Shallow Marsh	Robust Narrow	-leaved Bro	ad-leaved	Floating leaved	<u> </u>	
PFL / Seasonally Flooded Flats	Emergent	Shrub	·			
PEM / Wet Meadow	Ungrazed	Grazed				
PSS Shrub Swamp	Sapling Bushy	Cor	npact	Aquatic	. <u></u> .	<u></u>
PFO / Wooded Swamp	Deciduous	Evergreen				
Bog	Compact shrub	Bushy shrub	Woode		ergent	
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surface throughout year in all years Intermittently Exposed (Z) -surface water present throughout the year except in years of extreme drought Semi-permanently flooded (F) - surface water persists throughout growing season in most years Seasonally-saturated (Y) - soils saturated to surface, especially early in growing season, but are unsaturated by end of season in most years; surface water absent except for ground water seepage-and overland flow Temporarily flooded (A) - surface water present for brief periods during growing season, but water table usually lies well below soil surface for most of the season in most years Seasonally-saturated (Y) - soils saturated to surface, especially early in season, but are unsaturated by end of season in most years; surface water-absent except for ground water seepage-and overland flow Temporarily flooded (A) - surface water present for brief periods during growing season, but water table usually lies well below soil surface for most of the season Intermittently flooded (J) - substrate usually exposed, but surface water is present for variable periods without detectable seasonal periodicity— Seasonally-saturated (Y) - soils saturated to surface, especially early in growing season, but are unsaturated by end of season in most years; surface water absent except for ground water seepage-and overland flow Temporarily flooded (A) - surface water present for brief periods during growing season in most years. Temporarily flooded (J) - substrate usually exposed, but surface water is present for variable periods without detectable seasonal periodicity— Artificially flooded (K) - amount/duration of flooding controlled by dikes dams, pumps						
growing season, but is absent by end of season in	most years		etc	,		
Hydrology: Ground water discharges present: Y	res No		Denth to	free water:		
- '	ES 110		•	saturation:		
If Present: Slope or Depressional	wernge - M	aximum -		altered hydrology?	Yes	No
·		axkridir - /ater marks - Drift lin		•	ge patterns within wetta	nds Other
Plant Adaptations to Hydrology: Pneumal			ssed trees H	lypertrophied lenticel oating leaves		Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Somewha	it Poorly	Poorly Ve	ery Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:						
Slope: Nearly level	Gentle M	loderate	Steep			
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (Yees)	Saplings	Shrub	s Herbs	Grass		
N	wite Pine Pl	lantation				
Soil : DeA - Deerfield	loamy san	ld -			·	

1	eaf	litter	
_	.cai	IIIII CI	

Well developed

Moderately well developed

Absent

Cover objects:

Quas .

Bark

Boulders

Rocks

Evidence of Erosion:

(NO)

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	Comments	
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentie	Moderate or Steep	-
Function Present	Yes No		
Degree of Function	High Mo	d kow)	•

GWD/GROUNDWATER DISCHARGE

	-	Comments
Hardpan, shallow ledge		
Yes	(FNo)	
Well developed	Non/Poorly	
(Yes)	No	
(Tes)	No	
High Mod	Low	
	Yes Well developed Yes Yes	Yes No Non/Poorly developed No No No No

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large .	Small	
Amount of impervious surface in wetland watershed	-trarge	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	₹€S	No -	
Wetland in floodplain of adjacent watercourse	Yes	No	
	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes	(6N)	
Wetland vegetation density	High)	Low	
Wetland microrelief	Well developed	None/Poorly developed	

	Yes	No		
Degree of Function	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition Not associated with pond/lake)

Criteria		l		Comments
Dominant land use adjacent to Waterbody	Ferest, Shrub	, Meadow	Lawn	. As the second of the second
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No.	
% of pond covered by submerged or emergent vegetation	15-40%	- Commence of the Commence of	Other	
Direct stormwater discharge via culvert?	No.		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	<u> </u>
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nulsance aquatic vegetation or duckweed?	No	<u>-</u>	Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs_boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	<u> </u>

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	(No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	·
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	a No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	/ No	
Wetland basin topographic gradient	(Low	High	
Fine grained mineral or organic soils present	(Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	(No)	Yes	No water ourse
Function Present	Yes	· No	-
Degree of Function	High (Mod		_

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	No.	-
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No No	
Water flow through welland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	No		
Degree of Function	High	(Mod)	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	N6)	
Wetland has high degree of plant community structure and species diversity	(Yes)	No	<u>_</u>
Detritus development is present within this wetland	(_Yes	No	
Flowering plants used by nectar gatherers present	Yes	No	<u> </u>
Evidence of wildlife use in wetland	Yes	No	
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	(Yes)	No	<u>_</u> .
Degree of Function	High Mod_	(Low)	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	÷		Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	Yes	No	
Wetland border >10' adjacent to pond or water	Yes		<u></u>
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	Ng	
Boating activity present	Yes	(No)	
Floodplain stabilizing trees and shrubs present	(Yes)	No	
Indications of erosion or sillation present	Yes	(No)	
Function Present	(Yes)	No _	
Degree of Function	High Mo	od Low	

REC/RECREATION

Criteria	+				Comments
Wetland is part of recreation area, park, refuge, etc.	Yes		No_		
Fishing is available in or from the wetland	Yes	1	No	}	·
Hunting is permitted in wetland	Yes	\	No	<u> </u>	
Hiking occurs or has potential to occur in wetland	Yes		No /	<u>'</u>	
Wetland is a valuable wildlife habitat	Yes	/	Nø		

Wetland has high visual/aesthetic quality	Yes	/ \	0	
Boating or canoeing feasible in wetland	Yes		0 \	
Off-road public parking near wetland available	Yes	1/	。 \	
Safety Hazards (if present list them)	Yes		, 	••
Function Present	Yes			
Degree of Function	High	Mod	Low	

WLH/WILDLIFE HABITAT

Criteria	_	· ·	
	+		Comments
Wetland degradation by human activity	Little or None	Moderate to High	Pandways & Pine Plantation
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Xes_)	No	White Pine Plantation
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No)	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant)	Few	
Interspersion of vegetation and open water	High	COWO	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp, \$S=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	SM H		
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	(No)	
Edge diversity (List types)		-	
Water regime	Wetter (Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absept	
Sphagnum hummocks next to shallow pools	Present	Absent	-
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(B)	No	
Degree of Function	High (Mod)	Low	

Criteria		4	-	Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		No	
Wetland class diversity	High		(10W)	
Adjacent upland cover types (É=forest/ M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest- White Pine
Off-road parking near wetland available	Yes		NO	•
Proximity to schools	Near		(Far	
Wetland contains perennial watercourse	Yes		₹	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(N)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	+				Comments
Wetland contains listed species	Yes	/	No		
Wetland identified as exemplary natural community	Yes	\	No	}	,
Wetland locally/regionally significant	Yes		No	/	
Function Present	Yes		No		
Degree of Function	High.	Mod	Low		

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+ .	<u></u>	Comments
Visible from primary viewing locations	Yes		No \	
Views absent trash, debris, sign of degradation	Yes	1	No \	
Low noise level	Yes	1	No	
Visual landuse contrast with wetland	Yes	1	No /	
Function Present	Yes		No /	
Degree of Function	High	Mod	Low	·

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No \	
Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	No	

Function Present	Yes		No
Degree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Low/mod	Mod	No	mod	Mod	Low	No_	Low	No	No	Cars	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

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Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

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Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo 204-SW	zonel M	ODIFIED FUNCTION Date: N/A Function	NS AND VALUES	S ASSESSMENT	Sunny		
Project Name: Brunswick NAS Wet Id#	: FA 17 1	Date: N/A Function	al Unit:			Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios	Recent Precipita	ation: N/A Belo	ow average 🗌	Average	Above Average		
Wildlife Investigation Method: Cover search	Dip netti	ng 🗌 💮 Audi	itory 🛛	Scat 🗵	Tracks 🛛 💮 🛚	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classificati	ion	· 	<u> </u>		·		
Class	Subclass			<u>-</u>	<u>-</u>		<u> </u>
POW/ Open water	Vegetated	Non-Veg	etated				
PEM/PSS Deep Marsh	Dead Woody	Shrub S	Sub-shrub	Robust	Narrow-leave	ed Broad-leav	/ed
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-lea	ved FI	oating leaved		<u>_</u>
PFL / Seasonally Flooded Flats	Emergent	Shrub		_		_ 	<u>-</u>
PEM / Wet Meadow	Ungrazed	Grazed			_	-	<u>-</u>
PSS / Shrub Swamp	Sapling	Bushy	Compact	A	quatic	_ _	<u> </u>
PFO / Wooded Swamp	Deciduous	Evergre				<u> </u>	
Bog	Compact shi	rub Bushy s	hrub	Wooded		ergent I to surface, especially	early in growing
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land sur Intermittently Exposed (Z) -surface water present			seas exce _j	on, but are unsate of for ground water persons to glooded ()	urated by end of se er seepage and ove \\ - surface water n	ason in most years; su	ırtace water abseni s durina arowina
of extreme drought Semi-permanently flooded (F) - surface water p most years			Interr varia	nittently flooded (ble periods witho	(J) - substrate usua ut detectable seasc	illy exposed, but surfac anal periodicity~	ce water is present for
Seasonally flooded (C) - surface water present growing season, but is absent by end of season	for extended peri in most years	ods especially early	in Artific	cially flooded (K)	- amount/duration o	of flooding controlled b	y dikes dams, pumps
Hydrology: Ground water discharges present:	Yes	No .		Depth to fre			
If Present: Slope or Depressional		maximum -	_	•	ered hydrology?	Yes	No
Surface water depth:	Saturated in up			Sediment de		ge patterns within wet	ands Other
Hydrology indicators: Inundated Plant Adaptations to Hydrology: Pneurostems, or roots Adventitious roots	natophores Rhizospheric o	Polymorphic leaves		trees Hyr	pertrophied lenticels ting leaves		Inflated leaves,
otome, or re	rately Well	Somewhat Poorly	Pod	orly Very	y Poorly	Mapped Hydric Soll	
Upland Border: Slope: Nearly level Cover Types: Mature forest Vegetation Density(S/M/D): Grees	Gentle Sapting	g forest Sh	Steen	Meadow	Mowed lawn Grass	Farm	

Soil: 10 A - Udorthents - croghan complex

		1164
L	ear	litter:

Well developed

Moderately well developed

Absent

Cover objects:

Evidence of Erosion:

No Yes

Bark

(Explain)

Boulders

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	(Sand/gravel outwash)	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mod	Low	· · · · · · · · · · · · · · · · · · ·

GWD/GROUNDWATER DISCHARGE

+		Command
Hardpan, shallow ledge	- 	Comments
Yes	No	
(Well developed	Non/Poorly	
Yes		
Yes		No inlet or outlet
High Mod	(Low)	\dashv
	Well developed Yes Yes	Yes No Non/Poorly developed Yes No

FFA/FLOODFLOW ALTERATION (Excluding condition; Slope Wetland)

Criteria	+	T	<u> </u>	Comments
Wetland size in relation to watershed	Large	Smail	- -	Comments
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentie	Moderate	C4===	
Wetland characterized by variable water level?	Ves	No	Steep	
Wetland in floodplain of adjacent watercourse	Yes	(No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		
Watershed has a history of economic loss due to flooding	Yes	No		ta . I.
Wetland outlet restricted	Yes	No	_	Unknown
Wetland vegetation density	High-	LOW	-	
Wetland microrelief	Well developed	None/Poorly developed	<u>·</u>	

•			
Function Present	Yes	No	
Degree of Function	High	Mod	(Low)

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	·	<u> </u>	Comments
Dominant land use adjacent to Waterbody	Fores) Shrub,	Meadow	Lawn	
Shallow littoral zone wifir emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	- No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	<u>-</u>	Yes	
Pond size ≥0.5 acre	Yes	· <u>-</u>	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	_	Yes	
FunctionPresent	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dants/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability .	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High.	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		(No)	
Degree of Function	High	Mođ	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	(Yes)	No	
Duration of water retention in wetland	Long	Short	Runoff from roads
Evidence of sediment trapping in wetland	Yes		
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	- 	
Drainage ditches in wetland	No No	Low	
Water flow through wetland	Diffuse	(Yes)	
Ponded water present		Channelized	<u> </u>
Wetland basin topographic gradient	Yes	No	
Fine grained mineral or organic soils present	Yes	High	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present		No	No watercourse
Function Present		Yes	
Degree of Function	High (Mod	No	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		T
Wetland size in relation to watershed	Large	-	Comments
Potential sources of excess nutrients upstream	Yes .	Small	·
Wetland is saturated most of the season	Yes	(,No)	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	No	
Vegetation density	High	Channelized Lów	
Potential for sediment trapping exists	Yes	No No	
Deep or open water habitat is present	Yes		
Soil type	Organic/high clay	(Sand/gravei)	
Wetland basin topographic gradient	-Low		
Wetland microrelief	Well developed	High None, poorly developed	

Function Present	Yes	No		
Degree of Function	High	Mod	Low	The state of the s
DE/DRODUCTION EXPORT /Excluding Condition: No Outlet	·		•	

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low -	
Nutrients and/or organic matter flushed out of wetland into watercourse	(es)	No	·
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	(Yes)	No	
Flowering plants used by nectar gatherers present	Yes	(No	
Evidence of wildlife use in wetland	Yes .	(No)_	
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	(Pes)	No	
Degree of Function	High Mod	(Low)	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	(Yes)	No	
Wetland border >10' adjacent to pond or water	Yes	No	
Distinct shoreline or bank evident between wetland and water	No	Yes	
Open water fetch present	Yes	_ (-NG)	
Boating activity present	Yes	MO	
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes	(No)	
Function Present	(Fes.)	No	
Degree of Function	High M	od (Low)	

REC/RECREATION

Criteria	+		, (Comments
Wetland is part of recreation area, park, refuge, etc.	Yes		No \	·
Fishing is available in or from the wetland	Yes		No	
Hunting is permitted in wetland	Yes		No	
Hiking occurs or has potential to occur in wetland	Yes	_ \	No	
Wetland is a valuable wildlife habitat	Yes	7	NO NO	·

Wetland has high visual/aesthetic quality	Yes	No	
Boating or canoeing feasible in wetland	Yes	No	
Off-road public parking near wetland available	Yes	No	
Safety Hazards (if present list them)	Yes	No /	
Function Present	Yes	No	
Degree of Function	High	Mod Low	

WLH/WILDLIFE HABITAT

		•	
Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	t
Wetland fragmentation by development	Little or None	Moderate to	Fragmented by roadways I ball field
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	The agreement the say of sales and the sales are the
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	FA 15 + FA 16
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	· · ·
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OVV=Open water)	High	Low	
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	TS SH, H,		
Wetland plant species diversity	High Mod (Low)	_	-
Vernal poof	Yes	(No)	
Edge diversity (List types)	· - -		
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	Suags, Logs
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	swales, 20 ys
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present c	Absent	·
Bare well drained sandy soils near wetland (turtle nest site)	Present (Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	
Degree of Function	High Mod	(Coy)	

Criteria	÷	- Comments
Welland contains listed species	Yes	No \
Wetland provides valuable wildlife habitat	Yes	/No
Wetland class diversity	High	Low
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low
Off-road parking near wetland available	Yes	No .
Proximity to schools	Near	Far
Wetland contains perennial watercourse	Yes	No
Wetland contains pond/lake	Yes	No ·
Safety hazards (if present list them)		
Site currently used for educational/scientific purposes	Yes	\ No /
Function Present .	Yes-	Ne Ne
Degree of Function	High Mod	Low

U/H/UNIQUENESS/HERITAGE

Criteria	+	•		Comments
Wetland contains listed species	Yes		No \	
Wetland identified as exemplary natural community	Yes		No _	
Wetland locally/regionally significant	Yes		No /	
Function Present	Yes		(ON)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments	
Visible from primary viewing locations	Yes		(No)		
Views absent trash, debris, sign of degradation	Yes		No		
Low noise level	Yes		No	·	
Visual landuse contrast with wetland	Yes		No.		
Function Present	Yes		No		
Degree of Function	High	Mod	Low	<u> </u>	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	No.	·

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/Low	Low	No	mod	Mod	cow	20	low	No	No	Low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered:

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 18 Date:	N/A Functional Unit:	Weathe	er: N/A Ti	ime Start: N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios R	ecent Precipitation:	: N/A Below average]	☐ Average ☐	Above Average] Don't Know □	⊤BD ∏
Wildlife Investigation Method: Cover search ⊠	Dip netting 🗌	Auditory 🛛	Scat ⊠	Tracks 🛛 M	innow Traps 🔲	Electro-shocking [
Wetland Types(s) Cowardin/Golet Classification	n				•	_
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated				
PEM/PSS Deep Marsh	Dead Woody Sh	nrub Sub-shrub	Robust	Narrow-leaved	Broad-leave	eđ .
PAB/ Shalfow Marsh	Robust Na	arrow-leaved Broa	d-leaved Floa	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub				· .
PEM / Wet Meadow	Ungrazed	Grazed				
PSS / Shrub Swamp	Sapling Bu	ushy Com	pact Aqu	ıatic		
PFO / Wooded Swamp	Deciduous	Evergreen				
Bog	Compact shrub	Bushy shrub	Wooded	Emerg		
Water Regimes (Cowardin Modifier):			easonally saturated (Y) eason, but are unsatura			
Permanently flooded (H) - water covers land surface	ce throughout year in		xcept for ground water			
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the year e.		emporarily flooded (A) - eason, but water table t			
Semi-permanently flooded (F) - surface water pers most years	sists throughout growi		ntermittently flooded (J) variable periods without			water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		,	Artificially flooded (K) - a atc	mount/duration of f	looding controlled by	dikes dams, pumps,
Hydrology:					•	•
Ground water discharges present: Y	es (Ñõ)		Depth to free v	water:		
If Present: Slope or Depressional	•	•	Depth to satur	ation:		
Surface water depth: a	verage -	maximum -	Signs of altere	d hydrology?	Yes	No
Hydrology indicators: Inundated S	aturated in upper 12"	" Water marks Drift line	s Sediment depo	sits Drainage	patterns within wetlar	other
Plant Adaptations to Hydrology: Pneumate stems, or roots Adventitious roots R	ophores Polym Rhizospheric oxidatior			trophied lenticels g leaves Fi	Stooling loating stems	Inflated leaves,
Soil Drainage classes (Well) Moderate	ly Weli Some	ewhat Poorly	Poorty Very Po	oorly M	apped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:					•	
Slope: Nearly level G	Gentle	Moderate	Steep			
Cover Types: Mature forest	Sapling forest	t Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	N Saplin	ngs Shrubs	Herbs	Grass	-	
C 3. 20 4 - 11 day						

Leaf litter:	Well developed	Moder	ately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	(No) Yes	(Explain)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse		©	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		·
Degree of Function	High Mod	Low	-

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledg	e	
Seeps, springs observed?	Yes	(No	
Wetland microrelief	Well developed	Non/Poorly) developed	
Welland contains an outlet, no inlet	Yes	(No.)	
Function Present	Yes	(No)	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Small		
Amount of impervious surface in wetland watershed	Lárge	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No		
Wetland in floodplain of adjacent watercourse	Yes	(No)		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		
Watershed has a history of economic loss due to flooding	Yes	No .		Unknown
Wetland outlet restricted	Yes	No		
Wetland vegetation density	High	Low	***	
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	·

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone-with emergent vegetation present?	Yes		No	The state of the s
Waterbody at least 10' deep	Yes		No	·
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	fligh	-	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	-	Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blogues, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition) Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	The same of the sa
Gravel spawning areas present	Yes	No	Andrew Street,
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	-High	Low	
Channel alterations (channelization, islands or point bars)	Absent-or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen legs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	·
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	4		Comments	
Sources of sediments or toxicants upstream	(Yes)	No		
Duration of water retention in wetland	Long	(Short)		
Evidence of sediment trapping in wetland	Yes	Low		
Vegetation density	High	No		 -
Wetland edge broad and intermittently aerobic	Yes	Lów		<u> </u>
Drainage ditches in wetland	No	Yes		
Water flow through wetland	Diffuse	Channelized)		
Ponded water present	Yes	(No)		
Wetland basin topographic gradient	(Low)	High		_ _
Fine grained mineral or organic soils present	Yes	No	<u> </u>	
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	 	_
Indicators of erosion or high water velocities are present	Ñø	Yes		 .
Function Present	Yes	(Nô)	-	
Degree of Function	High Mo	- \ 		

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	_	Comments
Wetland size in relation to watershed	Large	Śmáli)	
Potential sources of excess nutrients upstream	Yes	NO -	_
Wetland is saturated most of the season	Yes	No.	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No -	
Water flow through wetland	Diffuse	(Channelized	-
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	(None, poorly developed)	

Function Present	Yes	No	
Degree of Function	High	Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+		Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Yes	(No)	
Detritus development is present within this wetland	Yes	(Ño)	
Flowering plants used by nectar gatherers present	Yes	(No)_	
Evidence of wildlife use in wetland	Yes	(No)	
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	Yes	(No)	
Degree of Function	High Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	÷	-	Comments	.
Topographical gradient in wetland	Yes	(No)		
Potential sediment sources upstream or upslope	(P)	No	•	
Wetland border >10' adjacent to pond or water	Yes	(NO)		
Distinct shoreline or bank evident between wetland and water	No	Yes		
Open water fetch present	Yes	(N)		
Boating activity present	Yes	160		
Floodplain stabilizing trees and shrubs present	\rightarrow (e)	No	·	
Indications of erosion or siltation present	Yes	N		
Function Present	Yes	(16)		
Degree of Function	High M	flod Low		

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No	
Fishing is available in or from the wetland	Yes	No	
Hunting is permitted in wetland	Yes	No	
Hiking occurs or has potential to occur in wetland	Yes	No	
Wetland is a valuable wildlife habitat	Yes	No	

Wetland has high visual/aesthetic quality	Yes	(Ng))	
Boating or canoeing feasible in wetland	Yes	(No		·
Off-road public parking near wetland available	Yes	(No		
Safety Hazards (if present list them)	Yes	(No))	
Function Present	Yes	(No)	j	
Degree of Function	High	Mod	Low	1

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	(Moderate to	
Wetland fragmentation by development	Little or Nane	Moderate to	
Buffer exists (F=forest: M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No	
Buffer width	Good to Excellent	(Fair to Poor)	
Connectivity with other wetlands	Yes	(No)	
Size of landscape block in which wetland is located	Large	Small	· · · · · · · · · · · · · · · · · · ·
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(LÓW)	Unniled Salaman
Vegetation density	High	Tow)	7,000
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Vooded swamp Thee, leaflitter
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	(No)	-
Edge diversity (List types)			
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	Fre Siera Long
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	20 9 2 (M) A AVIONES
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low y	High	
Function Present	Yes	No.	
Degree of Function	High Mod	Low	

Criteria		+	-	Comments
Wetland contains listed species	Yes		(W)	
Wetland provides valuable wildlife habitat	Yes		(P)	
Wetland class diversity	High		(oy)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest
Off-road parking near wetland available	Yes		N60	
Proximity to schools	Near		Far	Bowldsin College
Wetland contains perennial watercourse	Yes		(No)	J
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)			_	
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes		(NO)	
Degree of Function	High	Mod	Low	and the second s

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		®	
Wetland identified as exemplary natural community	Yes		N9 .	
Wetland locally/regionally significant	Yes		<u>(6)</u>	
Function Present	Yes		No	
Degree of Function	·High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments	
Visible from primary viewing locations	Yes		No	-	
Views absent trash, debris, sign of degradation	(Yes		No		·
Low noise level	Yes		(No)		
Visual landuse contrast with wetland	Yes		(%)		·
Function Present	Yes		(No)		•
Degree of Function	High	Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		-	Comments		
Wetland contains or known to contain federal listed species or habitat	Yes		(No)			
Wetland contains critical habitat for state or federal listed species	Yes		(6)			
Area appears in state or national database	Yes	•	160)			

Function Present	Yes		(Qo)	,	· ·	
Degree of Function	High	Mod	Low			

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Med/No	NO_	10	No	NO	No	No	Low	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

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Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap-for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent itl effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

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Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 19 Date: N/A Functional Unit:	Weather: N/A	Time Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	lecent Precipitation: N/A Below average	e 🗌 Average 🗌 Above Average	☐ Don't Know ☐ TBÐ ☐
Wildlife Investigation Method: Cover search 🗵	Dip netting ☐ Auditory ⊠	Scat 🛛 Tracks 🖾	Minnow Traps \square Electro-shocking \square
Wetland Types(s) Cowardin/Golet Classification	n		
Class	Subclass		
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leav	red Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Br	pad-leaved Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub		
PEM / Wet Meadow	Ungrazed Grazed		
PSS / Shrub Swamp	Sapling Bushy Co	mpact Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen		
Bog	Compact shrub Bushy shrub		ergent
Water Regimes (Cowardin Modifier):		Seasonally saturated (Y) - soils saturated	i to surface, especially early in growing eason in most years; surface water absent
Permanently flooded (H) - water covers land surfa-	ce throughout year in all years	except for ground water seepage and ov	erland flow
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the year except in years	Temporarily flooded (A) - surface water p season, but water table usually lies well it	resent for brief periods during growing below soil surface for most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout growing season in	Intermittently flooded (J) - substrate usua variable periods without detectable seaso	ally exposed, but surface water is present for onal periodicity—
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		Artificially flooded (K) - amount/duration etc	of flooding controlled by dikes dams, pumps,
Hydrology:			
Ground water discharges present: Y	(es (Ño)	Depth to free water:	
If Present: Slope or Depressional	<u> </u>	Depth to saturation:	
Surface water depth: a	everage - maximum -	Signs of attered hydrology?	Yes No
Hydrology indicators: Inundated S	Saturated in upper 12" Water marks Drift li	nes Sediment deposits <u>Oraina</u>	ge patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumal stems, or roots Adventitious roots F	tophores Polymorphic leaves Buttre Rhizospheric oxidation Shallow root s	ssed trees Hypertrophied lenticels systems Floating leaves	s Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep	•	
Upland Border:		•	
Slope: Nearly level	Gentle Moderate	Steep	
Cover Types: Mature forest	Sapling forest Shrub thicket	Meadow Mowed lawn	Farm
Vegetation Density(S/M/D): Trees	M Saplings Shrut	s Herbs Grass	1

Soil: 30A - Udorthents - Adams Complex

Leaf litter:

Well developed

Moderately well developed

Boulders

Absent

Cover objects:

(Logs)

Bark

Rocks

Evidence of Erosion:

(Mg)

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	000	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High (Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow l	ledge	
Seeps, springs observed?	Yes	/No	
Wetland microrelief	Well developed	Non/Poolly sleveloped	
Wetland contains an outlet, no inlet	Yes		
Function Present	Yes	(Ne)	
Degree of Function	High N	Mod Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments	
Wetland size in relation to watershed	Large	Small			
Amount of impervious surface in wetland watershed	(Carge)	Small			
Wetland Slope	(Gentie	Moderate	Steep		
Wetland characterized by variable water level?	(Yes)	No	· · · · ·		
Wetland in floodplain of adjacent watercourse	Yes	CON	****	<u> </u>	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(A)	No			
Watershed has a history of economic loss due to flooding	Yes	No		aknown	
Wefland outlet restricted	Yes	No			
Wetland vegetation density	High	1501/2			
Wetland microrelief	Well developed	None/Podrty (developed			

Function Present	Yes	(No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Critezia	·			Comments
Dominant land use adjacent to Waterbody	Forest, Shrui	, Meadow	Lawn	
Shallow littoral zone with emergent-vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%	-	Other	
Direct stormwater discharge via culvert?	_No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		FOW	<u> </u>
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes	<u></u>	No	
Pond experiences dense algal blooms, nuisance-aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	<u>-</u>	No_	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes .	No	The state of the s
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	The state of the s
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	FOW	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	<u> </u>
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria			+	\top		Comments
Sources of sediments or toxicants upstream		Yes		T _N		Other Control of the
Duration of water retention in wetland		Long	-	1	nort .	
Evidence of sediment trapping in wetland		Yes	_	10	/	
Vegetation density	_	High		No		
Welland edge broad and intermittently aerobic		Yes	_	وكا	- · - · - · - · - · - · - · · - · · · ·	<u> </u>
Drainage ditches in wetland		No		7		
Water flow through wettand		Diffuse			nannelized)	
Ponded water present	•	Yes	<u> </u>	(N		
Wetland basin topographic gradient		Low			9 gh	
Fine grained mineral or organic soils present		Yes		No		
Watercourse, if present, has visible velocity decreases in wetland	_	Yes	<u>. </u>	No	_	
Indicators of erosion or high water velocities are present		No No		Ye		
Function Present		Yes		(No		
Degree of Function		High	Mod	سلسدا	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	<u> </u>	
Wetland is saturated most of the season	Yes		
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Cow	
Potential for sediment trapping exists	Yes		
Deep or open water habitat is present	Yes	(N)	
Soil type	Organic/high clay	Sand/grayel	
Wetland basin topographic gradient	Content		
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	No	
Degree of Function	High	Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria		+	-	Comments
Wildlife food sources in wetland	Abundant		Few	
Vegetation density	High		Loy	
Nutrients and/or organic matter flushed out of wetland into watercourse	(es)		No	
Wetland has high degree of plant community structure and species diversity	Yes		(A)	
Detritus development is present within this wetland	Yes		(N)	
Flowering plants used by nectar gatherers present	Yes		(FFO)	
Evidence of wildlife use in wetland	Yes			
Fish or shellfish develop/occur in wetland	Yes		. [₹]	
Function Present	Yes		<u></u>	
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+			-	Comments
Topographical gradient in wetland	Yes		No		
Potential sediment sources upstream or upstope	6		No		
Wetland border >10' adjacent to pond or water .	Yes		Ng.		·
Distinct shoreline or bank evident between wetland and water	No .		Yes		
Open water fetch present	Yes		(N)		
Boating activity present	Yes		(N)		
Floodplain stabilizing trees and shrubs present	(Yes)		No		
Indications of erosion or siltation present	Yes		(No)		
Function Present	Yes		(v)		
Degree of Function	High	Mod		Low	

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	Nd	
Fishing is available in or from the wetland	Yes	No	
Hunting is permitted in wetland	Yes	No \	
Hiking occurs or has potential to occur in wetland	Yes	No \	
Wetland is a valuable wildlife habitat	Yes	No	

Wetland has high visual/aesthetic quality	Yes		(No)	,			
Boating or canceing feasible in wetland	Yes		(6))			•	
Off-road public parking near wetland available	Yes		(No)		· · ·		
Safety Hazards (if present list them)	Yes		Q				-
Function Present	Yes		No.			•	,
Degree of Function	High	Mod	Low	· -			

WLH/WILDLIFE HABITAT

<u> </u>				
Criteria	+	•		Comments
Wetland degradation by human activity	Little or None		Moderate to High	
Wetland fragmentation by development	Little or Nor	ne .	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes		100	
Buffer width	Good to Ex	cellent	(Fair to Poor	
Connectivity with other wetlands	Yes		(No)	
Size of landscape block in which wetland is located	Large		Small	
Wildlife food sources in weiland	Abundant		(Few	
Interspersion of vegetation and open water	High		Cow	
Upland islands	Present		Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		يم تونين	Wood ed suroup
Vegetation density	High		(WOZ)	300 1000
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)				Tree, leaf litter
Wetland plant species diversity	High Mad	(Cow)		
Vernal pool	Yes		® _	
Edge diversity (List types)				
Water regime	Wetter _		/Drier)	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant		Few	Tast and look C
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	<u> </u>	Few	Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present		(Absept)	- was to account
Sphagnum hummocks next to shallow pools	Present		Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Absent	
Abundance of invasive exotic flora	None or Lov	v3	High	
Function Present	(Yes)		No	· · · · · · · · · · · · · · · · · · ·
Degree of Function	High	Mod	Low	
		_	<u> </u>	· ·

Criteria	+		- Comments
Wetland contains listed species	Yes	(Ne)	
Wetland provides valuable wildlife habitat	Yes	Ne	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(a)	Forest
Off-road parking near wetland available	Yes	(No)	
Proximity to schools	Near	Far	Bourdoin college
Wetland contains perennial watercourse	Yes	(AG)	<i>J</i>
Wetland contains pond/lake	Yes	(A)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes .	(No)	
Function Present	Yes	6	
Degree of Function	High	Mod Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+ .	-	Comments
Wetland contains listed species	Yes		(140)	
Wetland identified as exemplary natural community	Yes		MD	
Wetland locally/regionally significant	Yes		Ø.	
Function Present	Yes		6	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	Yes		No)	
Views absent trash, debris, sign of degradation	sent trash, debris, sign of degradation		No	
Low noise level	Yes	Yes		
Visual landuse contrast with wetland	Yes		(P)	
Function Present	Yes		(N)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	/NO)	
Area appears in state or national database	Yes	(M)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	No	No	No	No	No	No	Low	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo 207-S Project Name: Brunswick NAS Wet Id#:F	one,	DIFIED FUNCTIONS A ၂ (20 ate: N/A Functional U		SSESSMENT Weathe	r: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitati	ion: N/A Below av	rerage □	Average 🗌	Above Average	☐ Don't Know ☐	TBD □
Wildlife Investigation Method: Cover search ⊠	Dip netting	g Auditory	\boxtimes	Scat 🛛	Tracks 🖾	Minnow Traps ☐	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n				_		
Class	Subclass						· .
POW/ Open water	Vegetated	Non-Vegetate	eđ				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	shrub	Robust	Narrow-leav	ed Broad-leav	ed
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Floa	ting leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub				<u></u>	
PEM / Wet Meadow	Ungrazed	Grazed			_		. <u></u>
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aqua	atic		
PFO / Wooded Swamp	Deciduous	Evergreen					
Bog	Compact shrub	Bushy shrub		Wooded		ergent	
Water Regimes (Cowardin Modifier):			(Seasona	lly saturated (Y) but are unsatura	<u>- soils s</u> aturated ted by end of se	l-to-surface, especially d ason in most years; sui	arly in growing face water absent
Permanently flooded (H) - water covers land surface	ce throughout yea	ar in all years	except fo	or ground water s	seepage and ov	erland flow	
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the ye	ear except in years				present for brief periods below soil surface for m	
Semi-permanently flooded (F) - surface water pers most years	iists throughout g	prowing season in		ently flooded (J) - periods without o		ally exposed, but surfactional periodicity~	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		s especially early in	Artificially etc	y flooded (K) - ar	mount/duration	of flooding controlled by	dikes dams, pumps,
Hydrology:							
Ground water discharges present: Y	es N	<u> </u>		Depth to free w	vater:		
If Present: Slope or Depressional				Depth to satura	ation:		
Surface water depth:	verage -	maximum -		Signs of altered	d hydrology?	Yes	No
Hydrology indicators: Inundated S	aturated in upper	r 12" Water marks	Drift lines	Sediment depos	sits Draina	ge patterns within wetla	nds Other
Plant Adaptations to Hydrology: Pneumato stems, or roots Adventitious roots R	ophores Po Rhizospheric oxid		Buttressed tree: root systems	s Hyperti Floating	rophied lenticels ¡ leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ly Well So	omewhat Poorly	Poorly	Very Po	orly	Mapped Hydric Soil	
Slope: Nearly level (Gentle)	Moderate	Steep					
Upland Border:							
Slope: Nearly level	entle	Moderate	Steep				
Cover Types: Mature forest	Sapling fo	orest Shrub th	icket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (rees)	D §	aplings W	Shrubs	Herbs	Grass		
Soil: 25A - Adams loan	my fine -	Send					

	E	400	t	
- E	eaf	III	rei	г.

Yes

Moderately well developed

Absent

Cover objects:

Evidence of Erosion:

Bark

(Explain)

Boulders

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	. +	-	Comments
Soils	Sand/gravel outwash)	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	(Yes)	No	·
Slope	Gentie	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	<u></u>		Comments
Soits	Hardpan, shallow	ledge		
Seeps, springs observed?	Yes		No.	
Wetland microrelief	Well developed	Well developed		
Wetland contains an outlet, no inlet	Yes		developed No	
Function Present	Yes		(No)	
Degree of Function	High I	Mod	Low	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Small)		
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No		
Wetland in floodplain of adjacent watercourse	(Yes)	No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		
Watershed has a history of economic loss due to flooding	Yes	No		Kuthown
Wetland outlet restricted	(Yes)	No		Stream culverted in several places
Wetland vegetation density	High	(ow)		Street Culpernes in Several Stocks
Wetland microrelief	Weil developed	None/Poorly developed		

Function Present	Yes	No		_	
Degree of Function	High	Mod	(Low)		

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition; Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	- Andrews -
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		-Xes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	_	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No)	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	Culverted in soveral polaces
Dominant bottom substrate	Gravel/cobbles	Sand/silt)	
Substrate embeddedness by sand & silt	Low	High	<u> </u>
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(COW)	
Channel atterations (channelization, islands or point bars)	Absent or Few	Numerous	<u></u>
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	(High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	(Many)	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	Unknow h

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	Unknown
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	•	Comments	
Sources of sediments or toxicants upstream	Yes	No		
Duration of water retention in wetland	Long	(Short)		
Evidence of sediment trapping in wetland	Yes	Low		
Vegetation density .	High	No		
Wetland edge broad and intermittently aerobic	Yes	Low		_
Drainage ditches in wetland	(No)	Yes		
Water flow through wetland	Diffuse	Channelized		
Ponded water present	Yes	(No.)		
Wetland basin topographic gradient	Low	High		
Fine grained mineral or organic soils present	Yes	No No		
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	· · · · · · · · · · · · · · · · · · ·	<u> </u>
Indicators of erosion or high water velocities are present	- GN	Yes		
Function Present	Yes	No	<u> </u>	
Degree of Function	High Mo	d (Low)	-	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	(mall)	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse	Channelized	· · · · · · · · · · · · · · · · · · ·
Vegetation density	(High)	Low	
Potential for sediment trapping exists	Yes	(No)	
Deep or open water habitat is present	Yes	(N)	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	(None, poorly developed	

Function Present	Yes	No	
Degree of Function	High	Mod	(Low)

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Crîteria	+	Comments
Wildlife food sources in wetland	Abundant	(Fevir)
Vegetation density	High	Low
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No
Wetland has high degree of plant community structure and species diversity	Yes	(NO)
Detritus development is present within this wetland	Yes	No
Flowering plants used by nectar gatherers present	Yes	(No
Evidence of wildlife use in wetland	(Yes)	No
Fish or shellfish develop/occur in wetland	Yes	No
Function Present	(Yes	No
Degree of Function	High Mod	(Low)

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	-	Comments
Topographical gradient in wetland	(Ves)		No	
Potential sediment sources upstream or upslope	Yes		No.	
Wetland border >10' adjacent to pond or water	Yes		No _	
Distinct shoreline or bank evident between wetland and water	(No)		Yes	
Open water fetch present	Yes		<u>No</u>	
Boating activity present	Yes	j	(D)	
Floodplain stabilizing trees and shrubs present	Yes		No	
Indications of erosion or siltation present	Yes		No)	<u> </u>
Function Present	(Yes)		No	
Degree of Function	High	Mod	(Low)	<u> </u>

REC/RECREATION

Criteria	+	<u> </u>	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	(%)	
Hunting is permitted in wetland	Yes	(W)	
Hiking occurs or has potential to occur in wetland	Yes	<u> </u>	
Wetland is a valuable wildlife habitat	Yes	(No)	<u> </u>

Wetland has high visual/aesthetic quality	Yes	(Co)	
Boating or canoeing feasible in wetland	Yes	No		
Off-road public parking near wetland available	Yes	- No	-	-
Safety Hazards (if present list them)	Yes	(Ñ)	<u>-</u>	
Function Present	Yes	— (No		
Degree of Function	High	Mod	Low	†

WLH/WILDLIFE HABITAT

Criteria	- +	-	Comments
Wetland degradation by human activity		Moderate to	Comments
	Little or None	High	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	
Buffer width	Good to Excellent	Fair to Poor)
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High (Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(ow)	Wooded swemp
Vegetation density	High	Low	2.000ts9 3.00 b to h
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, saysling, leaf litter
Wetland plant species diversity	High Mod (Low)	<u> </u>	
Vernal pool	Yes	No)	
Edge diversity (List types)	-	<u> </u>	
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	(Abundant)		8-11
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	trallen logs
Flat rocks in/near watercourse (stream salamanders):	Present	Absent	loge/branches
Sphagnum hummocks next to shallow pools	Present	(Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present (Absent	<u> </u>
Abundance of invasive exotic flora	None or Low	High	
Function Present	(res)	No No	
Degree of Function	High Mod	(Low)	

Criteria		+		Comments
Wetland contains listed species	Yes	_	No _	
Wetland provides valuable wildlife habitat	Yes		(No)	
Wetland class diversity	. High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	_	Low	Ferest
Off-road parking near wetland available	Yes		_ (N)	
Proximity to schools	Near		Far	Boundain Course
Wetland contains perennial watercourse	Yes		No	
Wetland contains pond/lake	Yes	_	(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes		(No)	<u> </u>
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Dillo Aldo Eleboni Element				Comments
Criteria				Comments
Wetland contains listed species	Yes		<u></u>	
Wetland identified as exemplary natural community	Yes		<u> </u>	
Wetland locally/regionally significant	Yes	<u>.</u>	<u>66</u>	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Crîteria	+		Comments
Visible from primary viewing locations	Yes	(NO)	
Views absent trash, debris, sign of degradation	Yes	Ng	
Low noise level	Yes		
Visual landuse contrast with wetland	Yes	(Ng)	
Function Present	Yes	No	<u>· </u>
Degree of Function	High Mod	LLOW_	

ESH/ENDANGERED SPECIES HABITAT

ESTINENDARIOLITED OF ESTEED FOR THE STATE OF			
Criteria	+	ļ -	Comments
	<u> </u>		
Wetland contains or known to contain federal listed species or	Yes	(No)	
habitat		100	
Wetland contains critical habitat for state or federal listed species	Yes	(Ng	
Area appears in state or national database	Yes	(No)	<u> </u>

Function Present	Yes	<u> </u>	(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	Feat	T		, – 						
	TFA -	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
mod/No	Low	Low	Low	Low	ر هرب	No		No		£	
SUMMARY O	F FUNCTIONS	<u> </u>	<u> </u>				Low_		NO	Low	No

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to eroston and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA21 Da	te: N/A Functional	l Unit:	Weat	her: N/A	Time Start: N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios R	ecent Precipitation	on: N/A Below	average 🗌	Average 🗌	Above Average	Don't Know [☐ TBD ☐
Wildlife Investigation Method: Cover search ⊠	Dip netting	☐ Audito	ry 🛛	Scat 🗵	Tracks 🛚	Minnow Traps 🗌	Electro-shocking [
Wetland Types(s) Cowardin/Golet Classification	n					•	
Class	Subclass						
POW/ Open water	Vegetated	(Non-Veget	ated				·
PEM/PSS Deep Marsh	Dead Woody	Shrub Su	b-shrub	Robust	Narrow-leav	red Broad-lea	ved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	ed Fl	oating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling	Bushy	Compact	A	quatic		
PFO / Wooded Swamp	Deciduous	Evergreen	,				
Bog	Compact shrub	Bushy shru		Wooded		ergent	
Water Regimes (Cowardin Modifier):	-					d to surface, especially	
Permanently flooded (H) - water covers land surface	ce throughout yea	r in all years			irated by end of se er seepage and ove	eason in most years; seerland flow	urface water absent
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the yea	r except in years				nresent for brief period below soil surface for i	
Semi-permanently flooded (F) - surface water pers most years	sists throughout gr	owing season in	Intermit variable	tently flooded (J) – substrate usua It detectable seasc	ally exposed, but surfa	ce water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		especially early in					y dikes dams, pumps,
Hydrology:							
Ground water discharges present:	es No			Depth to free	e water:		
If Present: Slope or Depressional				Depth to sat	uration:		
Surface water depth:	verage -	maximum -		Signs of alte	ređ hydrology?	Yes	No
Hydrology indicators: Inundated S	aturated in upper	12" Water marks	Drift lines	Sediment dep	posits Drainag	ge patterns within wet	ands Other
Plant Adaptations to Hydrology: Pneumatostems, or roots Adventitious roots R	ophores Poi Phizospheric oxida	lymorphic leaves tion Shallo	Buttressed tree w root systems	,,	ertrophied lenticels ing leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ly Well Sor	mewhat Poorly	Poorly	Very	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:				•			
Slope: Nearly level	entle	Moderate	Steep				
Cover Types: Mature forest	Sapling fore	est Shrub	thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	M Sa	plings	Shrubs	Herbs	Grass		
Soil: DeA- Deerfield	loaning :	قصبرط					

Leaf litter:	Well developed	Mode	rately well developed	Absent
Cover objects:	(ogs)	Bark	Boulders	Rocks
Evidence of Erosion:	(No) Yes	(Explain)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	· +	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	(Yes)	No	
Slope	Gentle)	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High / Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments	
Soils	Hardpan, shallow le	dge		
Seeps, springs observed?	Yes	No		
Wetland microrelief	Weil developed	Non/Poorly developed		
Wetland contains an outlet, no inlet	Yes	(developed)		
Function Present	Yes	No _		
Degree of Function	High M	od Low		

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	(Moderate) Steep	
Wetland characterized by variable water level?	(Yes)	No	
Wetland in floodplain of adjacent watercourse	(Yes)	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	No	lakuowa
Wetland outlet restricted	(Yes)	No	curverted under dist read
Wetland vegetation density	High	(Low)	
Wetland microrelief	Well developed	(None/Poorly developed	

Function Present	Yes	No		
Degree of Function	High	Mod }	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments	
Dominant land use adjacent to Waterbody	Forest Shrub,	Meadow	Lawn		
Shallow littoral zone with emergent vegetation present?	(Yes)		No		
Waterbody at least 10' deep	(Yes)	,	No		
% of pond covered by submerged or emergent vegetation	15-40%		Othen	L159.	
Direct stormwater discharge via culvert?	No		(Yes)		
Sandbar present at inlet?	Nd		Yes	·	
Water transparency	High		Low		
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes		
Pond size ≥0.5 acre	Yes		No		
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No .		(Yes)		
Function Present	Yes		No)		
Degree of Function	High	Mod	Low		

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition; Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	·
Gravel spawning areas present	Yes	No	The state of the s
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	The state of the s
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable; eroding	
Bank vegetative cover	High (trees. shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many .	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mosfly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	(Yes)	Low	
Vegetation density	High	No (Low)	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No \	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	(Yes)	No	
Wetland basin topographic gradient	. (Low)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present .	Yes	No	Booms in place to contain
Degree of Function	High Mod	Low	Booms in place to contain input of unknown substance

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	÷	•	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	(Yes)	No	
Wetland is saturated most of the season	Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(Low)	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	(Yes)	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	(None, poorly developed)	

	<u> </u>							·	
Function Present	Yes			No	0				
Degree of Function		High	i	Mod		Low		•	
PE/PRODUCTION EXPORT (Excluding Condition: No Outl	et)				٠				
Criteria	† †			+		-	Comments		
Wildlife food sources in wetland			Abundant			Few			
Vegetation density -	!		High			Low			
Nutrients and/or organic matter flushed out of wetland into wa	ercourse		(Yes			No			
Wetland has high degree of plant community structure and sp	ecies diversity		Yes			(No)			
Detritus development is present within this wetland	<u>!</u> •		Yes			No			
Flowering plants used by nectar gatherers present		_	Yes			No			
Evidence of wildlife use in wetland	{		Yes			(No)			
Fish or shellfish develop/occur in wetland			Yes			No			-
Function Present	!		Yes			No			
Degree of Function			High	Mod	Ţ	_ow]	1 .		
S&SS/SEDIMENT/SHORELINE STABILIZATION									
Criteria] 	_	+		-		Comments	•	-
Topographical gradient in wetland	•	Yes		No					
Potential sediment sources upstream or upslope	(Yes)		No					
Wetland border >10' adjacent to pond or water		Yes		No)				
Distinct shoreline or bank evident between wetland and water	!	(<u>M</u>)		Ye	5				
Open water fetch present		Yes		No					
Boating activity present	j	Yes		(No)				
Floodplain stabilizing trees and shrubs present	<u> </u>	(Yes)		No					
Indications of erosion or siltation present))	Yes		No	\mathcal{F}		·		
Function Present		Yes		No					
Degree of Function		High	Mod	1)	Lov	٧		•	
REC/RECREATION				-					
Criteria			Ť			-	Comments		
Wetland is part of recreation area, park, refuge, etc.	1	Yes		(No					
Fishing is available in or from the wetland		Yes		N	2				
Hunting is permitted in wetland	1	Yes		N					
Hiking occurs or has potential to occur in wetland	1	Yes		N					
Wetland is a valuable wildlife habitat	!	Yes		(No	(3)	<u> </u>			

Wetland has high visual/aesthetic quality	Yes	(Nto)	
Boating or canoeing feasible in wetland	Yes	es (No)		
Off-road public parking near wettand available	Yes	(No)	
Safety Hazards (if present list them)	Yes	No	, '	
Function Present	Yes	(No)	
Degree of Function	High	Mod	Low	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	(Moderate to)	
Wetland fragmentation by development	Little or None	Moderate to	·
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	Forest
Buffer width	Good to Excellent	(Fair to Poor)	
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	Large	(Small)	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	(OW)	
Upland islands	Present	Absent)	-
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(Cow)	wooded swamp, open water
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, leaf litter herb
Wetland plant species diversity	High Mod Low	-	,
Vernal pool	Yes	(No)	
Edge diversity (List types)			
Water regime	(Wetter)	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	(Absent)	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	(None or Low)	High	
Function Present	(Yes	No	
Degree of Function	High Mod	Low	

Criteria	+		- Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	Yes	No	
Wetland class diversity	High	(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	Yes	No	
Proximity to schools	Near	Far	Bowdoin (cheqe
Wetland contains perennial watercourse	Yes	(No)	3
Wetland contains pond/lake	Yes/\	No	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	No	
Function Present	Yes	(No)	
Degree of Function	High	Mod Low	

U/H/UNIQUENESS/HERITAGE

Criteria ·		+	-	Comments
Wetland contains listed species	Yes		16	·
Wetland identified as exemplary natural community	Yes	Yes		-
Wetland locally/regionally significant	Yes	Yes		
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	<u> </u>

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	Yes		(ND)	
Views absent trash, debris, sign of degradation	Yes		(80)	
Low noise level	Yes		No	Near air f-eld/roadways
Visual landuse contrast with wetland	(Yes)		No	,
Function Present	Yes		(ag)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+ .		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	№	·
Wetland contains critical habitat for state or federal listed species	Yes	(NO)_	
Area appears in state or national database	Yes	(No)	

Function Present	-	Yes		Nob
gree of Function	ction	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/Low	Mod	دسوسا	Med	Low	Low	No	Lew	No	No	mod	20

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or configuous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo 209 S 2	MODIFIED FUNCTIONS AN	ND VALUES ASSESSMENT	
Project Name: Brunswick NAS Wet Id#:	FA22 Date: N/A Functional Un	it: Weather:	N/A Time Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios F	Recent Precipitation: N/A Below ave	erage 🗌 🔝 Average 🔲 💮 Abov	Average Don't Know TBD 🖂
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory ∑	Scat 🖾 Track	s 🗵 . Minnow Traps 🗌 Electro-shocking 🗌
Wetland Types(s) Cowardin/Golet Classification	on .		
Class	Subclass		
POW/ Open water	Vegetated Non-Vegetated	1	
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-si	nrub Robust Na	arrow-leaved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved Floating le	aved
PFL / Seasonally Flooded Flats	(Emergent Shrub	·	
(PEM / Wet Meadow)	(Ungrazed) Grazed		-
PSS / Shrub Swamp	Sapling Bushy	Compact Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen		
Bog	Compact shrub Bushy shrub	Wooded	Emergent
Water Regimes (Cowardin Modifier):			saturated to surface, especially early in growing end of season in most years; surface water absent
Permanently flooded (H) - water covers land surfa		except for ground water seepa	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years .		te water present for brief periods during growing lies well below soil surface for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout growing season in	Intermittently flooded (J) - subs variable periods without detect	trate usually exposed, but surface water is present for able seasonal periodicity—
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in			duration of flooding controlled by dikes dams, pumps,
Hydrology:			
Ground water discharges present:	Yes (No)	Depth to free water:	•
If Present: Slope or Depressional		Depth to saturation:	
Surface water depth:	average - maximum -	Signs of altered hydr	plogy? Yes No
Hydrology indicators: Inundated	Saturated in upper 12" Water marks Di	rift lines Sediment deposits	Drainage patterns within wetlands Other
		uttressed trees Hypertrophie oot systems Floating leave	
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle:			
Upland Border:			·
Slope: Nearly level (Gentle Moderate	Steep	
Cover Types: Mature forest	Sapling forest Shrub thic	ket Meadow Mowe	d lawn Farm
Vegetation Density(S/M/D): Trees	D Saplings S SI	hrubs Herbs Grass	
Soil : DeA - Deerfield	loamy sand		

Leaf litter:

Well developed

Moderately well developed

Absent

Cover objects:

Evidence of Erosion:

Logs

Bark

(Explain)

Boulders

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	•	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	·
Slope	Gentie	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High (Moo		

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	Curverted under road from ponded Area
Function Present	Yes	No	79000 2000
Degree of Function	High Mod	(Low)	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large (Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentie	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes (_No	
Wetland vegetation density (High	Low.	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	•	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	+ Development
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	· ·	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	·- ·	Comments
Channel shaded by riparian trees and/or shrubs	Yes (No	·
Gravel spawning areas present	Yes (No	·
Barriers to anadromous fish (dams/high culverts) present in stream reach	No -	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High <	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High-(trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	600 S
Riparian zone (Wide	Narrow	9-4-1
Watershed development	Low	High	
Water quality	Good	Poor	Cloudy-Ponded area had a

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	-	Mostly tolerant	hukenows	
Function Present	(Yes)		No		
Degree of Function	High	Mod	Low		

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	(Yes)	No	-
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	eyes)	Low	
Drainage ditches in wetland	No	Yes	•
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Yes)	No	
Degree of Function		Mod Low	<u></u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria		+	•	Comments
Wetland size in relation to watershed		Large (Small	
Potential sources of excess nutrients upstream		Yes	No	
Wetland is saturated most of the season		Yes	No '	
Emergent vegetation and/or dense woody stems are dominant	(Yes	No	
Water flow through wetland		Diffuse	Channelized	
Vegetation density	i	High	Low	
Potential for sediment trapping exists		Yes	No.	
Deep or open water habitat is present		Yes	(Ne)	
Soil type		Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Ć	Low	High	
Wetland microretief	C	Well developed	None, poorly developed	

	27m			
	(Yes)	No		
Degree of Function	High	Mod (Low)	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	- Comments	
Wildlife food sources in wetland	Abundant	Few ·	 .
Vegetation density	High	Low	···-
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes	No	
Wetland has high degree of plant community structure and species diversity	(Xes)	No .	•
Detritus development is present within this wetland	(Yes	No	
Flowering plants used by nectar gatherers present	Yes	(No)	
Evidence of wildlife use in wetland	Yes	(No)	
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	(fes)	No .	
Degree of Function	High Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	(Yes)	No	
Potential sediment sources upstream or upslope	(es)	No	
Wetland border >10' adjacent to pond or water	(Yes)	No	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	(No)	
Boating activity present	Yes	(No)	
Floodplain stabilizing trees and shrubs present	(Yes)	No	
Indications of erosion or siltation present	(Yes)	No	Silty water in stream
Function Present	Yes	No	, , , , , , , , , , , , , , , , , , ,
Degree of Function	High (Mod)) Low	·

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	(Yes)	No	Pirnic Area
Fishing is available in or from the wetland	Yes	(No)	
Hunting is permitted in wetland	Yes	(No)	·
Hiking occurs or has potential to occur in wetland	(Yes)	No	
Wetland is a valuable wildlife habitat	Yes	(B)	

Degree of Function	High M	od Low	
Function Present	(Yes)	No	
Safety Hazards (if present list them)	Yes	No	***
Off-road public parking near wetland available	Yes	No	
Boating or canoeing feasible in wetland	Yes	No	
Wetland has high visual/aesthetic quality	Yes	No	

WLH/WILDLIFE HABITAT

Comments Wetland fragmentation by human activity Wetland fragmentation by development Buffer exists F-forest M-Medaow S-Saping/shrub thicket 1-Lawn Buffer exists F-forest M-Medaow S-Saping/shrub thicket 1-Lawn Buffer width Connectivity with other wetlands Size of landscape block in which wetland is located Large Widlife food sources in wetland Interspersion of vegetation and open water Upland islands Widlife food sources in wetland Interspersion of vegetation and open water Upland islands Wetland class diversity (W-Wooded swamp SS-Shrub swamp M-Marsh WMM-Wet meadow OW-Open water) High Letter litter) Vegetation density Vegetation stratt (-Tree S-Saping SH-Shrub V=Vine H-Hobb Little et illeter) Veteral pool Yes Wetter Wetter Drier Habitat features (S-Snags L-Fallen logs SF-seep/spring) Abundant Few Vetter Fair to Poor No STrenus system Few Low Strenus system High Low Wetter Drier High Mod (no) Wetter Drier Habitat features (S-Snags L-Fallen logs SF-seep/spring) Abundant Few Late (Its (List types) Wetter Filat rocks in/near watercourse (stream salamanders) Prosent Abundant Few Late (Idags Nanothes R-Rocks B-Bark) Sphagnum hummocks next to shallow pools Present Abundant Abundance of Invasive excit flora None or Low High Mod Low Present Absent Absent Abundance of Invasive excit flora None or Low High Few Low High Mod Low Present Absent Absent Abundance of Invasive excit flora None or Low High Few Low High Mod Low Present Absent Abundance of Invasive excit flora None or Low High Function Present Absent				·
Wetland fragmentation by development Little or None High Buffer wistst(=forest) M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture) Buffer width Connectivity with other wetlands Size of landscape block in which wetland is located Large Midilife food sources in wetland Abundant Few Within code sources in wetland Abundant Few Upland islands Present Absent) Metland plant species diversity Wetland plant species diversity Fes No Abundant Few Later of Present Wetler Drier High Mod Low Wetler Drier High Few Later of Present Absent Absent Abundance of invasive exolic flora None or Low High Function Present	Criteria	+		Comments
Wetland (ragmentation by development Buffer exists(Feforas) M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture. Buffer exists(Feforas) M=Meadow S=Sapling/shrub thicket L=Lawn No	Wetland degradation by human activity	Little or None	High)
Buffer exists(F=forest) M=Meadow S=Saping/shrub thicket L=Lawn		Little or None	Moderate to,	
Connectivity with other wetlands Size of landscape block in which wetland is located Large Small Wildlife food sources in wetland Abundant Few Interspersion of vegetation and open water Upland islands Wetland class diversity (W=Wcoded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water) Wegetation density Vegetation density Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LEt_etel filter) Welland plant species diversity Wernal pool Edge diversity (List types) Water regime Water regime Wetter (S=Snags L=Fallen logs SE=seep/spring) Abundant Few Cover objects (L=Logs/branches R=Rocks B=Bark) Present Absent Absent Absent Absent Absent Absent Absent Absent Absent Fresent Absent Absent Absent Fresent Absent Absent Fresent Absent Absent Fresent Absent Absent Fresent Absent Fresent Absent Absent Fresent Absent Absent Fresent Absent	Buffer exists(F=forest) M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	**************************************	
Size of landscape block in which welland is located Large Small Wildlife food sources in wetland Abundant Few Upland islands Wetland class diversity (W=Wooded swamp SS=Shrub swamp High M=Marsh WM=Wet meadow OW=Open water) Wegleation density Vegletation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter) Wetland plant species diversity Wetland plant species diversity Wetland plant species diversity Wetler regime Water regime Wetler (S=Snags L=Faflen logs SE=seep/spring) Abundant Few Cover objects (L=Logs/btanches R=Rocks B=Bark) Sphagnum hummocks next to shallow pools Present Absent None or Low) High None or Low) High Finntion Present None or Low) Finntion Present	Buffer width	Good to Excellent	Fair to Poor	
Wildlife food sources in wetland is located Abundant Few Interspersion of vegetation and open water Upland islands Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wot meadow OW=Open water) Wegetation density Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter) Wetland plant species diversity High Mod Low Vernal pool Yes No Weter regime Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (I=Logs/branches R=Rooks B=Bark) Present Abundant Few Metter Abundant Few J Abundant	Connectivity with other wetlands	Yes	No	Stream system
Interspersion of vegetation and open water Upland islands Wetland class diversity (W=Wooded swamp SS=Shrub swamp High Low Wetland class diversity (W=Wooded swamp SS=Shrub swamp High Low Vegetation density Vegetation density Uegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb L=Leaf litter) Wetland plant species diversity High Mod Low Vernal pool Edge diversity (List types) Water regime Wetter) Drier Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near welland (turtle nest site) Function Present None or Low) High Function Present Fine Absent Absent None or Low) High Function Present Fine Mod Low Absent Absent Absent None or Low) High Function Present	Size of landscape block in which wetland is located	Large	Small	7
Upland islands Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water) Vegetation density Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf lifter) Wetland plant species diversity High Mod Low Vernal pool Edge diversity (List types) Water regime Water regime Wetter) Drier Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rooks B=Bark) Flat rocks in/hear watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Present Absent Absent Function Present Absent No	Wildlife food sources in wetland	Abundant	Few	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water) Vegetation density Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter) Wetland plant species diversity Vernal pool Vernal pool Edge diversity (List types) Water regime Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rocks B=Bark) Few SL Cover objects (L=Logs/branches R=Rocks B=Bark) Present Absent Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Function Present None or Low) High Low High Low Low Absent High Function Present None or Low) High Function Present	Interspersion of vegetation and open water	High	Low	
M=Marsh WM=Wet meadow OW=Open water) Vegetation density Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter) Wetland plant species diversity Vernal pool Edge diversity (List types) Water regime Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rocks B=Bark) Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Function Present No No Low High Low Low Wetter Drier Abundant Few SL Absent Absent Absent None or Low) High Function Present	,	Present	Absent	
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LL=Leaf litter) Wetland plant species diversity High Mod Low Vernal pool Yes No Edge diversity (List types) Water regime Wetter Drier Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Abundance of invasive exotic flora None or Low High No	<u> </u>	High	Low	
Wetland plant species diversity Vernal pool Edge diversity (List types) Water regime Wetter Drier Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Abundance of invasive exotic flora None or Low High No	Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			4 1
Edge diversity (List types) Water regime Wetter Drier Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Absent Present Absent Absent Absent Absent Function Present None or Low High Function Present	Wetland plant species diversity	High Mod (Low)		
Water regime Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Absent Present Absent Absent Absent Function Present None or Low No No	Vernal pool	Yes	(No)	
Habitat features (S=Snags L=Fallen logs SE=seep/spring) Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Absent Present Absent Present Absent Absent Function Present None or Low High No	Edge diversity (List types)			
Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Absent Present Absent Absent Absent Function Present None or Low No No	Water regime <	Wetter	Drier	
Cover objects (L=Logs/branches R=Rocks B=Bark) Flat rocks in/near watercourse (stream salamanders) Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Absent Present Absent Absent Absent Abundance of invasive exotic flora Function Present Present Absent None or Low High No	Habitat features (S=Snags L=Fallen logs SE=seep/spring) (Abundant	Few	5.1
Sphagnum hummocks next to shallow pools Bare well drained sandy soils near wetland (turtle nest site) Absent Absent Absent Absent Absent Absent Function Present Present Absent None or Low High No	Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	1'_
Bare well drained sandy soils near wetland (turtle nest site) Absent Absent Absent Function Present Present Absent None or Low High No	Flat rocks in/near watercourse (stream salamanders)	Present	Absent)	
Abundance of invasive exotic flora None or Low High Function Present No	Sphagnum hummocks next to shallow pools	Present (Absent	
Function Present (Pes No	Bare well drained sandy soils near wetland (turtle nest site)	Present c	Absent	
	Abundance of invasive exotic flora	None or Low	High	
Degree of Function High (Mod) Low	Function Present	eres)	No .	
	Degree of Function	High (Mod)	Low	

Criteria		+		-	Comments
Wetland contains listed species	Yes		No	\	
Wetland provides valuable wildlife habitat	Yes	/	No		·
Wetland class diversity	High		Low		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low		
Off-road parking near wetland available	Yes		No		
Proximity to schools	Near	1	Far		-
Wetland contains perennial watercourse	Yes		No		
Wetland contains pond/lake	Yes		No		
Safety hazards (if present list them)					·
Site currently used for educational/scientific purposes	Yes		No		
Function Present	Yes		No		
Degree of Function	High	Mod	Low	,	1

U/H/UNIQUENESS/HERITAGE

Criteria		+		-	Comments
Wetland contains listed species	Yes	Yes			
Wetland identified as exemplary natural community	Yes	Yes			
Wetland locally/regionally significant	Yes	Yes			
Function Present	Yes		M		
Degree of Function	High	Mod	Lo	w	1

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	Yes		No	
Views absent trash, debris, sign of degradation	Yes	/	No \	
Low noise level	Yes	Yes		
Visual landuse contrast with wetland	Yes	(No /	
Function Present	Yes	`	No	
Degree of Function	High	Mod .	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(NO)	
Wetland contains critical habitat for state or federal listed species	Yes	(g)	
Area appears in state or national database	Yes	(No)	

Function Present
unction

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/low	Cow	Low	mod	Cow	رس	Mod	Weg	No	No	mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: I	N/A Functional Unit: N/A Below average [Auditory ⊠	Weati ∐ Average ∐ Scat ⊠	Above Average	Don't Know ☐ TBD ☐	top: N/A shocking[
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated				
PEM/PSS Deep Marsh	Dead Woody Shri	ub Sub-shrub	Robust	Narrow-leaved	Broad-leaved	
PAB/ Shallow Marsh	Robust Nam	row-leaved Broa	d-leaved Flo	oating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub			-	
PEM / Wet Meadow	Ungrazed	Grazed				
PSS / Shrub Swamp	Sapling Bus	hy Com	pact Ac	juatic .		
PFO / Wooded Swamp	Deciduous	Evergreen				
Bog	Compact shrub	Bushy shrub	Wooded	Emerge	ent	
Water Regimes (Cowardin Modifier):					surface, especially early in gre	
Permanently flooded (H) - water covers land surface	ce throughout year in a		eason, but are unsatu xcept for ground wate		on in most years; surface wate nd flow	r absent
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the year ex				ent for brief periods during grows soil surface for most of the	
Semi-permanently flooded (F) - surface water pers most years	sists throughout growin	**	stermittently flooded (J ariable periods withou		exposed, but surface water is I periodicity~	present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		, , ,	rtificially flooded (K) - fc	amount/duration of flo	ooding controlled by dikes dan	ns, pumps,
Hydrology:	•					
Ground water discharges present: Y	es No		Depth to free	water:		
If Present: Slope or Depressional			Depth to satu	uration:		
Surface water depth:	verage -	maximum -	Signs of alter	red hydrology?	Yes No	
Hydrology indicators: Inundated S	aturated in upper 12"	Water marks Drift line	s Sediment dep	osits Drainage p	attems within wetlands	Other
Plant Adaptations to Hydrology: Pneumato stems, or roots Adventitious roots R	ophores Polymo Phizospheric oxidation	orphic leaves Buttress Shallow root sys	21	ntrophied lenticels ing leaves Flo	Stooling Inflated pating stems	leaves,
Soil Drainage classes: Well Moderate	y Well Somew	hat Poorly	oorly Very i	Poorly Ma	apped Hydric Soil	
Slope: Nearly level Gentiè	Moderate	Steep	-			
Upland Border:						
Slope: Nearly level G	entie (Moderate	Steep			
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	> Sapling	s Shrubs	Herbs	Grass		
Call: Ba Ca = Palarrala		at a constant				

Loof	litter:
LUCI	шцы.

Well developed

Yes

Moderately well developed

Absent

Cover objects:

6

Bark

Boulders

Rocks

Evidence of Erosion:

√√√√

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Sails	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal.watercourse	Yes	No .	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No	_	
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		•	Comments	
Soils	Hardpan, shallow I	ledge		·	 -
Seeps, springs observed?	Yes		(No)		
Wetland microrelief	Well developed		Non/Poorly developed		
Wetland contains an outlet, no inlet	Yes		No		
Function Present	Yes		No)		
Degree of Function	High I	Mod	Low		

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	(Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	(Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	(No)	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	Color Color	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	(Yes)	No	Outflow into adi stream
Wetland vegetation density	High	(Low)_	
Wetland microrelief	Well developed	None/Poorly developed	

	<u>~~~</u>	,				
Function Present	Yes	No			·	
Degree of Function	High	(Mod)	Low		•	
			•			

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	-	Comments
Dominant land use adjacent to Waterbody	Foresi, Shrub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	No	·
Waterbody at least 10' deep	Yes	No	<u> </u>
% of pond covered by submerged or emergent vegetation	15-40%	Other	<15%
Direct stormwater discharge via culvert?	No	(Yes)	
Sandbar present at inlet?	(No)	Yes	
Water transparency	High	(Low)	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	(No)	Yes	
Pond size ≥0.5 acre	(Yes)	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	N9)	Yes	
Function Present	Yes	No	Fish present, but degraded
Degree of Function	High Mod	Low	Fish present, but degraded habitat

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition, Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No .	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravei/cobbles	Sand/silt.	,
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	-
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	Maknown
Function Present	Yes		(No.)	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	4	-	Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	(No)	
Wetland edge broad and intermittently aerobic	Yes	(Low)	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	(wor	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Ves	No	
Degree of Function	High Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Smail	
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	(PES)	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	\

	·						
Function Present	(Yes)		No	_			
Degree of Function	High	Mod		Low			·
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)							
Criteria		+		-	Comments		

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	1
Vegetation density	High_	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Yes	No	·
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	Yes	No	Same fish in pond
Fish or shellfish develop/occur in wetland	198	No ·	
Function Present	(Ves)	No	
Degree of Function	High Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wettand	Yes	No	
Potential sediment sources upstream or upslope	(Yes)	No	
Wetland border >10' adjacent to pond or water	Yes	(Not)	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	No	
Boating activity present	Yes	(No)	
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes	(No)	
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	

REC/RECREATION

Criteria	_ +		Comments
Wetland is part of recreation area, park, refuge, etc.	(Yes)	No	
Fishing is available in or from the wetland	Yes	(No)	
Hunting is permitted in wetland	Yes	100	·
Hiking occurs or has potential to occur in wetland	Yes	No	
Wetland is a valuable wildlife habitat	Yes	No	*

Wetland has high visual/aesthetic quality Boating or canoeing feasible in wetland	Yes	(No)	
Off-road public parking near wetland available	(Yes)	No	
Safety Hazards (if present list them)	Y Y Y	No	Signs posted wy no fishing + swimmin
Function Present	(Yes)	No	
Degree of Function	High (M	Low	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	Frances
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(TES)	No	
Size of landscape block in which wetland is located	Large >	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	ಬ
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			
Wetland plant species diversity	High Mod (Low)		
Vernal pool	Yes	(No)	
Edge diversity (List types)	. <u> </u>	100	torest
Water regime	₫¥etter)	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant:	(Eew)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	-
Abundance of invasive exotic flora	zNone or Low	High	
Function Present	(es)	No .	
Degree of Function	High Mod	(Low)	

Criteria	+	-	Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	Yes	(No)	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	(Yes)	No	
Proximity to schools	(Nea)	Far	Bowdoin College
Wetland contains perennial watercourse	Yes	(N)	O .
Wetland contains pend/lake	Yes	No	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	No)	
Function Present	(Yes)	No	
Degree of Function	High Mod	(LOW)	

U/H/UNIQUENESS/HERITAGE

Criteria		÷	-	Comments
Wetland contains listed species	Yes		(67K)	
Wetland identified as exemplary natural community	Yes		GAZ	
Wetland locally/regionally significant	Yes		(G)	
Function Present	Yes		160	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	-
Visible from primary viewing locations	(ৰ্ছ্টি)	No		****
Views absent trash, debris, sign of degradation	Yes	1/6		
Low noise level	Yes	(6N)		
Visual landuse contrast with wetland	(P)	No		
Function Present	(res)	No	·	
Degree of Function	High Mo	d) Low	<u> </u>	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No	
Wetland contains critical habitat for state or federal listed species	Yes		
Area appears in state or national database	Yes	(No)	·

Function Present	Yes		(6)	·
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	Mod	Med	mod	Low	Low	mod	Low	Low	No	Mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the welland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, funting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS - Wet Id#:	FA 24 Date: N/A Fun	ectional Unit:	Weather	: N/A Time S	Start: N/A Time Stop:	N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation: N/A	Below average	Average 🗌 💮 A	Above Average 🗌	Don't Know 🔲 TBD 🔲	
Wildlife Investigation Method: Cover search 🗵	Dip netting ☐	Auditory 🖂	Scat ⊠ T	racks 🗵 Minno	w Traps 🔲 Electro-shock	king 🗀
Wetland Types(s) Cowardin/Golet Classification	n .					
Class	Subclass					
POW/ Open water	Vegetated Nor	n-Vegetated				
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leaved	Broad-leaved	
PAB/ Shallow Marsh	Robust Narrow-leav	ved Broad-leave	ed Floati	ng leaved		
PFL / Seasonally Flooded Flats	Emergent Shr	u b				
PEM / Wet Meadow	Ungrazed Gra	zed				
PSS / Shrub Swamp	Sapting Bushy	Compact	Aquat	tic		
PFC / Wooded Swamp	Deciduous Eve	ergreen				
Bog	Compact shrub Bus	shy shrub	Wooded	Emergent		
Water Regimes (Cowardin Modifier):					ace, especially early in growing	
Permanently flooded (H) - water covers land surface	ce throughout year in all years			ed by end of season in eepage and overland <u>f</u> i	most years; surface water absolow	ent
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the year except in y	i emboi			for brief periods during growing oil surface for most of the seaso	
Semi-permanently flooded (F) - surface water pers most years	ists throughout growing seaso	on in Intermiti	tently flooded (J) - :	•	sed, but surface water is prese	
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		arly in		-	ng controlled by dikes dams, pu	umps,
Hydrology:		310				
	es (No		Depth to free wa	iter:		
If Present: Slope or Depressional			Depth to saturati	ion:		
Surface water depth: a	verage - maximi	um -	Signs of altered	hydrology?	Yes No	
Hydrology indicators: Inundated S	aturated in upper 12" Water i	marks Drift lines	Sediment deposit	s Draipage patte	rns within wellands Other	r
Plant Adaptations to Hydrology: Pneumatostems, or roots Adventitious roots R	ophores Polymorphic lea hizospheric oxidation	aves Buttressed tree Shallow root systems	es Hypertro Floating I	phied lenticels leaves Floatin	Stooling Inflated leave g stems	}S,
Soil Drainage classes: Well Moderate	ly Well Somewhat Poo	riy Poorly	Very Poo	rly Mappe	d Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:						
Slope: Nearly level G	entie Modera	ate Steep				
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow N	Nowed lawn	Farm	
Vegetation Density(S/M/D): Trees	D Saplings S	Shrubs	Herbs G	Grass		
Soil: BaCz - Belgrade f	the sandu lan	r GA				

Leaf litter:		
		1744
	1 621	miche.

Well developed

Moderately well developed

Absent

Cover objects:

(Legs

Bark

Boulders

Rocks

Evidence of Erosion:

Alo

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments .
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	res)	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No	· ·	
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	4	-	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	<u> </u>	
Wet and microrelief	Well developed	(Non/Poorly) developed	
Wet and contains an outlet, no inlet	Yes	No	No.
Function Present	Yes	No	
Degree of Function	High Mod	e Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wet and size in relation to watershed	Large	(Small)	
Amount of impervious surface in wetland watershed	Large	(Small)	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	(Yes)	No .	
Wetland in floodplain of adjacent watercourse	(Yes)	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(NO)	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes	N _B)	
Wetland vegetation density	High	Low	
Wet and microrelief	Well developed	None/Poorty developed	

Function Present	Yes	No		
Degree of Function	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments
Dominant land use adjacent to Waterbody	Forest, Shrul	b, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%	Ties.	Other	- Market Control of the Control of t
Direct stormwater discharge via culvert?	No	The sales of the s	Yes	Transport Control of the Control of
Sandbar present at inlet?	No		Yes	****
Water transparency	High	THE RESERVE OF THE PARTY OF THE	Low	The state of the s
Significant nutrient source (fertilizers, waterfowl) present in watershed?	-No-		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algai blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	7

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	÷	-	Comments
Channel shaded by riparian trees and/or shrubs	(Colored Colored Color	. No	
Gravel spawning areas present	Yes	(No)	·
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	Culverted from FA 23 + into FA 47
Dominant bottom substrate	Gravel/cobbles	Sand/sill	
Substrate embeddedness by sand & silt	Low	(High)	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	Moderate
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	Culvert, riprap.
Bank stability	(Stable)	Unstable, eroding	
Bank vegetative cover	High (trees shrubs)	Low	Shrubs
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	,
Water quality	Good	Poor	Unknown

Polletion tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	Unknown.
Function Present	(PES)		No	-
Degree of Function	High	Mod	Low	

\$&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Critéria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	· No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(LOW)	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	No)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponted water present	Yes	6	
Wetland basin topographic gradient	معاق	High	
Fine grained mineral or organic soils present	(es)	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	®	-
Indicators of erosion or high water velocities are present	(6)	Yes	
Function Present	Yes	No	
Degree of Function	High Mod		

N&R/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	•	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	χ̄ē̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄̄	No	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(es)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	(vo)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(GW)	High	
Wetland microretief	Well developed	None, poorly developed	

Function Present	(YES)	No .	
Degree of Function	High	Mod Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	(es)	No	
Detritus development is present within this wetland	(es)	No	
Flowering plants used by nectar gatherers present	(Yes)	No	
Evidence of wildlife use in wetland	Yes	<u>@</u>	
Fish or shellfish develop/occur in wetland	Yes		
Function Present	Yes) _	No	
Degree of Function	High (Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	-	Comments
Topographical gradient in wetland	(Ye)	No	 _,	
Potential sediment sources upstream or upslope	(FeS)	No	<u>-</u>	
Wetland border >10' adjacent to pond or water	Yes	(No		·
Distinct shoreline or bank evident between wetland and water	(6)	Ye	ş	
Open water fetch present	·Yes	Ñ		
Boating activity present	Yes	Ņά	7)	
Floodplain stabilizing trees and shrubs present	(Yes	No		
Indications of erosion or siltation present	Yes	No		
Function Present	Yes	No		
Degree of Function	High	Mod	(w)	

REC/RECREATION

Criteria	+	-	Comments .
Wetland is part of recreation area, park, refuge, etc.	(Yes)	No	
Fishing is available in or from the wetland	Yes	(No	
Hunting is permitted in wetland	Yes	№	
Hiking occurs or has potential to occur in wetland	Yes	No	
Wetland is a valuable wildlife habitat	Yes	(No)	

Wetland has high visual/aesthetic quality	Yes	(Ng)	
Boating or canoeing feasible in wetland	Yes	(No)	
Off-rpad public parking near wetland available	(Yes)	No	
Safety Hazards (if present list them)	Yes	No	
Function Present	(Yes)	No	
Degree of Function	High Mo	od (Low)	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to High	·
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Apriculture)	(Fig.)	No	Forest
Buffer width	Good to Excellent	(Fair to Poor)	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	(Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	·
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Shrub Swaziep
Vegetation density	(Ĥigh)	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Shrub, herb.
Wetland plant species diversity	High Mod Low)	
Vernal pool	Yes	(B)	
Edge diversity (List types)			Forest
Water regime	Wetter	(frier)	
Habilat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Fèw	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat locks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	6	No	
Degree of Function	High Mod	(Low)	

E&SV/EDUCATIONAL/SCIENTIFIC VALUE

Criteria		4	-	Comments
Wetland contains listed species	Yes		100	
Wetland provides valuable wildlife habitat	Yes		(No)	
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		(w)	Forest
Off-road parking near wetland available	(Yes)		No	
Proximity to schools	(Near)		Far	Boudoin College
Wetland contains perennial watercourse	Yes		No	Ų į
Wetland contains pond/lake	Yes		160	
Safety hazards (if present list them)			,	
Site currently used for educational/scientific purposes	Yes		(e)	
Function Present	(Yes)	•	No	
Degree of Function	High	Mod	(Low)	

U/H/UNIQUENESS/HERITAGE

Criteria	1	4	-	Comments
Wetland contains listed species	Yes		(No)	
Wettand identified as exemplary natural community	Yes		6	
Wetland locally/regionally significant	Yes		<u>P</u>	
Function Present	Yes		№	
Degree of Function	High	Mod	Low	<u></u>

VQA/VISUAL QUALITY/AESTHETICS

Criteria	<u> </u>	+	-	Comments
Visible from primary viewing locations	(es)	(res)		
Views absent trash, debris, sign of degradation	Yes	Yes		
Low noise level	Yes			·
Visual landuse contrast with wetland	(Yes)	(Yes)		
Function Present	Yes)	Yes)		
Degree of Function	High	Mod	(Low)	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(A)	
Wetland contains critical habitat for state or federal listed species	Yes	(N)	
Area appears in state or national database	Yes	(4/0°)	

Fui	ction Present	Yes		(No)
gree		High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GW	R/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
MLOS	/ Low	mos	سوا	tous	Low	Low	دسور	Low	رمون	No	Low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxidants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nuttient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, candeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator: Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: I	N/A Functional Unit N/A Below avera Auditory ⊠	age □ Av	Weat ∕erage ☐ cat ⊠	her: N/A Above Average Tracks ⊠	Time Start: N/A ☐ Don't Know ☐ Minnow Traps ☐	Time Stop: N/A TBD Electro-shocking
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegetated					
PEM/PSS Deep Marsh	Dead Woody Shr	rub Sub-shri	ıb dı	Robust	Narrow-leav	ed Broad-leav	red
PAB/ Shallow Marsh	Robust Nar		Broad-leaved	Fle	oating leaved	,	
PFL / Seasonally Flooded Flats	Emergent	Shrub ·					
PEM / Wet Meadow	Ungrazed	Grazed		· · · · · ·			
PSS / Shrub Swamp	Sapling Bus	shy	Compact	Ac	quatic	,	
PFO / Wooded Swamp	Deciduous	Evergreen					
Bog	Compact shrub	Bushy shrub		Wooded	Fmr	ergent	
Water Regimes (Cowardin Modifier):		-			Y) - soits saturated	to surface, especially	
Permanently flooded (H) - water covers land surface throughout year in all years season, but are unsaturated by end of season in most years; surface water absent except for ground water seepage and overland flow							face water absent
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the year ex	rcept in years	Temporarily	flooded (A) - surface water p	resent for brief periods pelow soil surface for m	during growing
Semi-permanently flooded (F) - surface water pers most years	ists throughout growin	ng season in	Intermittenti	y flooded (J	•	lly exposed, but surface	
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods esp most years	ecially early in	Artificially flooded (K) - amount/duration of flooding controlled by dikes dams, pumps, etc				
Hydrology:							
Ground water discharges present: You	es No		D	epth to free	water:		
If Present: Slope or Depressional			D	epth to satu	ration:		
Surface water depth: av	erage -	maximum -	Si	igns of alter	red hydrology?	(es)	No
Hydrology indicators: Inundated Sa	aturated in upper 12"	(Valer marks) Drift	lines Se	diment dep	osits Drainag	e patterns within wetta	nds Other
Plant Adaptations to Hydrology: Pneumatostems, or roots Adventitious roots R	phores Polymo hizospheric oxidation		ressed trees t systems		ertrophied lenticels ing leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderatel	y Well Somew	hat Poorly	Poorly	Very F	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:		-	,				
Slope: Nearly level G	entie (Moderate	Steep				
Cover Types: Mature forest	Sapling forest	Shrub thicke	et Me	eadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Tiges	Sapling	gs Shri	₃bs He	erbs	Grass		

Soil: BuB - Buxton silt Loam

Logf	litter:
LEGI	IIIIIHL -

Well developed

Moderately well developed

Absent

Cover objects:

Bark

Boulders

Rocks

Evidence of Erosion:

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Crite	ria	+	-	Comments
Soils		,&arid/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
	and associated w/ perennial or onal watercourse	(F)	No	*****
Slop	e	Gentle	Moderate or Steep	
Fun	ction Present	YES) No		
Deg	ree of Function	High Mod	(Low)	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledg	e.	
Seeps, springs observed?	Yes	(No)	
Wet and microrellef	Weil developed	Non/Poorly) developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	(No)	
Degree of Function	High Mod		•

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	4	<u>-</u>	Comments
Wet and size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Şmall	
Wet and Slope	Gentle	Moderate Steep	
Wet and characterized by variable water level?	Yes	No	
Wet and in floodplain of adjacent watercourse	(PES)	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes		
Wetland vegetation density	High	(Low)	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn	
Shallow littoral-zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes	-	No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		_Yes	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal brooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	High Mod		

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) presentin-stream reach	No	Yes	
Dominant bottom substrate	- Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Tow	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Nаrrow	·
Watershed development	Low	High	·
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No)	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		_	Comments
Sources of sediments or toxicants upstream	Yes		No	Unknown
Duration of water retention in wetland	Long		Short	
Evidence of sediment trapping in wetland	Yes		(Cw)	
Vegetation density	High		No	
Wetland edge broad and intermittently aerobic	Yes		(LOW)	
Drainage ditches in wetland	No		Yes	
Water flow through wetland	Diffuse		Channelized	
Ponded water present	Yes		No)	
Wetland basin topographic gradient	Low		(मांक्री)	-
Fine grained mineral or organic soils present	Yes		No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	***	No)	-
Indicators of erosion or high water velocities are present	No)		Yes	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	-

N&R/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	No	unknown
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse	Channelized	"-"
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	(No.)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	(None, poorly developed)	

Function Present	Yes	(40)	
Degree of Function	High	Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+		-	Comments
Wildlife food sources in wetland	Abundant		Few	
Vegetation density	High		(OW)	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		(No	
Wetland has high degree of plant community structure and species diversity	Yes		(B)	
Detritus development is present within this wetland	Yes		No	
Flowering plants used by nectar gatherers present	Yes		No)	****
Evidence of wildlife use in wetland	Yes		(No)	
Fish or shellfish develop/occur in wetland	Yes		(N)	
Function Present	Yes		(6)	· · · · · · · · · · · · · · · · · · ·
Degree of Function	High i	Aod L	ow	1

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		-	Comments
Topographical gradient in wetland	Yes	No		
Potential sediment sources upstream or upslope	Yes	No	•	unknown
Wetland border >10' adjacent to pond or water	Yes	(No)		
Distinct shoreline or bank evident between wetland and water	No	Yes		
Open water fetch present	Yes	<u> </u>		-
Boating activity present	Yes	(a)		
Floodplain stabilizing trees and shrubs present	(es)	No		
Indications of erosion or siltation present	Yes	<u>Q</u>		
Function Present	Yes	(No)	
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	÷	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	(No)	
Hunting is permitted in wetland	Yes	(a)	
Hiking occurs or has potential to occur in wetland	(Yes)	No	
Wetland is a valuable wildlife habitat	Yes	(No)	

Wetland has high visual/aesthetic quality	Yes	10	
Boating or canoeing feasible in wetland	Yes	(No)	
Off-road public parking near wetland available	Yes	(No)	
Safety Hazards (if present list them)	Yes	No	
Function Present	(Yes)	No _	
Degree of Function	High A	Aod (Low)	•

WLH/WILDLIFE HABITAT

Criteria	+	_	Comments
Wetland degradation by human activity	Little or None	Moderate to	cuiverts
Wetland fragmentation by development	Little or None	Moderate to High	culverts
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	Culverts Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swarnp SS=Shrub swamp M=Narsh WM=Wet meadow OW=Open water)	High		PFO
Vegetation density	High	(ow)	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, leaflitter
Wetland plant species diversity	High Mod Low		,
Vernal pool	Yes	(v)	
Edge diversity (List types)			Forest
Water regime	Wetter	Drier	
Hab tat features (S=Snags L=Fallen logs SE=seep/spring)	-Abundant)	Few	Logs
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	1008
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	J
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High Mod	(Low)	

Criteria		+	-	Comments
Wetland contains listed species	Yes .		No	
Wetland provides valuable wildlife habitat	Yes		(No)	
Wetland class diversity	High		Low	· · · · · · · · · · · · · · · · · · ·
Adjacent upland cover types (F=forest M=Meadow S=Sapting/shrub thicket A=Agriculture)	High		LOW	Forest
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		. Far	Bowdoin Callege
Wetland contains perennial watercourse	Yes	-	(No)	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		No	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes		NO	
Wetland identified as exemplary natural community	Yes		(g)	
Wetland locally/regionally significant	Yes		(No)	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	Yes		No	
Views absent trash, debris, sign of degradation	Yes	_	No	
Low noise level	(Yes)		No	
Visual landuse contrast with wetland	Yes		No	
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(1)	
Wetland contains critical habitat for state or federal listed species	Yes	(N)	
Area appears in state or national database	Yes	(No)	

Function Present	Yes		No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
we wo	No	No	No	No	20	Low	Low	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

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Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

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Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

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Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 26 Da	ate: N/A Functional U	nit:	Weat	ther: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitati	on: N/A Below av	rerage 🗌	Average	Above Average	Don't Know	TBD 🗆
Wildlife Investigation Method: Cover search ⊠	Dip netting	a ☐ Auditory	⊠	Scat 🔯	Tracks 🗵	Minnow Traps 🔲	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n					·	
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegetate	d				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	shrub	Robust	Narrow-leav	ved Broad-leav	red
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	ed F	loating leaved	· · · · · · · · · · · · · · · · · · ·	
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
(PSS / Shrub Swamp	Sapling	Bushy	-Compact)	A	quatic		
PFO / Wooded Swamp	Deciduous	Evergreen					
Bog	Compact shrub	Bushy shrub		Wooded	Em	ergent	
Water Regimes (Cowardin Modifier):		-	Seasona	ally saturated (Y) - soils saturate	d to surface, especially	early in growing
Permanently flooded (H) - water covers land surface	ce throughout yea	ar in all years	season, except f	but are unsate or ground wate	urated by end of se er seepage and ov	eason in most years; su erland flow	face water absent
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the ye	ar except in years	Tempora	arily flooded (A	۱) - surface water ۽	present for brief periods below soil surface for m	
Semi-permanently flooded (F) - surface water pers most years	ists throughout g	rowing season in	Intermitt	ently flooded (-	ally exposed, but surface	
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods most years	especially early in		•		of flooding controlled by	dikes dams, pumps,
Hydrology:	-		Olo				
	es No)		Depth to free	e water:		
If Present: Slope or Depressional				Depth to sat			
Surface water depth:	verage -	maximum -		•	ered hydrology?	Yes	No
Hydrology indicators: (inundated) §	aturated in upper	¹ Y²" Water marks _ E	Drift lines	Sediment dep	posits Draina	ge patterns within wetla	nds Other
Plant Adaptations to Hydrology: Pneumatostems, or roots Adventitious roots R	ophores Po hizospheric oxida		Buttressed tree root systems		ertrophied lenticels ling leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ly Well So	mewhat Poorly	Poorly	Very	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep		·	·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Upland Border:							•
Slope: Nearly level G	entle	Moderate	Steep				
Cover Types: Mature forest	Sapling for	est Shrub thi	cket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees		plings S s	Shrubs	Herbs	Grass		
Soil: Wmc - Windsor	soudy	loan					

Τ	A OF	litter	•

-Well developed

Moderately well developed

Absent

Cover objects:

(Togs)

Bark

Boulders

Rocks

Evidence of Erosion:

NO

Yes (Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	(PES)	No	
Slope .	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mo	d) Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		-	Comments
Soils	Hardpan, shallow I	ledge		
Seeps, springs observed?	Yes		(No)	
Wetland microrelief	Well developed	Well developed		
Wetland contains an outlet, no inlet	Yes		(3)	
Function Present	Yes	_	No)	
Degree of Function	High !	Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Crite	ria	+	-	Comments
Wetl	and size in relation to watershed	Large	Small	· · · · · ·
Amo	unt of impervious surface in wetland watershed	Large (Small	
Wetl	and Slope	Gentle	Moderate Steep	
Wetl	and characterized by variable water level?	(Yes)	No	-
Weti	and in floodplain of adjacent watercourse	Yes	No	
Valua or ne	ble properties, structures, or resources located in ar floodplain downstream from wetland	Yes	(No)	
Wate flood	rshed has a history of economic loss due to ing	Yes	No	Unenow
Wetla	and outlet restricted	Yes	(No)	
Wetia	and vegetation density	High	Low	
Wetl	and microrelief	vvei! developed	None/Poorly developed	

Function Present	Yes	No	· •	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	-	+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	, Meadow	Ławn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	-Xes		No	
% of pond covered by submerged or emergent vegetation	15-40%	-	Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No	_	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	(Mg.)	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	(Yes)	Culverts upstream
Dominant bottom substrate	Gravel/cobbles	Sand/silf)	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(Low)	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable) 7	Unstable, eroding	
Bank vegetative cover	(High (trees, shrubs)	Low	5hrubs
Cover objects (fallen logs, boulders, undercut banks)	(Many)	Absent/few	
Riparian zone	VVide	Narrow	
Watershed development	Low	(High)	
Water quality	Good	Poor	Unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant	Mostly tolerant	liaknown
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(m)	-
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(W)	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	·
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	(NO)	Yes	
Function Present	(Yes)	No	
Degree of Function	High (Mod	Low	- -

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	. +		Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	No	Unknowy
Wetland is saturated most of the season	(Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wettand microrelief	(Well developed	None, poorly developed	-

Function Present	(Yes)	No		
Degree of Function	High Mod	Low		
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)			· · · · · ·	
Criteria	+	-	Comments]
Wildlife food sources in wetland	Abundant	Few		
Vegetation density	High	Low		
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No		
Wetland has high degree of plant community structure and species diversity	Yes	No	· ·	
Detritus development is present within this wetland	(Yes)	No		
Flowering plants used by nectar gatherers present	(Yes)	No	_	
Evidence of wildlife use in wetland	Yes	No		
Fish or shellfish develop/occur in wetland	Yes	No	Untercross	
Function Present	(Yes)	No	<u> </u>	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	•	Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	Yes	No	
Wetland border >10' adjacent to pond or water	Yes	(NO) ·	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	<u> </u>
Open water fetch present	Yes	(NB)	
Boating activity present	Yes	(NO)	
Floodplain stabilizing trees and shrubs present	(Yes)	No	
Indications of erosion or siltation present	(Yes)	No	
Function Present	(Yes)	No	
Degree of Function	High Mod	Low	1

Mod

Low

REC/RECREATION

Degree of Function

Criteria	+	-	Comments	· ·
Wetland is part of recreation area, park, refuge, etc.	Yes	<u></u>		
Fishing is available in or from the wetland	Yes	(6N)		
Hunting is permitted in wetland	Yes .	(Nô)		,
Hiking occurs or has potential to occur in wetland	Yes	(No)	10.7%	
Wetland is a valuable wildlife habitat	(Yes)	No		•

Wetland has high visual/aesthetic quality	Yes	(No	
Boating or canoeing feasible in welland	Yes	<u></u>	
Off-road public parking near wetland available	Yes	(No)	
Safety Hazards (if present list them)	Yes	No	
Function Present	Yes	No	
Degree of Function	High Mod	d (Low)	

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)	1 -	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	(Carge)	Small	
Wildlife food sources in wetland	Abundani	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present (Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Shrib swamp
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Shoub, herb
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	(No)	
Edge diversity (List types)			Corest
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	
Degree of Function	(High) Mod	Low	

E&SV/EDUCATIONAL/SCIENTIFIC VALUE

Criteria	+	-	Comments
Wetland contains listed species	Yes	No	
Wetland provides valuable wildlife habitat	Yes	No	
Wetland class diversity	High	(Low)	Shoul swamp
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(OW)	Forest
Off-road parking near wetland available	Yes	(No)	
Proximity to schools	(Near)	Far	Bowdow college
Wetland contains perennial watercourse	Yes	No	å ·
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(v)	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments		
Wetland contains listed species	Yes		(No)			
Wetland identified as exemplary natural community	Yes		(A)			
Wetland locally/regionally significant	Yes		(N ₉)			
Function Present	Yes		k (g)	-		
Degree of Function	High	Mod	Low			

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	
Visible from primary viewing locations	Yes	(NG)		
Views absent trash, debris, sign of degradation	Yes	No		
Low noise level	Yes	No		
Visual landuse contrast with wetland	Yes	No		
Function Present		No		· .
Degree of Function	High (Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	
Wetland contains critical habitat for state or federal listed species	Yes	(No)	
Area appears in state or national database	Yes	(No)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	High	wod		Mod	High	Low	High	No	No	Mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floddflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the welland and associated watercourses to provide recreational opportunities such as hiking, candeing, boating, fishing, funding or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the welland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Ro Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitati Dip netting		erage 🗌	Weath Average ☐ Scat ⊠	ner: N/A Above Average Tracks ⊠	Time Start: N/A ☐ Don't Know ☐ Minnow Traps ☐	Time Stop: N/A TBD Electro-shocking
Class	Subclass		•				
POW/ Open water	Vegetated	Non-Vegetate	·d				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	hrub	Robust	Narrow-leav	ed Broad-leav	ed
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	ed Flo	eating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aq	uatic		
PFO / Wooded Swamp	Deciduous	Evergreen	Mixed				
Bog	Compact shrub	Bushy shrub			Eme	ergent	
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surface Intermittently Exposed (Z) -surface water present to	• ,	,	season, except fo	but are unsatur or ground water	ated by end of se seepage and ove		face water absent
of extreme drought	mougnout me ye	агелсерин увагу				resent for brief periods relow soil surface for m	
Semi-permanently flooded (F) - surface water pers most years	ists throughout g	rowing season in	Intermitte	ently flooded (J		Ily exposed, but surface	
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods most years	s especially early in	Artificiall etc	y flooded (K) - a	amount/duration o	f flooding controlled by	dikes dams, pumps,
Hydrology:							
Ground water discharges present:	e) No			Depth to free	water:		
if Present: Slope or Depressional				Depth to satu	ration:		
Surface water depth: av	/erage -	maximum -		Signs of altere	ed hydrology?	Yes	No
Hydrology indicators: Inundated S	aturated in upper	12" Water marks D	rift lines	Sediment depo	osits Drainag	e patterns within wetlar	nds Other
Plant Adaptations to Hydrology: Pneumato stems, or roots Adventitious roots R	pphores Po hizospheric oxida	, ,	Buttressed tree root systems		rtrophied lenticels ng leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes Well Moderate	y Well So	mewhat Poorly	Poorly	Very P	оолу (Mapped Hydric-Soil	
Slope: Nearly level Gentle	Moderate	Steep			-		
Upland Border:	_	•					
Stope: Nearly level G	entle	Moderate	Steep				
Cover Types: Mature forest	Sapling for	rest Shrub thi	cket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (rees	D &	plings S	hrubs	Herbs	Grass		
Wmc - windsor sandy	loam						

Leaf litter:	(Well developed)	Moderately v

y well developed Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

(No)

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Crite	ria	+	-	Comments
Soils	<u></u>	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
	and associated w/ perennial or onal watercourse	(3)	No	
Slop	e	Gentle	Moderate or Steep	·
Fun	tion Present	(Yes) No		
Deg	ree of Function	High Mod	Low	

GWØ/GROUNDWATER DISCHARGE

Criteria	ŧ	•	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	<u>6</u>	
Function Present	(Yes)	No	·
Degree of Function	High Mod	Low	

FFA FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	(Small)	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	(No	
Wetland in floodplain of adjacent watercourse	(es)	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(N)	
Watershed has a history of economic loss due to flooding	Yes	No	lenknown
Wetland outlet restricted	Yes	No	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	No		
Degree of Function	High	(Mod)	 Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	4	+		Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn	
Shallow littoral zone-with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	-
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algai blooms, ndisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	(PS)	No	Trees
Gravel spawning areas present	Yes	(No)	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/sitt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(Low)	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	Trees
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few)	
Riparian zone	Wide	Narrow	
Watershed development	Low	(High)	
Water quality	Good	Poor	Unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	Unknown
Function Present	(Es)		No	
Degree of Function	High	Mod	(ow)	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	No .	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(w)	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes -	(Low)	
Drainage ditches in wettand	(No)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	
Indicators of erosion or high water velocities are present	No No	Yes	
Function Present	(Yes)	No	
Degree of Function	High Mo	d (Low)	1
	·		<u> </u>

N&R/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	(6)	
Wetland is saturated most of the season	(Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	h(igh)	Low .	
Potential for sediment trapping exists	Yes	No	· · · · · · · · · · · · · · · · · · ·
Deep or open water habitat is present	Yes	(Ng)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	(Well developed)	None, poorly developed	

Function Present Yes No
Function High Mod (Low)

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wettand	Abundant	Few	
Vegetation density	(High)	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Yes	ND	
Detritus development is present within this wetland	(Pes)	No	·
Flowering plants used by nectar gatherers present	Yes	(No)	
Evidence of wildlife use in wetland	(Yes)	No	
Fish or shellfish develop/occur in wetland	Yes	No	Unknown
Function Present	Yes	No	
Degree of Function	High (Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	÷	-	Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	Yeş	No	·
Wetland border >10' adjacent to pond or water	Yes	(No)	
Distinct shoreline or bank evident between wetland and water	No	(Yes)	
Open water fetch present	Yes	(No)	}
Boating activity present	Yes	160	
Floodplain stabilizing trees and shrubs present	Yes	No_	
Indications of erosion or siltation present	Yes	No	
Function Present	Yes	No	
Degree of Function	High M	ođ Low	

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(B)	·
Fishing is available in or from the wetland	Yes	(g)	
Hunting is permitted in wetland	Yes	(No)	
Hiking occurs or has potential to occur in wetland	Yes	(No)	
Wetland is a valuable wildlife habitat	Yes	(No)	

Wetland has high visual/aesthetic quality	Yes	(No)		·
Boating or canoeing feasible in wetland	Yes	(No)		
Off-road public parking near wetland available	Yes	6		
Safety Hazards (if present list them)	Yes	No		
Function Present	Yes	(No)		
Degree of Function	High Mo	d Low		

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	(Little or None	Moderate to High	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Apriculture)	Yes	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	(Large)	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High-	(10V)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		W
Vegetation density	(Fligh)	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			THU
Wetland plant species diversity	High Mod (Low)		, ,
Vernal pool	Yes	No)	
Edge diversity (List types)			Forest
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	(Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes)	No	
Degree of Function	High Mod	Low	

E&SV/EDUCATIONAL/SCIENTIFIC VALUE

Criteria	+	-	Comments
Wetland contains listed species	Yes	(N)	
Wetland provides valuable wildlife habitat	Yes	No	
Wetland class diversity	High	6	-
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Gw)	Forest
Off-road parking near wetland available	Yes	(N6)	-
Proximity to schools	Near	Far	Bowdoin College
Wetland contains perennial watercourse	(Fes)	No	
Wetland contains pond/lake	Yes	(No	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	Yes	NO)	, , , , , , , , , , , , , , , , , , ,
Degree of Function	High Mod	Low	

U/H/UNIQUENES\$/HERITAGE

Criteria	+		Comments	
Wetland contains listed species	Yes	No		
Wetland identified as exemplary natural community	Yes	(140)		
Wetland locally/regionally significant	Yes	100		
Function Present	Yes	No		
Degree of Function	High Mod	Low		

VQA/VISUAL QUALITY/AESTHETICS

Criteria	÷		Comments
Visible from primary viewing locations	Yes	No	
Views absent trash, debris, sign of degradation	(es)	No	
Low noise level	Yes	No	
Visual landuse contrast with wetland	Yes	No	_
Function Present	Yes	No	
Degree of Function	High (Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No)	
Wetland contains critical habitat for state or federal listed species	Yes	(db)	
Area appears in state or national database	Yes	(No)	

]				_	
Function Pres	sent .	Yes	,	(No)	
1 _ 1	nction	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/mod	Mod	Low	low	Low	mod	No	Mod	NO	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Atteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, candeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 28 Date: N/A Fu	nctional Unit:	Weather	: N/A	Time Start: N/A	Time Stop: N/A	
Site investigator: Amy Goodstine & Chris Akios F	Recent Precipitation: N/A	Below average	Average 🗌 💮 A	bove Average	☐ Don't Know ☐	TBD 🔲	
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐	Auditory 🔯	Scat ⊠ T	racks 🛛 💮	Minnow Traps 🗌	Electro-shocking	
Wetland Types(s) Cowardin/Golet Classification	en .						
Class	Subclass				· -		
POW/ Open water	Vegetated No	on-Vegetated					
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leave	d Broad-leave	ed	
PAB/ Shallow Marsh	Robust Narrow-lea	eved Broad-leave	ed Floatir	ng leaved			
PFL / Seasonally Flooded Flats	Emergent Sh	rub	-				
PEM / Wet Meadow	Ungrazed Gr	azed	_				
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquat	ic			
PFO7Wooded Swamp	Deciduous (Ev	rergreen	·				
Bog	Compact shrub Bu	ishy shrub	Wooded	Eme	rgent		
Water Regimes (Cowardin Modifier):					to surface, especially e		
Permanently flooded (H) - water covers land surfa-	ice throughout year in all year.		but are unsaturate or ground water se		ison in most years; sud rland flow	ace water absent	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in	- rempon			esent for brief periods o		
Semi-permanently flooded (F) - surface water per most years	sists throughout growing seas	on in Intermitt	Intermittently flooded (J) - substrate usually exposed, but surface water is present for variable periods without detectable seasonal periodicity~				
Seasonally llooded (C) - surface water present for growing season, but is absent by end of season in	extended periods especially and most years	oarly in	•		flooding controlled by	dikes dams, pumps,	
Hydrology:							
Ground water discharges present:	es No		Depth to free wa	ter:			
If Present: Slope or Depressional			Depth to saturati	on:			
Surface water depth:	verage - maxin	num -	Signs of altered I	hydrology?	Yes	®	
Hydrology indicators: Jundated (Saturated in upper 12" Water	marks Drift lines	Sediment deposits	s Drainage	e patterns within wetlan	ds Other	
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	ophores Polymorphic le Rhizospheric oxidation	eaves Buttressed tree Shallow root systems	s Hypertro _l Floating le	phied lenticels eaves	Stooling Floating stems	Inflated leaves,	
Soil Drainage classes Well Moderate	ely Weil Somewhat Po	orly Poorly	Very Poor	rly i	Mapped Hydric Soil		
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:							
Slope: Nearly level	Gentle Moder	rate Steep					
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow M	lowed lawn	Farm		
Vegetation Density(S/M/D): Trees	> Saplings	Shrubs	Herbs G	Grass			

WMB - Windsor loamy sand

1		1244
	.eaf	litter:

Well developed

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

No (Y

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	• ,	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seaspnal watercourse	(FE)	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Woo	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	4	-	Comments
Soils	Hardpan, shallow l	edge	
Seeps, springs observed?	Yes	0	
Wetland microrelief	Well developed	Non/Poorty developed	·
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	No	
Degree of Function	High N	flod Low	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	(Yes)	No	·
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No .	UNKNOWN
Wetland outlet restricted	Yes	No	
Wetland vegetation density	High	LOW	
Wetland microrelief	Well developed	-None/Poorly developed	

Function Present	Yes	No	
Degree of Function	High	Mod f	Low

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10 deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	::	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS Excluding condition: Not associated with perennial stream) Seasonal Stream - photo 288

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No -	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	***
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution toterance of benthic macro-invertebrate taxa	Mostly intolera	ant	Mostly tolerant	
Function Present		Yes		e.
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	NB	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No.)	
Wetland edge broad and intermittently aerobic	Yes	(Low)	
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	(Diffuse)	Channelized	
Ponded water present	(Yes)	No	
Welland basin topographic gradient	(LOW)	High	
Fine grained mineral or organic soils present	Yes	No	·
Watercourse, if present, has visible velocity decreases in wetland	Yes	(SO)	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Tes)	No	
Degree of Function	High Mo	d (Low)	1

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	(G)	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	(E)	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed)

	(Yes)	No		
Degree of Function	High	Mod	(Low)	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	- Comments
Wildlife food sources in wetland	Abundant	Few
Vegetation density	High	(a)
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No
Wetland has high degree of plant community structure and species diversity	Yes	(No)
Detritus development is present within this wetland	Yes	No
Flowering plants used by nectar gatherers present	Yes	(No)
Evidence of wildlife use in wetland	Yes	(No)
Fish or shellfish develop/occur in wetland	Yes	160
Function Present	Yes	No
Degree of Function	High Mod	(Low)

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments	
Topographical gradient in wetland	(Pes)	No		
Potential sediment sources upstream or upslope	Yes	(1)		
Wetland border >10' adjacent to pond or water	Yes	(D)		
Distinct shoreline or bank evident between wetland and water	(No)	Yes		
Open water fetch present	Yes	(NO)		,
Boating activity present	Yes	(ND)		
Floodplain stabilizing trees and shrubs present	Yes)	No		-
Indications of erosion or siltation present	Yes	(No)		• · · · · ·
Function Present	Yes	No		-
Degree of Function	High M	od Low	-	

REC/RECREATION

Criteria	+	<u> </u>	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No	
Fishing is available in or from the wetland	Yes	No)	
Hunting is permitted in wetland	Yes	(No)	
Hiking occurs or has potential to occur in wetland	Yes	(No)	
Wetland is a valuable wildlife habitat	Yes	(No)	

Wetland has high visual/aesthetic quality	Yes	(Ñõ)	
Boating or canceing feasible in wetland	Yes	€6)	
Off-road public parking near wetland available	Yes	(6))	
Safety Hazards (if present list them)	Yes	No		
Function Present	Yes	No		
Degree of Function	High	Mod	Low	

WLH/WILDLIFE HABITAT

Criteria	+		-	Comments
Wetland degradation by human activity	Little or None	9	Moderate to High	
Wetland fragmentation by development	Little or None	>	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes		No	Forest
Buffer width	eGood to Exc	ellent	Fair to Poor	·
Connectivity with other wetlands	Yes		No	
Size of landscape block in which wetland is located	Large		Small	
Wildlife food sources in wetland	Abundant		Few)	
Interspersion of vegetation and open water	(High)		Low	
Upland islands	Present	i	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		(Eow)	Wooded swamp
Vegetation density	High	(Low	Wooded swamp.
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)				Tree sapling
Wetland plant species diversity	High Mod	(Coy)		
Vernal pool	Yes		ND.	
Edge diversity (List types)				Forest
Water regime	Wetter	d	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant		Few	
Flat rocks in/near watercourse (stream salamanders)	Present		Absent	
Sphagnum hummocks next to shallow pools	Present		Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	_	Absent	
Abundance of invasive exotic flora	None or Low		High	
Function Present	Yes	- 05-	No ·	
Degree of Function	177	Mod	Low	

Criteria	4			Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		(No)	1.00
Wetland class diversity	High		(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	Hìgh			F
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	Boundoin College
Wetland contains perennial watercourse	Yes		(No)	0
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		MO)	
Function Present	Yes		No.	
Degree of Function	High	Mod	Low	7

U/H/UNIQUENESS/HERITAGE

Criteria		;	-	Comments
Wetland contains listed species	Yes		(Ng)	
Wetland identified as exemplary natural community	Yes		M22)	
Wetland locally/regionally significant	Yes		(No)	
Function Present	Yes		No.	***
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	÷	-	Comments	
Visible from primary viewing locations	Yes	(No)		
Views absent trash, debris, sign of degradation	(e)	No		
Low noise level	Yes	No		
Visual landuse contrast with wetland	Yes	No		
Function Present	Yes	No		
Degree of Function	High Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	
Wetland contains critical habitat for state or federal listed species	Yes	(No)	
Area appears in state or national database	Yes	(No)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	رصوب	No	Low	روس	Low	No	mod	No	NO	low.	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 29 Date: N/A Functional Unit:	Weather: N/A	Time Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	Recent Precipitation: N/A Below average	Average 🗌 Above Average	Don't Know 🗌 TBD 🗍
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory ☑	Scat ⊠ Tracks ⊠	Minnow Traps Electro-shocking
Wetland Types(s) Cowardin/Golet Classificatio	on		
Class	Subclass	,	
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-lea	ved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Bro	pad-leaved Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub		
PEM / Wet Meadow	Ungrazed Grazed	·	
PSS / Shrub Swamp	Sapling Bushy Co	mpact Aquatic -	
PFO / Wooded Swarpp	Deciduous Evergreen		
Bog	Compact shrub Bushy shrub	Wooded Em	ergent
Water Regimes (Cowardin Modifier):		Seasonally saturated (Y) - soils saturate	
Permanently flooded (H) - water covers land surface	ace throughout year in all years	season, but are unsaturated by end of se except for ground water seepage and ov	eason in most years; surface water absent erland flow
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the year except in years	Temporarily flooded (A) - surface water p season, but water table usually lies well	oresent for brief periods during growing below soil surface for most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout growing season in	Intermittently flooded (J) - substrate usua variable periods without detectable seas	ally exposed, but surface water is present for onal periodicity~
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		·	of flooding controlled by dikes dams, pumps,
Hydrology:			•
Ground water discharges present: Y	Yes No	Depth to free water:	
If Present: Slope or Depressional		Depth to saturation:	
Surface water depth: a	everage - maximum -	Signs of altered hydrology?	Yes No
Hydrology indicators: Inundated §	Saturated in upper 12" Water marks Drift lin	ies Sediment deposits Draina	ge patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumatostems, or roots Adventitious roots R	tophores Polymorphic leaves Buttres Rhizospheric oxidation Shallow root sy	ssed frees Hypertrophied lenticels stems Floating leaves	s Stooling Inflated leaves, Floating stems
Soil Drainage classes Well Moderate	ely Well Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep		
Upland Border:	•		
Slope: Nearly level G	Gentle Moderate	Steep	
Cover Types: Mature forest	Sapling forest Shrub thicket	Meadow Mowed lawn	Farm
Vegetation Density(S/M/D): (Trees)	D Saplings M. Shrubs	Herbs Grass	·
WmB - Windson loam	y sand		

Leaf	fitter:

Well developed

Moderately well developed

Absent

Cover objects:

(logs)

Bark

Boulders

Rocks

Evidence of Erosion:

(NO)

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/grave! outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	(FS) No		
Degree of Function	High M	od Low	

GWD/GROUNDWATER DISCHARGE

Crîteria	+	-	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	(Yes)	No	
Wetland microrelief Well developed		Non/Poorly developed	·
Wetland contains an outlet, no inlet	(Yes)	No	
Function Present	(Yes)	No	
Degree of Function	High (Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes)	No	
Wetland in floodplain of adjacent watercourse	Yes	(No2)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	•

Function Present	Yes	No		-	 	***	
Degree of Function	High	Mod	Low		-		•

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shrui	Forest, Shrub, Meadow		·
Shallow littoral zone with emergent vegetation present?	Yes		No .	A STANDARD MANAGEMENT AND A STANDARD MANAGEM
Waterbody at least 10' deep	Yes	·	No	THE REAL PROPERTY OF THE PARTY
% of pond covered by submerged or emergent vegetation	-15-40%	•	Other	PRODUCTION OF THE PROPERTY OF
Direct stormwater discharge via culvert?	No	-	Yes	
Sandbar present at inlet?	No	The state of the s	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No ·		Yes	
Pond size ≥0.5 acre	Yes	<u></u>	No	-
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	The state of the s
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt -	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	`
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

\$&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		-	Comments
Sources of sediments or toxicants upstream	Yes		(No)	
Duration of water retention in wetland	Long		Short	
Evidence of sediment trapping in wetland	Yes		(GW)	
Vegetation density	High		NO	·
Wetland edge broad and intermittently aerobic	Yes		Low	
Drainage ditches in wetland	(No)		Yes	
Water flow through wetland	Diffuse		Channelized	
Ponded water present	Yes 5		No	
Wetland basin topographic gradient	Low		High	
Fine grained mineral or organic soils present	Yes		No	
Watercourse, if present, has visible velocity decreases in wetland	Yes		No	No watercourse
Indicators of erosion or high water velocities are present	No		Yes	
Function Present	Yes		(No)	· ·
Degree of Function	High	Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	•	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	6	
Wetland is saturated most of the season	Yes	(No)	·
Emergent vegetation and/or dense woody stems are dominant	Yes ⁻	(No)	
Water flow through wetland	Diffuse	Channelized ·	
Vegetation density	High	COM	
Potential for sediment trapping exists	Yes	ND	
Deep or open water habitat is present	Yes	66	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	Hìgh	
Wetland microrelief	Well developed	None, poorly developed	

Function Present		Yes	(No)	
Degree of Function	_	High	Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria		+	-	Comments
Wildlife food sources in wetland	Abundant		Few	
Vegetation density	High		Wow	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No	
Wetland has high degree of plant community structure and species diversity	Yes		No	_
Detritus development is present within this wetland	Yes	-	No	
Flowering plants used by nectar gatherers present	Yes		No	
Evidence of wildlife use in wetland	Yes		No	
Fish or shellfish develop/ocear in wetland	Yes	<u>-</u>	No	
Function Present	Yes	, <u>-</u> .	· No	
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		-	Comments	
Topographical gradient in wetland	Yes		(N)		
Potential sediment sources upstream or upslope	Yes		No		
Wetland border >10' adjacent to pond or water	Yes	- [No)		
Distinct shoreline or bank evident between wetland and water	No		Yes		
Open water fetch present	Yes	((No)		
Boating activity present	Yes		(No)		
Floodplain stabilizing trees and shrubs present	Yes	Ì	No		<u> </u>
Indications of erosion or siltation present	Yes		No)		7 -
Function Present	Yes	ĺ	(MOL)	"	,
Degree of Function	High	Mod	Low		

REC/RECREATION

Criteria	+	-	Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)		- -
Fishing is available in or from the wetland	Yes	(P)		
Hunting is permitted in wetland	Yes	(NO)	-	***
Hiking occurs or has potential to occur in wetland	Yes	(NO)		
Wetland is a valuable wildlife habitat	Yes	(No)		<u> </u>

Wetland has high visual/aesthetic quality	Yes	No	
Boating or canoeing feasible in wetland	Yes	<u>6</u>	
Off-road public parking near wetland available	Yes	(No)	
Safety Hazards (if present list them)	Yes	No	
Function Present	Yes	(No)	
Degree of Function	High	Mod Low	

WLH/WILDLIFE HABITAT

Criteria	++		-	Comments
Wetland degradation by human activity	Little or None) Mod	derate to	
Wetland fragmentation by development	Little or None) Mod	derate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No		Vovest
Buffer width	Good to Excelle	ent Fair	r to Poor	
Connectivity with other wetlands	Yes	No		-
Size of landscape block in which wetland is located (Large	Sm	ıa!l	·
Wildlife food sources in wetland	Abundant	Fev		
Interspersion of vegetation and open water	High	Coy		
Upland islands	Present	المتياسية ا	sent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Lov	0	Wooded Swamp
Vegetation density	High	Lov	Ŭ	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H≃Herb LL=Leaf litter)				T, S, LL
Wetland plant species diversity	High Mod 🤇	Low		,
Vernal pool	Yes	ব্যেত	\cup	
Edge diversity (List types)				Forest
Water regime	Wetter	Drie	er	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Fev	w >	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Fe)	\supset	
Flat rocks in/near watercourse (stream salamanders)	Present	7	sent	
Sphagnum hummocks next to shallow pools	Present	Abs	sent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Abs	sent	
Abundance of invasive exotic flora	None or Low	Hig	ĵh .	
Function Present	Yes	No		
Degree of Function	The state of the s	lod (Co	ow)	

Criteria	-	<u>-</u> :	-	Comments '
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		No	
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	Rowdoin college
Wetland contains perennial watercourse	Yes		(V)	1303071
Wetland contains pond/lake .	Yes		(v)	
Safety hazards (if present list them)				-
Site currently used for educational/scientific purposes	Yes		(P)	
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		6	
Wetland identified as exemplary natural community	Yes	···-	(NO)	
Wetland locally/regionally significant	Yes	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(No)	
Function Present	Yes		No	***
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	
Visible from primary viewing locations	Yes	(No)		
Views absent trash, debris, sign of degradation	(Yes)	No	-	
Low noise level	(Tes)	No	-	
Visual landuse contrast with wetland	(Vés)	No		
Function Present	(Yes)	No		
Degree of Function	High Mod) Low	7	

ESH/ENDANGERED SPECIES HABITAT

Criteria	4,	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes.	No.	
Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	No	·

Function Present	Yes		N	_ ,	\prod
ree of Function	High	Mod	Low	i	_

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	₽E	REC	WLH	ED/S	U/H	S&S .	ESH
Loughed	Low	64	No	No	No	No	Low	No	1 -	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 30 D	ate: N/A Functional Un	it: V	Veather: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitat	ion: N/A Below ave	rage 🗌 Average	☐ Above Average	e 🔲 💮 Don't Know 🗀	TBD □
Wildlife Investigation Method: Cover search	Dip netting	g 🗌 💢 Auditory 🛭	Scat ⊠	Tracks 🖾	Minnow Traps 🗌	Electro-shocking [
Wetland Types(s) Cowardin/Golet Classification	n				•	
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-si	rub Robu	st Narrow-lea	ved Broad-leav	ed e
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leaved	Floating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed				
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aquatic		
PFO / Wooded Swamp	Deciduous	Evergreen				
Bog	Compact shrub	Bushy shrub	Wood		ergent	
Water Regimes (Cowardin Modifier):					d to surface, especially e eason in most years; sur	
Permanently flooded (H) - water covers land surface	ce throughout yea	ar in all years		water seepage and ov		
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the ye	ear except in years			present for brief periods of below soil surface for mo	
Semi-permanently flooded (F) - surface water pers most years	ists throughout g	rowing season in	Intermittently flood	ed (J) - substrate usua ithout detectable seas	ally exposed, but surface	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		s especially early in			of floading controlled by	dikes dams, pumps,
Hydrology:			5.5			
Ground water discharges present: Y	es No	0	Depth to	free water:		
If Present: Slope or Depressional			Depth to	saturation:		
Surface water depth:	verage -	maximum -	Signs of	altered hydrology?	Yes	No
Hydrology indicators: Inundated 6	aturated in upper	r 12 Water marks Di	ift lines Sedimen	t deposits Draina	ge patterns within wetlar	ids Other
Plant Adaptations to Hydrology: Pneumatostems, or roots Adventitious roots R	ophores Po Phizospheric oxida			Hypertrophied lenticels Floating leaves	s Stooling Floating stems	inflated leaves,
Soil Drainage classes:(Well) Moderate	ly Well So	omewhat Poorly	Poorly \	ery Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:					-	
Slope: Nearly level G	Sentle	Moderate	Steep			
Cover Types: Mature forest	Sapling for	rest Shrub thic	ket Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (Trees	> Sa	aplings SI	rubs Herbs	Grass		
Soil: WMB - Windson	10000	1				

Leaf litter:

Well developed

Moderately well developed

Absent

Cover objects:

Bark

Boulders

Rocks

Evidence of Erosion:

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	4	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No	· —	
Degree of Function	High Mor	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	No inlet or outlet
Function Present	Yes	No	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown No outlet
Wetland outlet restricted	Yes	No	No outlet
Wetland vegetation density	High	(Low)	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	No	·	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shr	ub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	•	No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	_	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal bloome; nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	·

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high-culverts) present in stream reach	No	Yes	AND DESCRIPTION OF THE PARTY OF
Dominant bottom substrate	Gravel/cobbles	Sand/silt	A PART OF THE PART
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	-Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa			Mostly tolerant	
Function Present	Yes	And the Party of the last of t	No	
Degree of Function	High	Mod	Low	and the same of th

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	÷	-	Comments
Sources of sediments or toxicants upstream	Yes	(B)	
Duration of water retention in wetland	Long	(Short)	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	(No)	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	, No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	No ·	
Wetland basin topographic gradient	LOW	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	No watercourse
indicators of erosion or high water velocities are present	, No 2	Yes	
Function Present	Yes	No	No inputs
Degree of Function	High Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	. +	-	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	Nor	
Wetland is saturated most of the season	Yes	河	
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(Low)	
Potential for sediment trapping exists	Yes .	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Cow)	High	
Wetland microrelief	Well developed	None, poorly developed	·

Function Present	Yes		No			No imputs
Degree of Function	High	Mo	od	Łów)	,
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	,					<u> </u>
Criteria		+		-	Comment	s
Wildlife food sources-in-wetland	Abu	ndant		Few		
Vegetation density	Higi	I		Low		The state of the s
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes			No		CONTRACTOR OF THE PROPERTY OF
Wetland has high degree of plant community structure and species diversity	Yes	-	The state of the s	No	and the same of th	· · · · · · · · · · · · · · · · · · ·
Detritus development is present within this wetland	Yes	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE OW	Constitute III	No	-	
Flowering plants used by nectar gatherers present	Yes			No		
Evidence of wildlife use in wetland	Yes			No		
Fish or shellfish develop/occur in wetland	Yes			No		
Function Present	Yes			No		
Degree of Function	High	M	od	Low	1	

Criteria	+			-	Comments
Topographical gradient in wettand	(Yes		No		-
Potential sediment sources upstream or upslope	Yes		ത		
Wetland border >10' adjacent to pond or water	Yes	(Nô)		
Distinct shoreline or bank evident between wetland and water	No		Yes	>	
Open water fetch present	Yes		NO		
Boating activity present	Yes		№		
Floodplain stabilizing trees and shrubs present	Yes		No		
Indications of erosion or siltation present	Yes		(NB)		
Function Present	Yes		(NO)		
Degree of Function	High	Mod		Low	

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	(NO)	
Hunting is permitted in welland	Yes	(No)	
Hiking occurs or has potential to occur in wetland	Yes	No	
Wetland is a valuable wildlife habitat	Yes	(No)	

Degree of Function	High	Mod	Low	
Function Present	Yes	/ No		
Safety Hazards (if present list them)	Yes	No	2 .	
Off-road public parking near wetland available	Yes	No		
Boating or canoeing feasible in wetland	Yes	No		
Wetland has high visual/aesthetic quality	Yes	. No	<u> </u>	

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No	Forest
Buffer width	Good to Excellent	Fair to Poor	·
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	(Large	Small	
Wildlife food sources in wetland	Abundant	Few)	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	·
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	weeded Sugano
Vegetation density	High	Lów)	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		-	Tree, herb, Leaf-Litter
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	(No)	
Edge diversity (List types)			Forest
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present (Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

Criteria	1	<u> </u>		Comments
Wetland contains listed species	Yes			
Wetland provides valuable wildlife habitat	Yes		No	Moderate
Wetland class diversity	High		(ow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest
Off-road parking near wetland available	Yes	_	(No)	
Proximity to schools	Near	_	Far	Bowdon College
Wetland contains perennial watercourse	Yes		No	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes	_	(No)	
Function Present	Yes		MO	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes		®	
Wetland identified as exemplary natural community	Yes	_	®	
Wetland locally/regionally significant	Yes	<u></u>	(10)	
Function Present	Yes		(%)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments
Visible from primary viewing locations	Yes	(No)	
Views absent trash, debris, sign of degradation	Yes	No	
Law noise level	(Yes	No	
Visual landuse contrast with wetland	(No	
Function Present	Yes	No	
Degree of Function .	High Mod) Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria		-	<u> </u>	Comments
Wetland contains or known to contain federal listed species or habitat	Yes		160	
Wetland contains critical habitat for state or federal listed species	Yes		N ₃	·
Area appears in state or national database	Yes			

Function Present .	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

	T										*
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/mod	mod	No	Low	Low	NO	No	rnol	No	Ne2	No	200
SHIRABADA	TE ELIMOTIANO		<u> </u>		-	<u> </u>		1 400	7 - 4	140	100

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

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Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 31 D	ate: N/A Functioπal Ur	nit:	Weat	her: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitat	ion: N/A Below av	erage 🗌	Average 🗌	Above Average	e ☐ Don't Know ☐] TBD □
Wildlife Investigation Method: Cover search 🗵	Dip netting	g ☐ Auditory l	oxdeta	Scat 🗵	Tracks 🛛	Minnow Traps 🔲	Electro-shocking [
Wetland Types(s) Cowardin/Golet Classificatio	n ,	·					·
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegetate	ed			•	
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	shrub	Robust	Narrow-lear	ved Broad-lea	ved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Fl	loating leaved		·
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling	Bushy	Compact	À	quatic		•
PFO / Wooded Swamp	Deciduous	Evergreen					
Bog	Compact shru	b Bushy shrub			Еп	ergent	The same of the sa
Water Regimes (Cowardin Modifier):						d to surface, especially eason in most years; st	
Permanently flooded (H) - water covers land surfa	ce throughout ye	ar in all years			er seepage and ov		made water absent
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the ye	ear except in years				present for brief periods below soil surface for n	
Semi-permanently flooded (F) - surface water persmost years	sists throughout g	growing season in			J) - substrate usu ut detectable seas	ally exposed, but surfac	e water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		ls especially early in	Artificiali etc	y flooded (K) -	- amount/duration	of flooding controlled b	y dikes dams, pumps,
Hydrology:		•				·	
Ground water discharges present:	es N	0		Depth to free	e water:		
if Present: Slope or Depressional				Depth to sat	turation:		
Surface water depth:	verage	maximum -		Signs of alte	ered hydrology?	Yes	No
Hydrology indicators: Inundated	aturated in uppe	wr 12" Water marks I	Orift lines	Sediment der	posits Draina	ige patterns within wett	ands Other
Plant Adaptations to Hydrology: Pneumal stems, or roots Adventitious roots F	ophores P Rhizospheric oxid		Buttressed tree root systems		ertrophied lenticel ling leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes Well Moderate	ely Well S	omewhat Poorly	Poorly	Very	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:						•	
Slope: (Nearly level)	Sentie	Moderate	Steep				
Cover Types: Mature forest	Sapling fo	orest Shrub thi	icket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	⊳ s	aplings S	Shrubs	Herbs	Grass		
Soil. Wm R- windso	r loan	u soud					

Leaf litter:	Well developed	Mod	erately well developed	Absent
Cover objects:	Cogg	Bark	Boulders	Rocks
Evidence of Erosion:	CATTO Vas	(Evoluin)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	N	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mo	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Weil developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	No inlet or outlet
Function Present	(Yes)	No -	The wife or built
Degree of Function	High (Mod)	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	_	Comments
Wetland size in relation to watershed	Large	(Small)		
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle .	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No		
Wetland in floodplain of adjacent watercourse	Yes	NO		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(gh	_	·
Watershed has a history of economic loss due to flooding	Yes	No		10. 1 k 11 5712363
Wetland outlet restricted	Yes	No		No outlet
Wetland vegetation density	High	Low		11/12 (235-6 0 - 1
Wetland microrelief	Well developed	None/Poorly developed		

Function Present (Yes	No		
Degree of Function	High (Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, I	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes	The same of the sa	No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		-Yes	
Sandbar present at inlet?	No	and the same of th	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, puisance aquatic vegetation or duckweed?	No	. <u>.</u>	Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian-trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high cuiverts) present in stream react	no No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/siit	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Ripatian zone	Wide	Nапоw	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolera	ant	Mostly tolerant	
Function Present	Yes-	The state of the s	No	Commence of the first process of the second
Function Present Degree of Function	High	Mod	Low	The state of the s

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	(No)	Volumenta
Duration of water retention in wetland	Long	(Short)	
Evidence of sediment trapping in wetland	Yes	(Cow)	<u> </u>
Vegetation density	High	(No)	-
Wetland edge broad and intermittently aerobic	(Fig. 1)	Low	-
Drainage ditches in wetland		Yes	
Water flow through wetland	Diffuse	Channelized	<u> </u>
Ponded water present	Yes Yes	No	
Wetland basin topographic gradient		High	
Fine grained mineral or organic soils present	Yes	No No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	A1
Indicators of erosion or high water velocities are present	NR -	Yes	No watercourse
Function Present	Yes	No	
Degree of Function	High Mod		-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	- 	
Wetland is saturated most of the season	Yes	- No	·
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(Cow)	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)		No No	خاصر ؛				
Degree of Function	High		Mod	Low	<u> </u>			
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	•							
Cifiteria			+		Comments			
Wildlife food sources in wetland		Abundan	t	Few				
Vegetation density		High		Low				·
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes ·		No				<u>.</u>
Wetland has high degree of plant community structure and species diversity	بعر علمه عده منازمون	Yes		No	_	<u></u>		
Detritus development is present within this wetland		Yes	-	No No	<u> </u>			
Flowering plants used by nectar gatherers present		Yes		MO NO		•		· .
Evidence of wildlife use in wetland		Yes		No	The same of the sa			
Fish or shellfish develop/occur in wetland		Yes		No			The same of the sa	
Function Present		Yes		No			- Contraction of the Contraction	
Degree of Function		High	Mod	Low				
S&SS/SEDIMENT/SHORELINE STABILIZATION		•						
Criteria	_	+			Comments	5		
Topographical gradient in wetland	Yes	>	No		_			
Potential sediment sources upstream or upslope	Yes		<u> </u>				<u>. </u>	
Welland border >10' adjacent to pond or water	Yes		CM6					

(Yes Distinct shoreline or bank evident between wetland and water No Yes Open water fetch present Yes Boating activity present Ye No Floodplain stabilizing trees and shrubs present (M) Yes Indications of erosion or siltation present Yes Function Present Low Hìgh Mod Degree of Function

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(A)	
Fishing is available in or from the wetland	Yes	₹ ®)	
Hunting is permitted in wetland	Yes	A [†] g	·
Hiking occurs or has potential to occur in wetland	Yes	My	
Wetland is a valuable wildlife habitat	Yes	<i>₩</i>	•

Wetland has high visual/aesthetic quality	Yes	- VN	-	<u> </u>		
Boating or canoeing feasible in wetland	Yes	<u> </u>	-			
Off-road public parking near wetland available	Yes	(No)	<u>-</u>		
Safety Hazards (if present list them)	Yes		• -	<u> </u>		
Function Present	Yes	- Ki	<u>′ </u>		<u> </u>	_
Degree of Function	High	Mod	Low	+		

WLH/WILDLIFE HABITAT

Criteria	-	_	
Wetland degradation by human activity		Moderate to	Comments
	Little or None	High	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapiling/shrub thicket L=Lawn A=Agriculture)	Yes	No :	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large)	Small	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	(High)	Low	<u> </u>
Upland islands	(Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Wooled current
Vegetation density	High		
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Wooded swamp Tree, herb, Leaf Litter
Wettand plant species diversity	High Mod Low	-	
Vernal pool	Yes	(No)	
Edge diversity (List types)			
Water regime	Wetter	Drier -	<u> </u>
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundan)	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundan	Few -	
Flat rocks in/near watercourse (stream salamanders)	Present	Absert	
Sphagnum hummocks next to shallow pools	Present	Absent	<u> </u>
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	·
Function Present	Yes	No	
Degree of Function	High (Mod)	Low	

Criteria		+	-	Comments
Wetland contains listed species	Yes			·
Wetland provides valuable wildlife habitat	Yes		(NO)	moderate
Wetland class diversity	- High		Lów	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		CON	Forest
Off-road parking near wetland available	Yes		Me	
Proximity to schools	Near		Far	Bowdoin College
Wetland contains perennial watercourse	Yes	·	<u></u>	
Wetland contains pond/lake	Yes		100	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes	. <u>_</u>	NO.	
Function Present	Yes			
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments		
Wetland contains listed species	Yes	•	Nb)_	_	 <u>.</u>	
Wetland identified as exemplary natural community	Yes		100		-	
Wetland locally/regionally significant	Yes				 	
Function Present	Yes		(No)			
Degree of Function	High	Mod	Low		 	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	
Visible from primary viewing locations	Yes	(No)		
Views absent trash, debris, sign of degradation	(Yeg)	No		
Low noise level	6	No		
Visual landuse contrast with wetland	(GS)	No		
Function Present	(es)	No		
Degree of Function	High (Mod)	Low		-

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(P)	·
Wetland contains critical habitat for state or federal listed species	Yes	®	
Area appears in state or national database	Yes		

Function Present	Yes (No)			
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	\$&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
mod/mod	Mod	No	Low	Low	No	No	Mod	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Afteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state fisted).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site Investigator:Amy Goodstine & Chris Akios R	1 . 4	Functional Unit: Below average	Weati Average □	her: N/A Above Average	Time Start: N/A ☐ Đon't Know ☐	Time Stop: N/A
Wildlife Investigation Method: Cover search ⊠	Dip netting [Auditory 🖾	Scat 🗵	Tracks 🛛	Minnow Traps 🗌	Electro-shocking \Box
Wetland Types(s) Cowardin/Golet Classificatio	n .	·	·			
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated	<u> </u>			
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leave	ed Broad-leav	ed
PAB/ Shallow Marsh	Robust Narrov	v-leaved Broad-	eaved Fi	oating leaved		· -
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed		<u></u>		
PSS / Shrub Swamp	Sapling Bushy	Сотра	ct A	quatic		
PFO / Wooded Swamp	Deciduous	Evergreen				
Bog	Compact shrub	Bushy shrub	Wooded		ergent	
Water Regimes (Cowardin Modifier):		sea	asonally saturated (ason, but are unsatu	Y) - soils saturated Irated by end of se	l to surface, especially e ason in most years; su	early in growing Face water absent
Permanently flooded (H) - water covers land surfa		years exc	ept for ground wate	er seepage and ove	erland flow	
Intermittently Exposed (Z) -surface water present of extreme drought		se:			resent for brief periods nelow soil surface for m	
Semi-permanently flooded (F) - surface water per most years		val	ermittently flooded (iable periods withou		lly exposed, but surfact onal periodicity~	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods espec n most years	ially early in Art etc		- amount/duration o	of flooding controlled by	dikes dams, pumps,
Hydrology:						
Ground water discharges present:	Yes No		Depth to free	e water:		
If Present: Slope or Depressional			Depth to sat	turation:		
Surface water depth:	аverage - п	naximum -	Signs of alte	ered hydrology?	Yes	No
Hydrology indicators: (nundated)	Saturated in upper 12 V	Vater marks Drift lines	Sediment de	posits Drainag	ge patterns within wetla	inds Other
	tophores Polymorp Rhizospheric oxidation	ohic leaves Buttresse Shallow root syste		ertrophied lenticels ting leaves	: Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely We ll Somewha	at Poorly P	oorly Very	Poorly	Mapped Hydric Soil	-
Slope: Nearly level Gentle	Moderate	Steep		•		
Upland Border:						
Slope: Nearly level	Gentle A	Moderate S	teep			
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (frees)	Saplings	M Shrubs	Herbs	Grass	•	
WMB - Windsor loam	y sand					

1	eaf	litter:

Well developed

Moderately well developed

Absent

Cover objects:

(Logs)

Bark

Boulders

Rocks

Evidence of Erosion:

(MD)

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle)	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mo	3)	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow I	edge	
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	(No)	
Function Present	Yes	N _S)	Time & Loren Steway cales cittle
Degree of Function	High N	Mod Low	Input from stormwater eystem - culverted from residential area

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-		Comments
Wetland size in relation to watershed	Large	Small	··	
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	(Yes)	No	! <u> </u>	
Wetland in floodplain of adjacent watercourse	(Yes)	No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)		
Watershed has a history of economic loss due to flooding	Yes	No	· -	Unknown
Wetland outlet restricted	(Yes)	No ,		Unknown Culverted under road
Wetland vegetation density	Aigr	Low		7000
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	No		
Degree of Function	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	-	Comments
Dominant land-use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No .	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	MD		-Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	A SECT SUPPLIES SECTION SECTIO
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algai blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	The state of the s
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	(Yes)	No	
Gravel spawning areas present	Yes	No.	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	(Yes)	·
Dominant bottom substrate	Gravel/cobbles	(Sand/silt)	
Substrate embeddedness by sand & silt	Low	(High)	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(OW)	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees. shrubs)	Low	Trees
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	(Narrow)	
Watershed development	Low	High	
Water quality	Good	Poor	Unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolera	ant	Mostly tolerant	Unknown
Function Present	Yes	_	No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	(Yes)	No No	Comments
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(Low)	
Vegetation density	High	No	-
Wetland edge broad and intermittently aerobic	Yes	(Tow)	
Drainage ditches in wetland	No	(Yes)	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	(Yes)	No	
Wetland basin topographic gradient	1000	High	· · · · · · · · · · · · · · · · · · ·
Fine grained mineral or organic soils present	Yes	No No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	
Indicators of erosion or high water velocities are present	No.	Yes	
Function Present	(Yes)	No	
Degree of Function	High Mod	<u></u>	<u>_</u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Smail)	
Potential sources of excess nutrients upstream	Yes	(NO)	-
Wetland is saturated most of the season	(Yes)	No	- <u>-</u>
Emergent vegetation and/or dense woody stems are dominant	(YES)	No	
Water flow through wetland	(Diffuse)	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	(Pes)	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Lowy)	High	
Wetland microrelief	Well developed)	None, poorly developed	

Function Present	Yes	·	No	<u> </u>	
Degree of Function	High	Hìgh (Mod		Low	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)				<u> </u>	<u> </u>
Criteria		+	_		Comments
Wildlife food sources in wetland	<u></u>	(Abundant)		Few	
Vegetation density	<u> </u>		·	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	<u></u>	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		No	<u> </u>
Wetland has high degree of plant community structure and species diversit	ty	(Yes)	·	No	
Detritus development is present within this wetland		Yes		No _	
Flowering plants used by nectar gatherers present		(Yes)		No	
Evidence of wildlife use in wetland	<u></u>	(Yes)		No	Madards 4 spotted and egg masse
Fish or sheilfish develop/occur in wetland		Yes		No	unknown
Function Present		YES	_	No	
Degree of Function		High N	lod)	Low	
S&SS/SEDIMENT/SHORELINE STABILIZATION					·
Criteria		+		•	Comments
Topographical gradient in wetland	Yes)	No		<u> </u>
Potential sediment sources upstream or upstope	Yes		No		
Wetland border >10' adjacent to pond or water	Yes		No.)	
Distinct shoreline or bank evident between wetland and water	No		Yes		<u></u>
Open water fetch present	Yes		(NO)		
Boating activity present	Yes		(NO)		
Floodplain stabilizing trees and shrubs present	Yes		No		
Indications of erosion or siltation present	Yes	_ 	NO		
Function Present	Yes)	No		
Degree of Function	High	(Mog)		Low	·
REC/RECREATION	-				·
Criteria		+		-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes		100)	
Fishing is available in or from the wetland	Yes		No) .	
Hunting is permitted in wetland	Yes	<u>. </u>	(No)	·
Hiking occurs or has potential to occur in wetland	Yes	_	(No	"	
Wetland is a valuable wildlife habitat	Yes	_	/100)	Directly adj. to development

Function Present	Yes	No No
Off-road public parking near wetland available Safety Hazards (if present list them)	Yes	No
Boating or canoeing feasible in wetland	Yes	60
Wetland has high visual/aesthetic quality	Yes	(A)

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	/Moderate to	
Wetland fragmentation by development	Little or None	High Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(F)	High No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	Large	(Small)	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(160)	PEM
Vegetation density	(High)	Low	<u> </u>
Vegetation strata (T=Tree S=Sapling SH≔Shrub V=Vine H=Herb LL=Leaf litter)			Herb
Wetland plant species diversity	(High) Mod Low	· -	· ·
Vernal poot	Yes	(A)	The state of the s
Edge diversity (List types)			But spotted sall egg masses present
Water regime	Wetter)	Drier	Forest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No No	
Degree of Function	High (Mod)	Low	

Criteria	+		Comments
Wetland contains listed species	Yes		
Wetland provides valuable wildlife habitat	Yes		
Wetland class diversity	High	1600	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(A)	Forest
Off-road parking near wetland available	Yea)	No	
Proximity to schools	Near	Far	School/daycare across street
Wetland contains perennial watercourse	Yes	No	
Wetland contains pond/lake	Yes	No No	<u> </u>
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	Yes	(N)	
Degree of Function	High	Mod Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments	 <u>. </u>	
Wetland contains listed species	Yes	<u>-</u>	1		 	
Wetland identified as exemplary natural community	Yes		(B)		 ·	
Wetland locally/regionally significant	Yes		No		 	
Function Present	Yes	_	(N)			
Degree of Function	High	Mod	Low		 · <u>-</u> ·	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments	·	
Visible from primary viewing locations	(Yes)		No			
Views absent trash, debris, sign of degradation	Yes	<u>-</u>	<u> </u>			
Low noise level	Yes		No	Adi. to road	<u> </u>	<u>-</u>
Visual landuse contrast with wetland	Yes		No			<u>.</u>
Function Present	Yes		(No)			
Degree of Function	High	Mod	Low	·		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	®	
Wetland contains critical habitat for state or federal listed species	Yes	<u> </u>	
Area appears in state or national database	Yes	(%)	

Function Present	Yes	-	(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

C) S (T)	T		, 		-				_		
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
mod/No	Mod	No	Mod	mod	mod	No	mod	No	120	Mod	
01135354					'	<u> </u>	<u> </u>	<u> </u>	NO		1 NO

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

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Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

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Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 33 Date: 1	N/A Functional Unit	:	Weath	er: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation:	N/A Below aver	age 🗌 💢	Average 🗌	Above Average	☐ Don't Know ☐	TBD □
Wildlife Investigation Method: Cover search ⊠	Dip netting 🗌	Auditory ⊠	•	Scat 🗵	Tracks 🗵	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n	· .					
Class	Subclass	<u> </u>		·	<u>.</u>		
POW/ Open water	Vegetated	Non-Vegetated				_ .	
PEM/PSS Deep Marsh	Dead Woody Shr	ub Sub-sh	rub	Robust	Narrow-leav	ed Broad-leav	ved
PAB/ Shallow Marsh	Robust Na	row-leaved	Broad-leaved	i Flo	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub_				. <u>-</u>	
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling But	shy	Compact	Aq	uatic		
(PFO / Wooded Swamp)	Deciduous	Evergreen					
Bog	Compact shrub	Bushy shrub		Wooded		ergent	
Water Regimes (Cowardin Modifier):		•	Seasona season.	lly saturated (Y but are unsatur	') - soils saturated rated by end of se	i to surface, especially eason in most years; su	rearry in growing inface water absent
Permanently flooded (H) - water covers land surfa					seepage and ov		
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year e	ccept in years`	Tempora season, i	rily flooded (A) but water table	- surface water p usually lies well l	resent for brief periods below soil surface for n	s during growing nost of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout growi	ng season in	intermitte variable	ently flooded (J periods withou) - substrate usua t detectable seas	ally exposed, but surfac onal periodicity—	e water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods esp n most years	pecially early in	Artificially etc	y flooded (K) -	amount/duration	of flooding controlled b	y dikes dams, pumps,
Hydrology:							
Ground water discharges present:	Yes No			Depth to free	water:		
If Present: Slope or Depressional				Depth to satu	ration:		
Surface water depth:	average -	maximum -		Signs of alter	red hydrology?	Yes	No
Hydrology indicators: Inundated	Saturated in upper 12"	Water marks Di	ift lines .	Sediment dep	osits Draina	ge patterns within wetl	ands Other ·
	tophores Polym Rhizospheric oxidatior		uttressed trees ot systems		rtrophied lenticel: ng leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Some	what Poorly	Poorly	Very I	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:	•						
Slope: Kearly level	Gentle	Moderate	Steep				
Cover Types: Mature forest	Sapling forest	Shrub thic	ket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (Tees)	M Saplir	gs) m si	nrubs	Herbs	Grass		

Soil: Sd - Saugatuck loamy sand- hydric soil

τ	~~£	T724 -	
	.eat	litte	

Well developed

Moderately well developed

Absent

Cover objects:

(E003)

Bark

Boulders

Rocks

Evidence of Erosion:

(No)

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Siope	Gentle	Moderate or Steep	
Function Present	Yes (Ño)		
Degree of Function	High Mo	d Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow k	dge	
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	Well developed	/Non/Poorly	
Wetland contains an outlet, no inlet	Yes	(No)	
Function Present	Yes		
Degree of Function	High M	od Low	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

+	-	Comments
Large	(Small)	
(Large)	Small	
Gentle)	Moderate Steep	
Yes	No	
Yes	(No)	<u> </u>
Yes	No	
Yes	No ·	Unknows
(Yes)	No No	Unknown No outlet
High	(Cow)_	700 000,507
Well developed	None/PoorIV developed	
	Large Large Gentle Yes Yes Yes Yes High Well	Large Small Large Small Gentle Moderate Steep Yes No Yes No Yes No Yes No High Low Well None/Poorly

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	<u></u>

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		<u>.</u> .	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, I	Meadow	Lawn	The state of the s
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		"Other	
Direct stormwater discharge via culvert?	-No	SECTION AND DESCRIPTION OF THE PERSON OF THE	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		-Few	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	 	Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal-blooms, nuisance aquatic vegetation or duckweed?	No .		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS Excluding condition: Not associated with perennial stream

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	The state of the s
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high-eulverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes -		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No No	
Duration of water retention in wetland	Long	(Short)	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No	
Welland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	(Diffuse)	Channelized	_
Ponded water present	Yes	No	<u> </u>
Wetland basin topographic gradient	(COW)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	No watercouse
Indicators of erosion or high water velocities are present	(No)	Yes	100 was ercouse
Function Present	(Yes)	No Too	-
Degree of Function	High Mo		-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	·
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	(No)	<u> </u>
Emergent vegetation and/or dense woody stems are dominant	Yes	No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(Low)	
Potential for sediment trapping exists	Yes	(No)	Low
Deep or open water habitat is present	Yes	(No	10000
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed (None, poorly developed	

Function Present	Yes		(%)			
Degree of Function	High		Mod		Low	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)				<u> </u>		-
Criteria			+		-	Comments
Wildlife food sources in wetland				Few		
Vegetation density		High		Low		A STATE OF THE STA
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes			No	- · · · · · · · · · · · · · · · · · · ·
Wetland has high degree of plant community structure and species diversity		Yes	~		No	<u> </u>
Detritus development is present within this wetland	Arrest America	Yes		-	No	·
Flowering plants used by nectar gatherers present		Yes		··-	No	
Evidence of wildlife use in wetland	•	Yes		-	No	
Fish or shellfish develop/oceur in wetland		Yes			No	
Function Present		Yes			No	
Degree of Function		High	Mod	1 [_ow	
S&SS/SEDIMENT/SHORELINE STABILIZATION						
Criteria		+			•	Comments
Topographical gradient in welland	Yes	_	(N)			<u> </u>
Potential sediment sources upstream or upslope	Yes			No		Sout/sand from treating road
Wetland border >10' adjacent to pond or water	Yes			(NO)		<u> </u>
Distinct shoreline or bank evident between wetland and water	No			Yes		
Open water fetch present	Yes		(No)			
Boating activity present	Yes			(NB)		<u> </u>
Floodplain stabilizing trees and shrubs present	Yes	ı <u> </u>		No		
Indications of erosion or siltation present	Yes			(NO)	<u> </u>	
Function Present	Yes		(No		_
Degree of Function	Hìgh		/lod	Lo	w	<u></u>
REC/RECREATION .						<u></u>
Criteria		+				Comments
Wetland is part of recreation area, park, refuge, etc.	Yes			(NO)		
Fishing is available in or from the wetland	Yes			(N)		
Hunting is permitted in wetland	Yes			(6)		
Hiking occurs or has potential to occur in wetland	Yes			No		· · ·
Wetland is a valuable wildlife habitat	Yes			(No)		

Degree of Function	Yes High	Mod No	Low		
Function Present	Yes	No No			
Safety Hazards (if present list them)			- -		
Off-road public parking near wetland available	Yes	(i)	-		
Boating or canoeing feasible in wetland	Yes	(6)		<u> </u>	
Wetland has high visual/aesthetic quality	Yes	(Ng)			

WLH/WILDLIFE HABITAT

Criteria	+		-	Comments
Wetland degradation by human activity	Little or None	e	Moderate to High	
Wetland fragmentation by development	Little or None		Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(res)	<u>_</u> _	High No	
Buffer width	Good to Exc	ellent	Fair to Poor	Narrow Forested strip one side
Connectivity with other wetlands	Yes	- }	No	TOWN FOR CAPED STIP BINE FINE
Size of landscape block in which wetland is located	Large	7	Small	<u> </u>
Wildlife food sources in wetland	Abundant	-	Eew	
Interspersion of vegetation and open water	High	 +	Low)	
Upland islands	Present		Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	- {		Wooded Survey
Vegetation density	High		Low	Wooded swamp
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)				Tree, loof litter
Wetland plant species diversity	High Mod	Low		1: cs, t wat at a sh
Vernal pool	Yes		No)	<u> </u>
Edge diversity (List types)				<u> </u>
Water regime	Wetter		Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant)		Few	2001 11011
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant		Few	Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present		Absent	cogs, branches
Sphagnum hummocks next to shallow pools	Present	_4_	Absent?	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Absen)	
Abundance of invasive exotic flora	None or Low	~ !!	High	
Function Present	Yes			Very small wetland-likely drains
Degree of Function	High	Mod	Low	very small wetland-likely drains into stormwater system.

Criteria	+		<u> </u>	Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		No)	
Wetland class diversity	High		(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	_	Low	Forest + development
Off-road parking near wetland available	(Yes)		No	
Proximity to schools	Near		Far	
Wetland contains perennial watercourse	Yes		6	·
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)			<u> </u>	
Site currently used for educational/scientific purposes	Yes		(N)	
Function Present	Yes		(N)	<u>. </u>
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments	<u>_</u> _		
Wetland contains listed species	Yes		((()	<u> </u>	<u> </u>	<u></u> .	<u>_</u>
Wetland identified as exemplary natural community	Yes		(O)				
Wetland locally/regionally significant	Yes						
Function Present	Yes	<u> </u>	(MS)				
Degree of Function	High	Mod	Low		<u></u>	_	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	_	+	-	Comments		
Visible from primary viewing locations	Yes	_	No		<u></u>	
Views absent trash, debris, sign of degradation	Yes		(G)			
Low noise level	Yes		(No)	<u> </u>		 _
Visual landuse contrast with wetland	Yes	<u> </u>	No)			
Function Present	Yes	<u> </u>	(No)		· .	•
Degree of Function	High	Mod	Low			. <u>.</u>

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments		
Wetland contains or known to contain federal listed species or habitat	Yes	1	·		·
Wetland contains critical habitat for state or federal listed species	Yes		· 		
Area appears in state or national database	Yes	(Ño)	·	· .	

Function Present	Yes	<u> </u>	(No)	
Degree of Function	Hìgh	Mod	Low	<u> </u>

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

G11(7) (5)				т	 :						
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/\$	U/H	S&S	ESH
NO NO.	No	No	نص	No	No	No	No	No	No	No	Als
CHRISTADY	F F! IN OTIO	_		<u> </u>	· _	<u> </u>	<u> </u>			, , , ,	NO

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

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Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation Dip netting	_	rerage 🗌	Weath Average □ Scat ⊠	er: N/A Above Average Tracks ⊠	Time Start: N/A ☐ Don't Know [Minnow Traps ☐	Time Stop: N/A TBD [] Electro-shocking [
Class	Subclass			<u> </u>	<u>-</u>		
POW/ Open water	Vegetated	Non-Vegetate	ed				
PEM/PSS Deep Marsh	Dead Woody S	hrub Sub-	shrub	Robust	. Narrow-leav	red Broad-lea	aved
PAB/ Shailow Marsh	Robust_ N	larrow-leaved	Broad-leave	i Flo	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub	·	.		_	
PEM / Wet Meadow	Ungrazed	Grazed			<u>.</u>		·. -
PSS / Shrub Swamp	Sapling B	lushy _	Compact	Aq	uati <u>c</u>		
PFO / Wooded Swamp	Deciduous	Evergreen	Mike	<u>d</u>			
Bog	Compact shrub	Bushy shrub		Wooded		ergent	
Water Regimes (Cowardin Modifier):	•		Seasona season	llý saturated (Y but are unsatu	') = soits saturated ated by end of se	d to surface, especial eason in most years;	y early in growing surface water absent
Permanently flooded (H) - water covers land surfa			except for	or ground water	seepage and ov	erland flow	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year	except in years	Tempora season,	arily flooded (A) but water table	- surface water p usually lies well	oresent for brief period below soil surface for	ts during growing most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout grov	wing season in `) - substrate usua t detectable seas		ace water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods e n most years	specially early in	Artificiall efc	y flooded (K) -	amount/duration	of flooding controlled	by dikes dams, pumps
Hydrology:							
Ground water discharges present:	Yes No			Depth to free	water:		
If Present: Slope or Depressional				Depth to satu	ıration:		
Surface water depth:	average -	maximum -		Signs of alter	red hydrology?	Yes	No
Hydrology indicators: Inundated	Saturated in upper 1	2") Water marks	Drift lines	Sediment dep	osits Draina	ige pattems within we	tlands Other
	tophores Poly Rhizospheric oxidati	morphic leaves on <u>Shallo</u> w	Bultressed tree root systems		rtrophied lenticel ng leaves	s Stooling Floating stems	inflated leaves,
Soil Drainage classes: Weil Moderati	ely Well Som	newhat Poorly	Poorly	Very t	Poorly	Mapped Hydric Soil	
Slope: Nearly level) Gentle	Moderate	Steep					
Upland Border:						•	
	Gentle	Moderate	Steep				
Cover Types: Mature forest	Sapling fore:	st Shrub t	hicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (rees	W @	lings m	Shrubs	Herbs	Grass		

Soil = 12A - Haplaquents - Naumburg complex

Leaf litter:	
--------------	--

Well developed

Yes

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

₩

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		-	Comments
Soils	Sand/gravel outwast	Hardpa shallow	n, tight fine-grained soils, ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	®		
Slope	Gentle	Modera	te or Steep	
Function Present	Yes No			
Degree of Function		Mod .	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge	-	Comments
Seeps, springs observed?	Yes	No	
Wefland microrelief	Well developed	Non/Poorly	
Wetland contains an outlet, no inlet	Yes	'developed'	
Function Present	Yes	Ng	
Degree of Function	High Mod	Low	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	<u> </u>		Comments
Wetland size in relation to watershed	Large	(Small)	_	- Commence
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No		
Wetland in floodplain of adjacent watercourse	Yes	(No)	<u> </u>	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		
Watershed has a history of economic loss due to flooding	Yes	No		Unknower
Wetfand outlet restricted	(Fes)	No	_	No obe, outlet - likely drains into stormwater system
Wetland vegetation density	High	Low		1149 Des. Overtor areing arains into stormwater system
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	(No)		<u> </u>
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition:/Not associated with pond/lake)

Criteria		+	<u> </u>	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn	
Shallow littoral zone with emergent vegetation-present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%	-	Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	Nouseman	-	Yes	
Water transparency	High		Low'	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No .		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u>-</u> .	Yes	3
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	The state of the s
Barriers to anadromous fish (dams/high culverts) present in stream reach	No .	Yes	AND THE PROPERTY OF THE PROPER
Dominant bottom substrate	Gravel/cobbles	Sand/silt	·
Substrate embeddedness by sand & silt	LOW	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous_	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees. shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolera	ent	Mostly tolerant	The control of the co
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	· +		Comments
Sources of sediments or toxicants upstream	(Yes)	No	Runoff from roads
Duration of water retention in wetland	Long	Short	Cunot trous roads
Evidence of sediment trapping in wetland	Yes	(LOW)	
Vegetation density	High	MO	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No.	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	0.20
Indicators of erosion or high water velocities are present	(M)	Yes	No watercourse
Function Present	Yes	No	
Degree of Function	High (Moo	7	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	(10)	<u> </u>
Wetland is saturated most of the season	Yes		
Emergent vegetation and/or dense woody stems are dominant	Yes	(Ng)	
Water flow through wetland	Diffuse)	Channelized	
Vegetation density	High	Cow	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	(6N)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(tow)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	(Ng)		
Degree of Function	High	Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Griteria	-	+	-	Comments	. <u> </u>
Wildlife food sources in wetland	Abundant		Few		
Vegetation density	High		Low		- Market Street Company of the Street Compan
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	· <u>-</u>	No		
Wetland has high degree of plant community structure and species diversity	Yes		No		
Detritus development is present within this wetland	Yes	Constitution Street Street	No		
Flowering plants used by nectar gatherers present	Yes	_ _	No		
Evidence of wildlife use in wetland	Yes		No		<u> </u>
Fish or shellfish develop/occur-in wetland	Yes	<u>.</u>	No		The State of the S
Function Present	Yes	_	No		The state of the s
Degree of Function	High	Mod	Low		

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	Yes	(A)	
Potential sediment sources upstream or upslope	Yes	No	Sand/salt runoff from road
Wetland border >10' adjacent to pond or water	Yes	(No)	
Distinct shoreline or bank evident between wetland and water	No	Yes	No nearby water
Open water fetch present	Yes	(No)	
Boating activity present	Yes	N ₀	<u> </u>
Floodplain stabilizing trees and shrubs present	Yes	No _	
Indications of erosion or siltation present	Yes	(NO)	
Function Present	Yes	(No)	
Degree of Function	High M	lod Low	

REC/RECREATION

Criteria	+		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	No		
Fishing is available in or from the wetland	Yes	(N)		
Hunting is permitted in wetland	Yes	(A)		
Hiking occurs or has potential to occur in wetland	Yes			
Welland is a valuable wildlife habitat	Yes	(NO)		

Wetland has high visual/aesthetic quality	Yes	(No	}			
Boating or canoeing feasible in wetland	Yes		. – –	- · -		-
Off-road public parking near wetland available	Yes			 - 		
Safety Hazards (if present list them)	Yes	No.		 -	. <u>.</u>	_ .
Function Present	Yes	No	-	-	- -	
Degree of Function	High	Mod	Low	╡ .		

WLH/WILDLIFE HABITAT

Criteria	+	<u> </u>	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	/Moderate to)	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(69)	High No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	(B)	
Size of landscape block in which wetland is located	Large	(Smail)	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	Hìgh		
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	wooded swamp
Vegetation density	High (Lów	0.100 @ 20.100
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, leaf Litter
Wetland plant species diversity	High Mod (Low)		The second second
Vernal pool	Yes	(P)	
Edge diversity (List types)			Forest
Water regime ~	Wetter	Drier	LO LETL
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	<u> </u>
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	(one or Low	High	
Function Present	Yes	(No)	
Degree of Function	Hìgh Mod	Low	•

Criteria		+	-	Comments
Wetland contains listed species	Yes		<u>®</u>	
Wetland provides valuable wildlife habitat	Yes		<u> (10)</u>	·
Wetland class diversity	High		Cow	· · ·
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	. High	<u>_</u>	Low	Forest
Off-road parking near wetland available	Yes		_ (No)	
Proximity to schools	Near		Far	Bowdoin college
Wetland contains perennial watercourse	Yes	_	<u></u>	<u> </u>
Wetland contains pond/lake	Yes	<u> </u>		
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes	<u> </u>	(N)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes		(P)	
Wetland identified as exemplary natural community	Yes	<u></u>	100	
Wetland locally/regionally significant	Yes		®	
Function Present	Yes			
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments	<u></u>
Visible from primary viewing locations	(es)	· <u>-</u>	No	Roadway	<u>-</u> .
Views absent trash, debris, sign of degradation	(es)	_	No		•
Low noise level	Yes		100	Near road	
Visual landuse contrast with wetland	Yes		(No)		
Function Present	Yes	•	(No)		
Degree of Function	High	Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No.)	
Wetland contains critical habitat for state or federal listed species	Yes	Q	·
Area appears in state or national database	Yes	(M)	

Function Present	Yes		(Ng)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

		T	г 				-						
	GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH	Ī
ĺ	NO/NO	No	No.	Low	No	No	No	No	No	No	415		
	CHESSANDY	Y ELMOTIONS				· -		<u> </u>	. 100		No	₹∕∕0	ł.

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 35 D	ate: N/A F	unctional U	mit:	Weath	er: N/A	Time Start:	N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Re		ion: N/A	Below a	verage 🗌	Average 🗌	Above Average	☐ Don't	Клож 🗌	тво 🗆
Wildlife Investigation Method: Cover search ⊠	Dip netting		Auditory	\boxtimes	Scat 🖾	Tracks 🛚	Minnow Traps	□	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n						<u>_</u>		
Class	Subclass	-		<u> </u>		<u>-</u>	<u></u>	<u> </u>	-
POW/ Open water	Vegetated		Non-Vegetat	ed				_	
PEM/PSS Deep Marsh	Dead Woody	Shrub	Sub-	shrub	Robust	Narrow-leav	red B	road-leave	<u></u>
PAB/ Shallow Marsh	Robust	Narrow-l	eaved	Broad-leave	d Flo	oating leaved			
PFL / Seasonally Flooded Flats	Emergent		Shru <u>b</u>		_			·	
PEM / Wet Meadow	Ungrazed		Grazed			_	_		
PSS / Shrub Swamp	Sapling	Bushy		Compact	Ac	uatic			
PFO / Wooded Swamp	Deciduous		Evergreen						
Bog	Compact shru	b	Bushy_shrub)	Wooded		ergent		
Water Regimes (Cowardin Modifier):				Season	ally saterated () but are unsatu	() - soils saturated	d to surface, e. eason in most	specially e vears; sun	face water absent
Permanently flooded (H) - water covers land surfa				except f	or ground wate	r seepage and ov	erland flow		
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the y	ear except	in years	Tempora season,	arily flooded (A' but water table) - surface water ; usually lies well :	present for brie below soil surf	ef periods (ace for mo	during growing ost of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout	growing se	ason in	Intermitt v <i>ariabl</i> e	entiy flooded (. periods withou	l) - substrate usua It detectable seas	ally exposed, t onal periodicit	out surface /~	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period most years	ds especia	lly early in	Artificial etc	ly flooded (K) -	amount/duration	of flooding cor	trolled by	dikes dams, pumps,
Hydrology:			•	•					
Ground water discharges present:	res 1	10 ·			Depth to free	e water:			
If Present: Slope or Depressional				•	Depth to sat	uration:			
Surface water depth:	verage -	ma	ximum -		Signs of alte	red hydrology?	Yes		No
Hydrology indicators: Inundated	Saturated in uppo	er 12" Wa	iter marks	Drift lines	Sediment dep	osits Draina	ge pattems w	thin wetlar	nds Other
	tophores l Rhizospheric oxid	Polymorph dation	ic leaves Shallov	Buttressed tree v root systems		ertrophied lenticel ing leaves	s Stoo Floating ster		Inflated leaves,
Soil Drainage classes: Well Moderate	ely Weli 🕡 8	Somewhat	Poorty >	Poorly	Very	Poorly .	Mapped Hyd	lric Soil	
Slope: Kearly level Gentle	Moderate	9	Steep	-					
Upland Border:									
·	Gentie	Мо	derate	Steep					
Cover Types: Mature forest	Sapling f	orest	Shrub t	thicket	Meadow	Mowed lawn	Farr	n	•
Vegetation Density(S/M/D): Trees	M s	Saplings	S	Shrubs	Herbs	Grass			

Soil: Sd - Saugatuck loamy sand - hydric

Leaf litter:	(Well developed)	Mod	erately well developed	Absent
Cover objects:	(.ogs)	Bark	Boulders	Rocks
Evidence of Erosion:	è Yes	(Explain)		
CHEROPOTEURINA PROPERTY				

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	_		Comments	
Soils	Sand/gravel outwa	ash	Hardpan, tight fine-grained soils, shallow ledge	· ·	
Wetland associated w/ perennial or seasonal watercourse	Yes		@		<u> </u>
Slope	Gentle		Moderate or Steep		<u> </u>
Function Present	Yes (Vo)			_	
Degree of Function	High	Mod	Low		<u> </u>

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge	-	
Seeps, springs observed?	Yes	(N)	
Wetland microrelief	Well developed	(Non/Poorly)	
Wetland contains an outlet, no inlet	(Yes)	No	
Function Present	Yes	(N)	
Degree of Function	High Mod	Low	<u> </u>

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		_	Comments		
Wetland size in relation to watershed	Large	(Small)			_	- :
Amount of impervious surface in wetland watershed	Large	Small			<u> </u>	
Wetland Slope	Gentle	Moderate	Steep		<u> </u>	_
Wetland characterized by variable water level?	(Yes)	No No				
Wetland in floodplain of adjacent watercourse	Yes	No	_			
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(Yes)	No				
Watershed has a history of economic loss due to flooding	Yes	No	_	Vaknown	<u> </u>	
Wetland outlet restricted	Yes	100			<u> </u>	
Wetland vegetation density	High	(Cow)	<u> </u>			
Wetland microrelief	Well developed	None/Poorly developed				

	_			- 1
Function Present	(Yes)	No		4
Degree of Function	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	1	+	· . <u>-</u>	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No.		Yes	
Sandbar present at inlet?	No		Yes	·
Water transparency	High		-Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	<u>-</u> .	No	_
Degree of Function	High	Mod	Low	<u> </u>

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	<u> </u>	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No ·	The state of the s
Gravel spawning areas present	Yes	No	The state of the s
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	- Programmer and the second se
Dominant bottom substrate	-Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees. shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low .	High	
Water quality	Good	Роог	

į	Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
	Function Present	_Yes	The second second	No	
Į	Degree of Function	High	Mod	Low	7

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	(v)	Comments
Duration of water retention in wetland	Long	(Short)	
Evidence of sediment trapping in wetland	Yes		-
Vegetation density	High	(No)	
Wetland edge broad and intermittently aerobic	(E)	Low	-
Drainage ditches in wetland		Yes	-
Water flow through wetland	(Diffuse)	Channelized	
Ponded water present	Yes	(No	
Wetland basin topographic gradient	(Low)	High	·
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	(No)	Yes	No wedercourse
Function Present	Ves	No	
Degree of Function	High (Mod	 _	- -

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	small)	Comments
Potential sources of excess nutrients upstream	Yes	76	
Wetland is saturated most of the season	Yes	Ma)	
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(Low)	<u> </u>
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	<u>.</u>		(M)			<u> </u>		
Degree of Function	High	High			Low	<u> </u>			
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)									
Criteria			+			Comment	s		
Wildlife food sources in wetland	. <u> </u>	Abundant		_	Few		<u></u>	_	
Vegetation density		High			(w)			_	
Nutrients and/or organic matter flushed out of wetland into watercourse	<u> </u>	Yes			May	ļ. <u>.</u>	<u>-</u> .		
Wetland has high degree of plant community structure and species diversit	iy	Yes			(No)	<u> </u>			
Detritus development is present within this wetland	<u></u>	Yes			No _		_		
Flowering plants used by nectar gatherers present		Yes			(NO)				
Evidence of wildlife use in wetland	<u> </u>	Yes	_		No	Comme	m forestd.	<u>,elling bi</u>	risisquin
Fish or shellfish develop/occur in wetland		Yes			(No)			<u> </u>	
Function Present		Yes			(No)	_			
Degree of Function	· <u>-</u>	High	Moe	đ 	Low	<u> </u>	·-·		
S&SS/SEDIMENT/SHORELINE STABILIZATION								<u></u>	
Criteria		+			-	Commen	ts	<u> </u>	
Topographical gradient in welland	Yes			(NO)		<u> </u>	_	-	
Potential sediment sources upstream or upslope	Yes	_		(No.)		<u> </u>	_		
Wetland border >10' adjacent to pond or water	Yes			(No)		}	· ·	_	
Distinct shoreline or bank evident between wetland and water	No	_		(Yes)		-	<u> </u>	_	
Open water fetch present	Yes	<u>_</u>	ļ	(NO)		_	· <u>· </u>		
Boating activity present	Yes			(ii)	-		_	•	
Floodplain stabilizing trees and shrubs present	(Yès)			No		<u> </u>			
Indications of erosion or siltation present	Yes		ļ	(vi)		_[
Function Present	Yes		į	1		· ·			
Degree of Function	High	ı,	fod 		Low				
REC/RECREATION		-							
Criteria		+		<u>.</u>	-	Commer	its		
Wetland is part of recreation area, park, refuge, etc.	Yes	_		Ro	_,				
Fishing is available in or from the wetland	Yes	-		No	. ^	<u> </u>	_	_	
Hunting is permitted in wetland	Yes			(No)	. <u> </u>				
Hiking occurs or has potential to occur in wetland	Yes			(No)					
Wetland is a valuable wildlife habitat	Yes		-	(No)					

Wetland has high visual/aesthetic quality	Yes	(No			<u> </u>	<u> </u>
Boating or canoeing feasible in wetland	Yes	(No)		<u> </u>		
Off-road public parking near wetland available	(Pa)	No	<u> </u>		<u> </u>	
Safety Hazards (if present list them)	Yes	(Ng)			_	
Function Present	Yes	No.		_	<u> </u>	
Degree of Function	High	Mod	Low			

WLH/WILDLIFE HABITAT

Criteria	+	T -	Comments
Wetland degradation by human activity	Little or None	Moderate to	Comments
Wetland fragmentation by development	Little or None	High Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes)	High No	
Buffer width	Good to Excellent	Fair to Poor	Forest
Connectivity with other wetlands	Nes	No	
Size of landscape block in which wetland is located	Large	(Small)	
Wildlife food sources in wetland	Abundant	(Few	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	795	(files for a source
Vegetation density	High	(ow)	Cooree Stangach
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, saping, herb, Leafliffer
Wetland plant species diversity	High Mod Low	- 1	iree, supung, nerb, cear wher
Vernal pool	Yes	6	
Edge diversity (List types)		1 - 1	7 1
Water regime	Wetter	(Dier	Lovest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	EW .	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few)	,
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absend	
Abundance of invasive exotic flora	(None or Low)	High	
Function Present	(Yes)	No	
Degree of Function	High Mod	(in)	•

Criteria		+	· .	Comments
Wetland contains listed species	Yes		(No)	
Wetland provides valuable wildlife habitat	Yes	. <u>-</u>	(No)	
Wetland class diversity	High		(SOW)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		(Low)	Forest
Off-road parking near welland available	Yes	<u>_</u>		
Proximity to schools	Near	· .	Far	Borsdoin college
Wetland contains perennial watercourse	Yes		<u>(N)</u>	
Wetland contains pond/lake	Yes	<u></u>	66)	
Safety hazards (if present list them)		. <u>.</u>		
Site currently used for educational/scientific purposes	Yes		<u>(%)</u>	
Function Present	Yes	_	(%)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes		(M)	<u> </u>
Wetland identified as exemplary natural community	Yes		<u></u> ₩0	<u> </u>
Wetland locally/regionally significant	Yes		<u> </u>	
Function Present	Yes			
Degree of Function	High	Mod	Low_	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	- -	Comments			
Visible from primary viewing locations	Yes	(No)		_		
Views absent trash, debris, sign of degradation	Yes.	No		<u> </u>	<u> </u>	
Low noise level	(P)	No		_	<u> </u>	_
Visual landuse contrast with wetland	(Yes)	No		<u>-</u>		<u> </u>
Function Present	(Yes)	No				
Degree of Function	High (Mod	i) Low		_	<u>_</u>	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes		્રે	
Wetland contains critical habitat for state or federal listed species	Yes		<u>\alpha\</u>	
Area appears in state or national database	Yes	1	(وا	

Function Present	Yes	_	(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

OWNER				- -		, - -					
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
No/No	Mog	No	Mod	No	No	No	Low	No	*)~	6 3.0	T)00
CLIBERANDY	E ELIMOTIONS			<u> </u>				_ 100	_ IV U_	_ <i>NO</i>	

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the welland and associated watercourses to provide recreational opportunities such as hiking, canoeing, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

• • • • • • • • • • • • • • • • • • • •	FA 36 Date: N/A Function		Weather: N/A		Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R		-	verage		
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Au	ditory⊠ S	cat 🛛 Tracks 🖾	Minnow Traps ☐	Electro-shocking
Wetland Types(s) Cowardin/Golet Classificatio	n .				
Class	Subclass			<u> </u>	
POW/ Open water	Vegetated Non-Ve	egetated		_	<u> </u>
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust Narrow-	leaved Broad-lea	ved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved	Floating leaved	<u> </u>	
PFL / Seasonally Flooded Flats	Emergent Shrub	<u> </u>		<u> </u>	
PEM / Wet Meadow	Ungrazed Grazed	<u>.</u>	<u> </u>		<u> </u>
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquatic		<u> </u>
PFO / Wooded Swamp	Deciduous Evergr	een	<u>_</u> ,		<u>-</u>
Bog	Compact shrub Bushy	shrub	Wooded	Emergent	
Water Regimes (Cowardin Modifier):		Seasonali	y saturated (Y) - soils satu ut are unsaturated by end	rated to surface, especially of season in most vears: st	rearly in growing urface water absent
Permanently flooded (H) - water covers land surfa	ace throughout year in all years	except for	ground water seepage and	d overland flow	
Intermittently Exposed (Z) -surface water present of extreme drought.	throughout the year except in yea	rs Temporari season, b	ily flooded (A) - surface wa ut water table usually lies v	ter present for brief period vell below soil surface for r	s during growing nost of the season
Semi-permanently flooded (F) - surface water per most years	sists throughout growing season i	n Intermitter variable p	ntly flooded (J) - substrate periods without detectable s	usually exposed, but surfa easonal periodicity→	ce water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods especially earl n most years	y in Artificially etc	flooded (K) - amount/dura	tion of flooding controlled b	ıy dikes dams, pumps,
Hydrology:					•
Ground water discharges present:	Yes No		Depth to free water:		
If Present: Slope or Depressional			Depth to saturation:		
Surface water depth:	average - maximum	ı -	Signs of altered hydrology	? Yes	No
Hydrology indicators: inundated	Saturated in upper 12" Water ma	erks Drift lines	Sediment deposits Dr	ainage patterns within wet	lands Other
	tophores Polymorphic leave Rhizospheric oxidation S	es Buttressed trees hallow root systems	Hypertrophied len Floating leaves	ticels Stooling Floating stem s	Inflated leaves,
Soil Drainage classes(Well) Moderat	ely Weli Somewhat Poorly	Poorly	Very Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate S	teep	•		
Upland Border:					
·	Gentle Moderate	Steep			
Cover Types: Mature forest	Sapling forest S	hrub thicket	Meadow Mowed lav	vn Farm	
Vegetation Density(S/M/D): (Tees)	M Saplings	Shrubs (flerby im grass t		

Soil: WMB-Windsor loamy sand

	•									
	Leaf litter:	Well develop	ed	М	oderately we	il developed)		Absent		•
•	Cover objects:	Logs		.≥ Bark		Boulders		Rocks		
	Evidence of Erosion:	No Yes		(Explain)	Highly	astered	Showater	detention		
GWR/GR	OUNDWATER RECHARGE	(Excluding co			ind)	w., 0, 4,	310,000,00	actention	pond	•
Criteria		+			- -		Comments		<u> </u>	
Soils		Sand/gravel o	utwash		n, tight fine-g	rained soils,	Comments	<u> </u>		
Wetland a seasonal	associated w/ perennial or watercourse	Yes		shallow No	ledge	, ,			<u> </u>	
Slope		Gentie		Modera	te or Steep	<u> </u>	<u> </u>	<u> </u>		
Function	Present	(Yes) No		-						
Degree o	f Function	High	Mod	<u>-</u>	Low		<u> </u>		_	
O'155							<u></u>	_ _	<u> </u>	_ _
GWD/GR	OUNDWATER DISCHARGE									
Criteria			+			_	Comments			
Soils	_	Hardpa	n, shallow I	edae	-	<u> </u>	Confidents	_	-	
Seeps, sp	rings observed?	Yes			No		<u> </u>	-	<u>.</u>	<u>_</u>
Wetland n	nicrorelief	Well de			Mon/Poo	riy)		_	 	
Wetland o	ontains an outlet, no inlet	Yes			develope	<u>ed / </u>		·		
Function	Present	Yes			(No.)		<u> </u>		<u> </u>	<u> </u>
Degree o	Function	High		Mod	Low	_				
					<u> </u>		<u> </u>	<u>.</u>		<u> </u>
FFA/FLO	ODFLOW ALTERATION (Exc	luding conditi	on: Slope	Wetland)						
Criteria					· -					
	ze in relation to watershed		Large	+			Comments		<u>_</u>	
	impervious surface in wettand		Large		Small Small	_				
Wetland S		- Watershed	Gentie		- -	1 64	<u> </u>	<u>.</u>	<u></u> _	
Wetland ci	naracterized by variable water	level?	Yes Y	''	Moderate	Steep	<u> </u>		<u>_</u>	
	floodplain of adjacent waterc		Yes	<u> </u>	No (No)					
Valuable p	roperties, structures, or resou	rces located in								
or near no	odplain downstream from wet has a history of economic los	and	Yes		No		·	_		
flooding	——————————————————————————————————————	o due to	Yes		No	İ	(Lukuow)	<u></u>		

Unknown rulverted

Yes (Yes) High

developed

Wetland outlet restricted

Wetland microrelief

Wetland vegetation density

No

None/Poorly developed

Function Present	Yes	No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	1	<u> </u>	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%	,	Other	
Direct stormwater discharge via culvert?	No	><	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream-reach	No	Yes	
Dominant bottom substrate	Gravel/eobbles	Sand/siit	Section 1
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	AbsentorFew	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low_	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed-development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	· Yes	No No	Comments
Duration of water retention in wetland	Long	Short	<u> </u>
Evidence of sediment trapping in wetland	Yes	Low	<u> </u>
Vegetation density	(High)	No No	
Wetland edge broad and intermittently aerobic	Yes	Low)	<u> </u>
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	(Yes)	No	<u> </u>
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	(Yes)	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	
Indicators of erosion or high water velocities are present	No)	Yes	
Function Present	Yes	No	
Degree of Function	(High) Mo	- 	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		S
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	Yes	No	-
Wetland is saturated most of the season	(Fes)	No -	Unknown
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	(Diffuse)	Channelized	<u> </u>
Vegetation density	High	Low	-
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	(Yes)	No -	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes			No	_	_		-	_
	Hìgh	· -	Mod	<u> </u>	Low		-		
Degree of Function PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	·_ · ···•	_			<u> </u>	· -			_
Criteria Criteria	-		+			Commen	ıts		
Wildlife food sources in wetland	-	Abunda	 ant		Few	1		_	
Vegetation density		High		_	Low	 -	_	_	
Nutrients and/or organic matter flushed out of wetland into watercourse		Yey			No	<u> </u> -			
Wetland has high degree of plant community structure and species diversity		Yes			(No)		<u> </u>	_	_
Detritus development is present within this wetland	-	(Yes)	_		No	_			-
Flowering plants used by nectar gatherers present		Yes)	_	_	No	<u>-</u>	_		•
Evidence of wildlife use in wetland		res)			No	Santed	sat. e	gg masses	: 00
Fish or shellfish develop/occur in wetland		Yes			No	1 '	now		
Function Present		Yes)	<u></u>		No	007-1	,,,,,		_
Degree of Function	- '	High	(Mo	(p	Low]			
S&SS/SEDIMENT/SHORELINE STABILIZATION	-	_	·	_		1-			
Criteria	_	+			•	Comme	nts		
Topographical gradient in wetland	Yes	<u>.</u>		(No)	•		-		
Potential sediment sources upstream or upslope	(Yes)			No		<u> </u>		<u> </u>	
Wetland border >10' adjacent to pond or water	Yes	. <u> </u>		(No)					
Distinct shoreline or bank evident between wetland and water	(No)			Yes			_ .		_
Open water fetch present	Yes		_	<u>₩</u>					. <u> </u>
Boating activity present	Yes	_		(No)		 - -		. <u>-</u>	
Floodplain stabilizing trees and shrubs present	Yes	_		No)_	-	1			
Indications of erosion or siltation present	Yes			No					
Function Present	(Yes)		ļ.	No	-				
Degree of Function	High	<u></u> -	Mod		LOW)	<u> </u>			
REC/RECREATION				_		- 1			··
Criteria		+				Comme	nts		
Wetland is part of recreation area, park, refuge, etc.	Yes			388 888		<u> </u>			
Fishing is available in or from the wetland	Yes			(6)					
	Yes			(No)					
Hunting is permitted in wetland	(Yes)					_		hool pla	

- ··· - · ---

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canoeing feasible in wetland	Yes	(No)	
Off-road public parking near wetland available	Yes	No	
Safety Hazards (if present list them)	Yes	No	•
Function Present	Yes	No No	
Degree of Function	High Mod		

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Mederate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)	No High	Culverted stormwater system Lown
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	Large	Small)	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow CW=Open water)	High	(A)	WM
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Herb.
Wetland plant species diversity	High (Mod) Low	-	112.0.
Vernal pool	(Yes)	No	Le une de la const
Edge diversity (List types)		<u> </u>	ii unatural
Water regime	Wetter	Drier	Lawn, Forest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Ew)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Eew -	· -
Flat rocks in/near watercourse (stream salamanders)	Present	Absept	
Sphagnum nummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtie nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High Mod	(Low)	

Criteria	1	· _		Comments
Wetland contains listed species	Yes		(No)	·
Wetland provides valuable wildlife habitat	Yes		(No)	
Wetland class diversity	High		(Cow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/sbrub thicket A=Agriculture)	High	••	L.W.	Forest lawn
Off-road parking near wetland available	(Yes)		No	<u>'</u>
Proximity to schools	(Near)	-	Far	Bourdoin/School/playground
Wetland contains perennial watercourse	Yes		N6)	
Wetland contains pond/lake	Yes		No	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		RO	
Function Present	Yes		\ <u>\</u>	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+ ,	-	Comments .	
Wetland contains listed species	Yes				
Wetland identified as exemplary natural community	Yes	•	(I)		
Wetland locally/regionally significant	Yes		M		
Function Present	Yes		(6)		
Degree of Function	High	Mod	Low		

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	(Yee)		No.	
Views absent trash, debris, sign of degradation	Yes		(No)	·
Low noise level	Yes		(No)	
Visual landuse contrast with wetland	AB)		No	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	
Wetland contains critical habitat for state or federal listed species	Yes	N	
Area appears in state or national database	Yes	(No)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&Ś	ESH
(ow/No	High	No	Hrgh	Mod	(ous.	Cow	Low	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

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Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/A Below av	rerage ☐ Average ☐ A	bove Average 🗌	tart: N/A Time Stop: N/A Don't Know TBD Traps Electro-shocking
Class	Subclass	<u>_</u>		<u> </u>
POW/ Open water	Vegetated Non-Vegetate	ed		<u> </u>
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-	shrub Robust	Narrow-leaved	Broad-leaved .
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved Floati	ng leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub			<u> </u>
PEM / Wet Meadow	Ungrazed Grazed		<u> </u>	·
PSS / Shrub Swamp	Sapling Bushy	Compact Aqua	lic	
PFO / Wooded Swamp	Deciduous Evergreen			
Bog	Compact shrub Bushy shrub	Wooded	Emergent	the only in growing
Water Regimes (Cowardin Modifier):		season, but are unsaturate	ed by end of season in	ace, especially early in growing most years; surface water absent
Permanently flooded (H) - water covers land surfa		except for ground water se	epage and overland fl	low
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	Temporarily flooded (A) - s season, but water table us	surface water present t sually lies well below so	for brief periods during growing oil surface for most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout growing season in	Intermittently flooded (J) - variable periods without d	substrate usually expo etectable seasonal per	nsed, but surface water is present for iodicity~
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods especially early in n most years	Artificially flooded (K) - an	ount/duration of floodi	ng controlled by dikes dams, pumps,
Hydrology:				
Ground water discharges present:	Yes No	Depth to free wa	ater:	
If Present: Slope or Depressional		Depth to satura	tion:	
Surface water depth:	average - maximum -	Signs of altered	hydrology?	Yes No
Hydrology indicators: Inundated S	Saturated in upper 12 Water marks	Drift lines Sediment depos	ts Draihage patte	erns within wetlands Other
	tophores Polymorphic leaves Rhizospheric oxidation Shallow	Buttressed trees Hypertre root systems Floating	ophied lenticels leaves Floatir	Stooling Inflated leaves, ng stems
Soil Drainage classes: Well Moderate	ely Weil Somewhat Poorly	Poorly Very Po	orly Mappe	ed Hydric Soil
Slope: Mearly level Gentle	Moderate Steep			
Upland Border:				
Slope: Nearly level (Gentle Moderate	Steep		
Cover Types: Metere forest	Sapling forest Shrub t	hicket Meadow	Mowed lawn	Farm
Vegetation Density(S/M/D): Vees	M saplings M	Shrubs Herbs	Grass	

Soil: Sd-Saugatuck loamy sand-hydric

Leaf litter:	Well developed	Mode	rately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)		110010

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+			Comments
Soils	Sand/gravel outwas	h /	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes		No.	
Slope	Gentle	_ T	Moderate or Steep	
Function Present	Yes (No)			
Degree of Function	High	Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Weil developed	Non/Poorly)	
Wetland contains an outlet, no inlet	(Yes)	developed	
Function Present	(Yes)	No	
Degree of Function	High Mod	Low	_

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Small		
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	(Yes)	No		
Wetland in floodplain of adjacent watercourse	Yes	(No)		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(Yes)	No		
Watershed has a history of economic loss due to flooding	Yes	No		Unknown
Wetland outlet restricted	Yes	(Nô)		
Wetland vegetation density	High	Low		
Wetland microrelief	Well developed	None/Poorly developed	·	<u> </u>

Function Present	(P)	No		 		
Degree of Function	High)	Mod	Low	 		

F&SH/FINFISH HABITAT: POND &LAKE([Excluding condition: Not associated with pond/lake)

Criteria	-	+		Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	Forest, Shrub, Meadow		
Shallow littoral zone with emergent vegetation present?	Yes		No	and the state of t
Waterbody at least-10' deep	Yes		No	A STATE OF THE PARTY OF THE PAR
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No	No		
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No .		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS Excluding condition: Not associated with perennial stream)

Criteria	. +	· ·	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas-present	Yes	No .	
Barriers to anadromous fish (dams/high culverts)-present in stream reach	No	Yes	The same of the sa
Dominant bottom substrate	-Gravel/cobbles	Sand/silt	The second second second
Substrate embeddedness by sand & silt	Low	High	And the second s
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	-l-ow-	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	_Mostly-intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes T	No	
Duration of water retention in wetland	(Long)	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	(High)	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	(10)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	(es)	No	
Wetland basin topographic gradient	(a)	High	
Fine grained mineral or organic soils present	(Yes)	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	No waterourse
Indicators of erosion or high water velocities are present	6	Yes	11- Order Control
Function Present	Gi -	No	
Degree of Function	(High) Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	6	
Wetland is saturated most of the season	(es)	No	
Emergent vegetation and/or dense woody stems are dominant	(res)	No	-
Water flow through wetland	(Diffuse)	Channelized	
Vegetation density	(Flight	Low	
Potential for sediment trapping exists	(es)	No —	-
Deep or open water habitat is present	Yes	100	-
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(a)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	· · ·		No	•	<u> </u>
Degree of Function	High		Mod)	Low	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)						·
Criteria			+			Comments
Wildlife food sources in wetland		Abundar	nt		(Few)	
Vegetation density		(High			Low	
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes			No	
Wetland has high degree of plant community structure and species diversity		Yes			NO	
Detritus development is present within this wetland	_	(Yes)			No	
Flowering plants used by nectar gatherers present		(Ves)			No	
Evidence of wildlife use in wetland		(Yes)			No	Vernal pool
Fish or sheilfish develop/occur in wetland		Yes			(NO)	•
Function Present		(es)			No	
Degree of Function		High	gh (Mo		Low	
S&SS/SEDIMENT/SHORELINE STABILIZATION			_			
Criteria		+			-	Comments
Topographical gradient in wetland	(es)			No		slight
Potential sediment sources upstream or upslope	(Yes)			No		
Wetland border >10' adjacent to pond or water	Yes			(b)		
Distinct shoreline or bank evident between wetland and water	No			(es)		
Open water fetch present	Yes			<u>N</u>		
Boating activity present	Yes		·	<u> </u>		
Floodplain stabilizing trees and shrubs present	Yes		_	(60)		·
Indications of erosion or siltation present	Yes			No		
Function Present	Yes			No.		
Degree of Function	High		Mod		Low	
REC/RECREATION -						·
Criteria		+			-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes			2		
Fishing is available in or from the wetland	Yes	•		3		
Hunting is permitted in wetland	Yes			(No)		· · · · · · · · · · · · · · · · · · ·
Hiking occurs or has potential to occur in wetland	Yes			2 2		
Wetland is a valuable wildlife habitat	Yes			(No)		

Wetland has high visual/aesthetic quality	Yes			
Boating or canoeing feasible in wetland	Yes	No		
Off-road public parking near wetland available	Yes	The Mo)	
Safety Hazards (if present list them)	Yes	No		
Function Present	Yes	No)	
Degree of Function	High	Mod	Low	

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(a)	No	Forest
Buffer width	Good to Excellent	(Fair to Poor)	
Connectivity with other wetlands	(es)	No	· · · · · · · · · · · · · · · · · · ·
Size of landscape block in which wetland is located	Large	Small)	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	8	WM .
Vegetation density	(High)	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	_		Herb, leaf lifter
Wetland plant species diversity	High Mod (Low)		Const Ct
Vernal pool	(Yes)	No -	
Edge diversity (List types)		_	Forest
Water regime	Wetter	Drier	P 0 7 0 3 1
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Egw)	
Flat rocks in/near watercourse (stream salamanders)	Present	A(6Sent)	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Pes)	No _	
Degree of Function	High Mod	(6w)	

Criteria		+		Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	(es)		No	Low
Wetland class diversity	High	-	(COW)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		16W)	Forest
Off-road parking near wetland available	Yes	•		
Proximity to schools	Near		Far	Bowdoin College
Wetland contains perennial watercourse	Yes		160	<u> </u>
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(B)	
Function Present	Yes		(NO)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(P)	
Wetland identified as exemplary natural community	Yes		(OP)	
Wetland locally/regionally significant	Yes		(No)	
Function Present	Yes		No)	
Degree of Function	High	Mod -	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	[·	+	-	Comments
Visible from primary viewing locations	- Yes		(0)	
Views absent trash, debris, sign of degradation	Yes		(No)	
Low noise level	Yes			
Visual landuse contrast with wetland	Yes			
Function Present	Yes	·	(M)	
Degree of Function	High	Mod	Low	·

ESH/ENDANGERED SPECIES HABITAT

Criteria	. +]	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(P)	
Wetland contains critical habitat for state or federal listed species	Yes	(60)	
Area appears in state or national database	Yes	(No)	

Function Present	Yes		(v)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X-present, P-Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Wo/High	High	No _	High	mod	Mod	No	Low	N'o	No_	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a welland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation Dip netting	_	age 🗌 💢	Ü	Above Average	Time Start: N/A ☐ Don't Know ☐ Minnow Traps ☐	Time Stop: N/A TBD ☐ Electro-shocking ☐
Class	Subclass_					<u></u>	
POW/ Open water	Vegetated	Non-Vegetated	_		_	<u> </u>	
PEM/PSS Deep Marsh	Dead Woody S	Shrub Sub-sh	rub	Robust	Narrow-leave	ed Broad-leav	ed
PAB/ Shallow Marsh	Robust N	larrow-leaved	Broad-leaved	d Floa	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub		_	<u> </u>		<u> </u>
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling E	Bushy	Compact	Aqu	latic		
PFO / Wooded Swamp	Deciduous	Evergreen	Mixed	<u></u> -			
Bog	Compact shrub	Bushy shrub		Wooded		ergent I to surface, especially (
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surfal Intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water permost years	throughout the year	except in years	Tempora season,	or ground water urily flooded (A) but water table entily flooded (J)	seepage and ove - surface water p usually lies well t	resent for brief periods below soil surface for m illy exposed, but surface	during growing ost of the season
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods e n most years	especially early in	Artificially etc	y flooded (K) - a	mount/duration o	of flooding controlled by	dikes dams, pumps,
Hydrology:							
Ground water discharges present:	res No			Depth to free			
If Present: Slope or Depressional		•		Depth to satur			
	verage -	maximum -		Signs of altere	•	Yes	No
, ,,	Saturated in upper 1	Water marks Dr	ift lines	Sediment depo	•	ge patterns within wetta	
Plant Adaptations to Hydrology: Pneumas stems, or roots Adventitious roots	tophores Poly Rhizaspheric oxidati		uttressed tree not systems		trophied lenticels ig leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate		newhat Poorly	Poorly	Very P	corly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:							
	Gentle	Moderate	Steep				
Cover Types: Wature forest	Sapling fore	est Shrub thic	ket	Meadow	Mowed lawn	Farm	
	D é	olings m S	rubs) M	Herbs	Grass		
Son Bul - Buxton Si	lt I oam						

Leaf	litter:

Well developed

Moderately well developed

Absent

Cover objects:

(ogs)

Bark

Boulders

Rocks

Evidence of Erosion:

(Ø∑)

Yes (E

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Crîteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	-
Wetland associated w/ perennial or seasonal watercourse	Yes ·	No	
Slope	Gentle	Moderate or Steep	
Function Present	(res) No		
Degree of Function	High Mo	d) Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	Weil developed	(Non/Poorly developed)	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	(Small)	
Wetland Slope .	Gentle)	Moderate Stee	p
Wetland characterized by variable water level?	Gentle Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	(NO)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	®	
Watershed has a history of economic loss due to flooding	Yes	No	unknown
Wetland outlet restricted	(Yes)	No	No outlet-isolated
Wetland vegetation density	High	(Low)	100 Sailtei is a control
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		<u>-</u>	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	- Andrews - Andr
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low .	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal bleoms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	- Andrews - Andr
Barriers to anadromous fish (dams/high-culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	The state of the s
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, bediders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good -	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	The second secon
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	(Long)	Short	
Evidence of sediment trapping in wetland	Yes	(Cow)	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	(No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	(Low)	High	<u> </u>
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	No watercourse
Indicators of erosion or high water velocities are present	(No)	Yes	No Cooper cours &
Function Present	(Yes)	No	
Degree of Function		Mod (Low)	- No in puts

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+ .	-	Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	(N)	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(COW)	-
Potential for sediment trapping exists	Yes	(No) -	
Deep or open water habitat is present	Yes		
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(COV)	High	
Wetland microrelief	Well developed	None, poorly developed	-

Function Present	(Yes)	No	·	0 lo 1 - 1 (m	
Degree of Function	High	- Mod	(Lo)v	No inputs	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria		÷	-	Comments
Wildlife food sources in wetland	Abundant		Few	
Vegetation density	High		Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No No	
Wetland has high degree of plant community structure and species diversity	Yes	The state of the s	No	
Detritus development is present within this wetland	Yes		No	
Flowering plants used by nectar gatherers present	Yes		No	
Evidence of wildlife use in wetland	Yes		No	
Fish or shellfish develop/occur-in wetland	Yes		No	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		-	Comments
Topographical gradient in wetland	Yes	No		
Potential sediment sources upstream or upslope	Yes	No		
Wetland border >10' adjacent to pond or water	Yes	Yes No		
Distinct shoreline or bank evident between wetland and water	No	Yes	ì	
Open water fetch present	Yes	No		
Boating activity present	Yes	No		
Floodplain stabilizing trees and shrubs present	Yes	No		-
Indications of erosion or siltation present	Yes	No		
Function Present	Yes	(No)	Isolated wetland
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	<u></u>	
Fishing is available in or from the wetland	Yes	100	
Hunting is permitted in wetland	Yes	®	
Hiking occurs or has potential to occur in wetland	Yes	No	
Wetland is a valuable wildlife habitat	(res)	No	

Wetland has high visual/aesthetic quality	Yes	No	
Boating or canoeing feasible in wetland	Yes	No	
Off-road public parking near wetland available	Yes	<u></u>	
Safety Hazards (if present list them)	Yes		
Function Present	Yes	/No	Potential for recreation
Degree of Function	High	Mod Low	Lorge area undeveloped
	 .,	· · · ·	

WLH/WILDLIFE HABITAT

Criteria	4		Comments
Wetland degradation by human activity	Little or None	Moderate to High	-
Wetland fragmentation by development	Little or None .	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	(M6)	isolated :
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(OW)	No open water
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High .	(OW)	Wooded swamp
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			T, S, SH, H, U
Wetland plant species diversity	High Mod (Low)		
Vernal pool	Yes	(No)	
Edge diversity (List types)			Tovest
Water regime	Wetter	(Drier)	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	(Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low)	High	
Function Present	(res)	No	
Degree of Function	High (Mod)	Low	·

Criteria		+	-	Comments
Wetland contains listed species	Yes		60	
Wetland provides valuable wildlife habitat	Yes		No	Moderate
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Cow	Forest
Off-road parking near wetland available	Yes	٠.	6	
Proximity to schools	Near		Far	Bowdoin college
Wetland contains perennial watercourse	Yes		(No)	J
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(b)	
Wetland identified as exemplary natural community	Yes		No.	
Wetland locally/regionally significant	Yes .		No	
Function Present	Yes		No.	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments
Visible from primary viewing locations	Yes	₹60	
Views absent trash, debris, sign of degradation	(Yes)	No	
Low noise level	Yes	No	
Visual landuse contrast with wetland	(ES)	No	·
Function Present	(Yes)	No	·
Degree of Function	High (Mod)	Low	· ·

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	<u>@</u>	·
Wetland contains critical habitat for state or federal listed species	Yes	₩)	
Area appears in state or national database	Yes	No.	"

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&\$	ESH
mod/No	NO	No	Low	Low	No	Mos	mos	Low	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 4 Date: N/A Functional Unit:	Weather: N/A Time Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	Recent Precipitation: N/A Below average	Average 🗌 Above Average 🔲 Don't Know 🗌 TBD 🗍
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory ⊠	Scat 🛛 Tracks 🖾 Minnow Traps 🔲 Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	on ·	
Class	Subclass -	
POW/ Open water	Vegetated Non-Vegetated	
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leaved Broad-leaved
PAB/ Shailow Marsh	Robust Narrow-leaved Broad-leaved	d Floating leaved
PFL / Seasonally Flooded Flats	Emergent Shrub	•
PEM / Wet Meadow	Ungrazed Grazed	
(PSS7 Shrub Swamp)	Sapling Bushy Compact	Aquatic
PFO / Wooded Swamp	Deciduous Evergreen	
Bog	Compact shrub Bushy shrub	Wooded Emergent
Water Regimes (Cowardin Modifier):		lly saturated (Y) - soils saturated to surface, especially early in growing
Permanently flooded (H) - water covers land surfa		but are unsaturated by end of season in most years; surface water absent or ground water seepage and overland flow
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years Temporal	rily flooded (A) - surface water present for brief periods during growing but water table usually lies well below soil surface for most of the season
Semi-permanently flooded (F) - surface water persmost years	sists throughout growing season in Intermitte	ently flooded (J) - substrate usually exposed, but surface water is present fo periods without detectable seasonal periodicity~
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods especially early in Artificially	y flooded (K) - amount/duration of flooding controlled by dikes dams, pumps
Hydrology:		
Ground water discharges present:	Yes No	Depth to free water:
If Present: Slope or Depressional		Depth to saturation:
Surface water depth:	average - maximum -	Signs of altered hydrology? Yes No
Hydrology indicators: (Inundated S	Saturated in upper 12" Water marks Drift lines	Sediment deposits Drainage patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	tophores Polymorphic leaves Buttressed trees Rhizospheric oxidation Shallow root systems	s Hypertrophied lenticels Stooling Inflated leaves, Floating leaves Floating stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly Poorly	Very Poorly Mapped Hydric Soil
Slope: (Vearly level) Gentle	Moderate Steep	
Upland Border:		
Slope: Nearly level (Gentle Moderate Steep	
Cover Types: Mature forest	Sapling forest Shrub thicket	Meadow Mowed lawn Farm
Vegetation Density(S/M/D): Trees	D Saplings // Shrubs	Herbs Grass
Soil , BuB - Buxton sil	+ loan	

Leaf litter:

Well developed

Moderately well developed

Absent

Cover objects:

logs

Bark

Boulders

Rocks

Evidence of Erosion:

(No)

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soits	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(ND)	Isolated wetland
Slope -	Gentie	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High (Mo	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow	ledge	
Seeps, springs observed?	Yes	No)	
Wetland microrelief	(Well developed)	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	Isolated wetland
Function Present	Yes	Nò	
Degree of Function	High N	Mod Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	_		Comments
Wetland size in relation to watershed	Large	(Small)		•
Amount of impervious surface in wetland watershed	Large	(Small)		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	(Tes)	No	•	
Wetland in floodplain of adjacent watercourse	Yes	(ND)	,	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	6		·
Watershed has a history of economic loss due to flooding	Yes	No	•	unknown
Wetland outlet restricted	Yes	No		No outlet
Wetland vegetation density	High	Low		
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	(NO)		surface	-
Degree of Function	High	Mod	Low	No hydrologic connections	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition; Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%	•	Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	_No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	ļ	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	·
Gravel spawning areas present	Yes	No	and the same of th
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	The state of the s
Substrate embeddedness by sand & silt	Low	High	
instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or FeW	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	·
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa		Mostly intoler	ant	Mostly tolerant	
Function Present	The same of the sa	Yes		No	
Degree of Function		High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	(Ng)	·
Duration of water retention in wetland	(Long)	Short	
Evidence of sediment trapping in wetland	Yes	10M)	-
Vegetation density	High)	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	W	Yes	
Water flow through wetland	Diffuse	Channelized	-
Ponded water present	Yes	No	-
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	<u> </u>
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	No watercourse
Indicators of erosion or high water velocities are present	6	Yes	110 1001.0. 00 00 00
Function Present -	(es)	No	
Degree of Function	High Mod	d (Low)	No inputs

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	(Small)	-
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	(Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	(es)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	(N)	Some ponded water
Soil type	Organic/high clay content	Sand/grave!	1 0,000,00
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)	No	•	No inputs	\Box
Degree of Function	High	Mod		,	
PERPARAMENTAL EXPORT (F. J. F. O. P. C. N. O. H. A.	'	'	<u> </u>		

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria		+	-	Comments
Wildlife food sources in wetland	Abundan	t	Few	
Vegetation density	High		Low	A STATE OF THE PARTY OF THE PAR
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No	
Wetland has high degree of plant community structure and species diversity	Yes	The same of the sa	NO	
Detritus development is present within this wetland	Yes	- Annual Control	No	* STATE OF THE PARTY OF THE PAR
Flowering plants used by nectar gatherers present	Yes		No	The state of the s
Evidence of wildlife use in wetland	Yes		No	
Fish or shellfish develop/occur in wetland	Yes		No	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	-	.		-	Comments				
Topographical gradient in welland	Yes	Yes		s		•			
Potential sediment sources upstream or upslope	Yes		No						
Wetland border >10' adjacent to pond or water	Yes	Yes 1		Yes N		s No			
Distinct shoreline or bank evident between wetland and water	No	No		No '		No Yes			
Open water fetch present	Yes	No							
Boating activity present	Yes		No						
Floodplain stabilizing trees and shrubs present	Yes		No						
Indications of erosion or siltation present	Yes		No						
Function Present	Yes		(P)	-	Isolated wetland				
Degree of Function	High	.Mod		Low	Isolated wetland no surface hydrologic connections				

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	®	
Fishing is available in or from the wetland	Yes	100	
Hunting is permitted in wetland	Yes	6	
Hiking occurs or has potential to occur in wetland	(((((((((((((No	
Wetland is a valuable wildlife habitat	6	No	Sia. Vernal fool #36

Wetland has high visual/aesthetic quality	Yes	No	
Boating or canceing feasible in wetland	Yes	(No)	
Off-road public parking near wetland available	Yes	(No)	
Safety Hazards (if present list them)	Yes	No.	
Function Present	(Yes)	No	No current access
Degree of Function	High (M	Low	The Court of the C

WLH/WILDLIFE HABITAT

	γ <u>·</u>		·
Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to High	
Wetland fragmentation by development	Liftle or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(S)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	6	Isolated
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	` - -	Shrub swamp
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Shrub, Herb, Leaf Litter
Wetland plant species diversity	High Mod Low		
Vernal pool	(Yês)	No	SVP #36
Edge diversity (List types)			Forest
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	None or Low	High	
Function Present	765	No	
Degree of Function	High Mod	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	®	
Wetland provides valuable wildlife habitat	X (S)	No	
Wetland class diversity	High	(Low)	Shrib Swallp
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	Yes	(G)	
Proximity to schools	(Near)	Far	Boudein College
Wetland contains perennial watercourse	Yes	(No)	U .
Wetland contains pond/lake	Yes	(NB)	
Safety hazards (if present list them)		1	
Site currently used for educational/scientific purposes	Yes	(Ng)	,
Function Present	(Fes)	No	Potential exists.
Degree of Function	High Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		t-	_	Comments
Wetland contains listed species	Yes		(No	
Wetland identified as exemplary natural community	Yes		<u>@</u>	
Wetland locally/regionally significant	Yes		(No)	
Function Present	Yes		<u>(6</u>)	
Degree of Function	High	Mod	Low] .

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments
Visible from primary viewing locations	Yes .	No	
Views absent trash, debris, sign of degradation	(Vigilary)	No	·
Low noise level	(6)	No	
Visual landuse contrast with wetland	(es)	No	,
Function Present	(res)	No	
Degree of Function	High Mog	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	(No	·
Area appears in state or national database	Yes	№	·

Function Present	Yes	<u> </u>	(Ño)
Degree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	No	No	low	Low	No	Mod	High	Mod	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 42 Date: N/A Functio	nal Unit: Wea	ather: N/A Time \$	Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation: N/A Bel	ow average 🗌 Average 🗌	Above Average 🗌	Don't Know ☐ TBD ☐
Wildlife Investigation Method: Cover search 🗵	Dip netting ☐ Aud	itory 🛛 Scat 🖾	Tracks 🛛 · Minno	w Traps Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n			
Class	Subclass	•		
POW/ Open water	Vegetated Non-Ve	petated		
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub Robust	Narrow-leaved	Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved I	Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub			
PEM / Wet Meadow	Ungrazed Grazed			. .
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquatic	
PFO / Wooded Swamp	Deciduous Evergre	en	<u> </u>	
Bog	Compact shrub Bushy s	hrub Wooded	Emergent	
Water Regimes (Cowardin Modifier):				face, especially early in growing
Permanently flooded (H) - water covers land surfa	ce throughout year in all years		ter seepage and overland t	n most years; surface water absent flow
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	Comporating recoded (for brief periods during growing oil surface for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout growing season in		(J) - substrate usually expo out detectable seasonal per	osed, but surface water is present for riodicity~
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		n Artificially flooded (K)	- amount/duration of flood	ing controlled by dikes dams, pumps,
Hydrology:				
Ground water discharges present: Y	es No	Depth to fro	ee water:	
If Present: Slope or Depressional		Depth to sa	aturation:	·
Surface water depth:	verage - maximum -	Signs of all	tered hydrology?	Yes No
Hydrology indicators: Inundated	Saturated in upper 12 Water mark	s Drift lines Sediment de	eposits Drainage patte	erns within wetlands Other
Plant Adaptations to Hydrology: Pneumal stems, or roots Adventitious roots F			pertrophied lenticels ating leaves Floatir	Stooling Inflated leaves, ng stems
Soil Drainage classes: Well (Moderate	ely Well) Somewhat Poorly	Poorly Ver	y Poorly Mappe	ed Hydric Soil
Slope: (Nearly level Gentle	Moderate Ste	ер		•
Upland Border:		·	•	
Slope: Nearly level	Gentle Moderate	Steep		
Cover Types: Mature forest	Sapling forest Shi	ub thicket Meadow	Mowed lawn	Farm
Vegetation Density(S/M/D): (Trees	D Saplings 5	Shrubs Herbs	Grass	,
Soil: BuB - Buston Sil	floam			

Leaf litter:

(Well developed)

Moderately well developed

Absent

Cover objects;

(logs)

Bark

Boulders

Rocks

Evidence of Erosion:

(No)

Yes[.]

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(N)	Isolated wetland
Slope	Gentle	Moderate or Steep	
Function Present	(Yes) No	<u> </u>	
Degree of Function	High Mor	Łow	

GWD/GROUNDWATER DISCHARGE

Criteria	+			Comments	<u>. </u>
Soits	Hardpan, shallow	ledge			· · · · · · · · · · · · · · · · · · ·
Seeps, springs observed?	Yes	.	(No)		
Wetland microrelief	Well developed	i	Non/Poorly developed		
Wetland contains an outlet, no inlet	Yes		No)	No inlet or outlet	
Function Present	Yes	· · · · · ·	6	The state of the s	· · · · · · · · · · · · · · · · · · ·
Degree of Function	High N	Mod	Low		

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	\$mail)	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Sente	Moderate Steep	
Wetland characterized by variable water level?	Yes	(No)	
Wetland in floodplain of adjacent watercourse	Yes	(NB)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	6	
Watershed has a history of economic loss due to flooding	Yes	No	Unkhowsh
Wetland outlet restricted	(Yes)	No	No vutlet
Wetland vegetation density	High	(Low)	1.10 ()0(1.10)
Wetland microrelief	Weil developed	None/Poorly developed	

Function Present	Yes	(No)		No surface by Irologic connection		
Degree of Function	High	Mod	Low	· · · · · ·		

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		_	Comments
Dominant land-use adjacent to Waterbody	Forest, Shruf	b, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No .	AND THE PARTY OF T
Waterbody at least 10' deep	Yes		No	- Partin Title Britanis Andrews Britanis
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No	A STATE OF THE PARTY OF THE PAR	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree-of-Function	High ·	Mod	Low	-

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by-riparian trees and/or shrubs	Yes	No	The state of the s
Gravel spawning areas present	Yes	No	- Secretary Control of the Control o
Barriers to anadromous fish (dams/high culverts) present in stream reach.	No	Yes	E THE PROPERTY OF THE PARTY OF
Dominant bottom substrate	Gravel/cobbles	Sand/silt	<u> </u>
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	The state of the s
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	·
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	 Mostly intolera	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	 High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN-RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	WE)	
Duration of water retention in wetland	Long	(Short	
Evidence of sediment trapping in wetland	Yes	(COW)	
Vegetation density	High	No)	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No)	Yes	· · · · · · · · · · · · · · · · · · ·
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(Ng)	
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	Yes	Nó	
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	No watercourse
Indicators of erosion or high water velocities are present	NO	Yes	100 0001 - 20 007 3 6
Function Present	Yes	No	
Degree of Function	High	Mod Low	No inputs low veg. denity

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	•	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	No.	
Wetland is saturated most of the season	Yes	<u></u>	
Emergent vegetation and/or dense woody stems are dominant	Yes	N67	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No	-
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Loy	High	<u> </u>
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	No		
Degree of Function	High	Mod	Low	·

PE/PRODUCTION EXPORT (Excluding Condition: No Qutlet)

Criteria		+		Comments
Wildlife food sources in wetland	Abundant		Few	- The state of the
Vegetation density	High		Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No	
Wettand has high degree of plant community structure and species diversity	Yes		No	
Detritus development is present within this wetland	Yes		No	
Flowering plants used by nectar gatherers present	Yes		No.	
Evidence of wildlife use in wetland	Yes	<u> </u>	No.	
Fish or shellfish develop/occur in wetland	Yes	Yes		
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	·	-	Comments
Topographical gradient in wetland	Yes		No	
Potential sediment sources upstream or upslope	Yes		No	
Wetland border >10' adjacent to pond or water	Yes		No	
Distinct shoreline or bank evident between wetland and water	No		Yes	
Open water fetch present	Yes		No	
Boating activity present	Yes		No	·
Floodplain stabilizing trees and shrubs present	Yes		No	
Indications of erosion or siltation present	Yes		No	
Function Present	Yes		No)	Isolated wetland
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	+		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	<u>66</u>		· .
Fishing is available in or from the wetland	Yes			
Hunting is permitted in wetland	Yes	(Nb)		
Hiking occurs or has potential to occur in wetland	(Yes)	No		<u></u>
Wetland is a valuable wildlife habitat	Yes	(No)		

Wetland has high visual/aesthetic quality	(Yes)	No .	
Boating or canoeing feasible in wetland	Yes	(No)	
Off-road public parking near wetland available	Yes	(No)	
Safety Hazards (if present list them)	Yes		
Function Present	(Yes)	No	Potential Carleiting an
Degree of Function	High	Mod (ow)	Potential for hiking, no access currently

WLH/WILDLIFE HABITAT

Criteria	+	-	
Mottand degradation by human and the		Moderate to	Comments
Wetland degradation by human activity	Little or None	High	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	6	No	Forest
Buffer width	Good to Excellen	Fair to Poor	
Connectivity with other wetlands	Yes	(6)	Tsolated
Size of landscape block in which wetland is located	(large)	Small	1,30 (0.1)
Wildlife food sources in wetland	Abundant	(W)	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Wooded swamp
Vegetation density	High	(Lów)	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, sopling, leaf lifer
Wetland plant species diversity	High Mod (ow)		par over
Vernal pool	Yes	(vo)	
Edge diversity (List types)	_		Torest
Water regime	Wetter	(Drier	1-8703
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent >	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	

Criteria	+	-	-	Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	Yes	1	No	
Wetland class diversity	High	(t	(ow	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	R	Eby E	Forest
Off-road parking near wetland available	Yes	1	6	
Proximity to schools	Near	F	- Far	Bowdoin college
Wetland contains perennial watercourse	Yes	le	®	3
Wetland contains pond/lake	Yes		Nō)	
Safety hazards (if present list them)	·	1	_	
Site currently used for educational/scientific purposes	Yes	1 (6	
Function Present	(Yes)	1	No	Potential.
Degree of Function	High	Mod	Low)	7 .04.5801000

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		©	·
Wetland identified as exemplary natural community	Yes		6	
Wetland locally/regionally significant	Yes		(M)	
Function Present	Yes		(Ng)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	-	f	-	Comments
Visible from primary viewing locations	Yes		®	· ·
Views absent trash, debris, sign of degradation	(V)		No	
Low noise level	(P)		No	
Visual landuse contrast with wetland	Yes		(63)	
Function Present	(Ŷes)		No	
Degree of Function	High	Mod	(Low)	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	®	
Wetland contains critical habitat for state or federal listed species	Yes .	(No)	,
Area appears in state or national database	Yes	(No)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
W 09/40	No	No	No	No	No	1-0W	mod	Low	No	No	20

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the welland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbedies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 43 Date: N/A Functions	al Uņit: V	Veather: N/A	Time Start: N/A Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios R	Recent Precipitation: N/A Below	v average 🗌 Average	☐ Above Average	☐ Don't Know ☐ TBD ☐
Wildlife Investigation Method: Cover search $oxtimes$	Dip netting ☐ Audit	ory⊠ Scat⊠	Tracks 🛛	Minnow Traps Electro-shocking
Wetland Types(s) Cowardin/Golet Classificatio	en .			
Class	Subclass			
POW/ Open water	Vegetated Non-Vege	etated	<u>-</u>	
PEM/PSS Deep Marsh	Dead Woody Shrub S	ub-shrub Robu	st Narrow-leav	ved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved .	Floating leaved	·
PFL / Seasonally Flooded Flats	Emergent Shrub			
PEM / Wet Meadow	Ungrazed Grazed			
PSS / Shrub Swamp	Sapling (Bushy)	Compact	Aquatic	
PFO / Wooded Swamp	Deciduous Evergreer	1		•
Bog	Compact shrub Bushy shr			ergent
Water Regimes (Cowardin Modifier):		Śèasonally satura	ted (Y) - soils saturated	Tto stirface, especially early in growing eason in most years; surface water absent
Permanently flooded (H) - water covers land surfa	nce throughout year in all years		water seepage and ov	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years			present for brief periods during growing below soil surface for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout growing season in		ied (J) - substrate usua ithout detectable seas	ally exposed, but surface water is present fo onal periodicity—
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		Artificially flooded etc	(K) - amount/duration (of flooding controlled by dikes dams, pumps
Hydrology:				
Ground water discharges present: Y	res No	Depth to	o free water:	
If Present: Slope or Depressional		. Depth to	saturation:	
Surface water depth:	everage - maximum -	Signs o	altered hydrology?	Yes No
Hydrology indicators: Inundated S	Saturated in upper 12" Water marks	Drift lines Sedimen	t deposits Draina	ge patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumatistems, or roots Adventitious roots F			Hypertrophied lenticels Floating leaves	s Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly	Poorly	/ery Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle	Moderate Stee	p		
Upland Border:				
Slope: Nearly level .	Gentle Moderate	Steep		•
Cover Types: Mature forest	Sapling forest Shru	b thicket Meadow	Mowed lawn	Farm
Vegetation Density(S/M/D): (Trees	Saplings	Shrubs Herbs	Grass	

Soil: Bub · Buxton Silf loam

Leaf litter:	(Well developed)	Mod	lerately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks

Evidence of Erosion: No Yes (Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(No.	
Slope	Gentle	Moderate or Steep	
Function Present	(Yes) No	_	
Degree of Function	High (Moo	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow l	edge	
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	Wetland microrelief Well developed)
Wetland contains an outlet, no inlet	Netland contains an outlet, no inlet Yes		Isolated wetland
Function Present	Yes	(NO)	300,000
Degree of Function	High N	Mod Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-		Comments			
Wetland size in relation to watershed	Large	Small	-				
Amount of impervious surface in wetland watershed	Large	Smgli			<u> </u>		
Wetland Slope	Gentle	Moderate	Steep		<u>·</u>		
Wetland characterized by variable water level?	Yes	(No)			<u>. </u>		
Wetland in floodplain of adjacent watercourse	Yes	(No)			·		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(NO)					
Watershed has a history of economic loss due to flooding	Yes	No		Unkuman			
Wetland outlet restricted	(Yes)	No		Unknown Isolatel			
Wetland vegetation density	High	Low	 -	1.300			
Wetland microrelief	Weil developed	None/Poorly developed)				

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	No surface hydrologic connection

F&SH/FINFISH HABITAT: POND &LAKE-Excluding condition: Not associated with pond/lake)

Criteria	-		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	Yes		and the same of th
Waterbody at least 10' deep	Yes		No .	THE RESERVE AND THE PARTY OF TH
% of pond covered by submerged or emergent vegetation	15-40%	 -	Other	and the state of t
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	- No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	•
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	.	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	-¥es	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	·
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent of Few	Numerous	
Bank stability	Stable	Unstable, eroding	·
Bank vegetative cover	High (trees. shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler		Mostly tolerant	•		
Function Present	_Yes		No		•	
Degree of Function	High	Mod	Low			İ

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments	
Sources of sediments or toxicants upstream	Yes	(No)		
Duration of water retention in wetland	Long	Short)		
Evidence of sediment trapping in wetland	Yes	(Low)		
Vegetation density	(High)	No		
Wetland edge broad and intermittently aerobic	Yes	Low		
Drainage ditches in wetland	No	Yes	"	
Water flow through wetland	Diffuse	Channelized		
Ponded water present	Yes	(b)		
Wetland basin topographic gradient	(Low)	High		
Fine grained mineral or organic soils present	Yes	No		
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	No watercourse	
Indicators of erosion or high water velocities are present	(D)	Yes	100 000-61 (000) 5-6	
Function Present	Yes	No		
Degree of Function	High Mod	(Low)	No inputs	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	Ño	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(es)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density		Low	
Potential for sediment trapping exists	Yes	No	_
Deep or open water habitat is present	Yes	(No)	-
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(ew)	High	
Wetland microrelief	Well developed	None, poorly developed	

- 1	·	12-5-X	-			
		(Yes)	No			
i	Degree of Function	High	Mod	(COW)	No inputs	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	•	+	-	Comments
Wildlife food sources in welland	Abundan	t	Few.	
Vegetation density	High		Low	- A Company of the Co
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No	The state of the s
Wetland has high degree of plant community structure and species diversity	Yes	- Indiana - Indi	No)	
Detritus development is present within this wetland	Yes	-	No	
Flowering plants used by nectar gatherers present	Yes		(No	
Evidence of wildlife use in wetland	Yes		No	
Fish or shellfish develop/occur in wetland	Yes		No	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upstope	Yes	No	
Wetland border >10' adjacent to pond or water	Yes	No	
Distinct shoreline or bank evident between wetland and water	No	Yes	
Open water fetch present	Yes	No	
Boating activity present	Yes	No	
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes	No	
Function Present	Yes	(No)	Isolated wetland
Degree of Function	High	Mod Low	

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	6	
Fishing is available in or from the wetland	Yes	<u> </u>	
Hunting is permitted in wetland	Yes	NO	
Hiking occurs or has potential to occur in wetland	(Yes)	No	
Wetland is a valuable wildlife habitat	Yes	No	

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canoeing feasible in wetland	Yes	(No)	
Off-road public parking near wetland available	Yes	100	
Safety Hazards (if present list them)	Yes,	No	
Function Present	(Yes)	No	Potential for hiling
Degree of Function	High	Mod (Low)	- · · · · · · · · · · · · · · · · · · ·

WLH/WILDLIFE HABITAT

Criteria	÷	_	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Welland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	ES)	No	Torest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	(Q))	isolated
Size of landscape block in which wetland is located (Large	Smail	7,3 0,1 = 1
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Shrub swamp
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H≒Herb LL≔Leaf litter)			Shrubs, leaf litter
Wetland plant species diversity	High Mod (Low)		, (224)
Vernal pool	Yes	(No)	
Edge diversity (List types)			Forest
Water regime	Wetter	Drier	(-D) r e z r
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	<u> </u>
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent')	
Abundance of invasive exotic flora	(None or Low)	High	
Function Present	Yes	No	
Degree of Function	High Mod	(ow)	

Criteria		+	-	Comments
Wetland contains listed species	Yes	· · · · ·	(No)	
Wetland provides valuable wildlife habitat	Yes		(No)	
Wetland class diversity	High		(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Lôn	Forest
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	Bowdoin College
Wetland contains perennial watercourse	Yes		(No)	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes		N ₀	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	-	+	-	Comments
Wetland contains listed species	Yes		(No	
Wetfand identified as exemplary natural community	Yes			
Wetland locally/regionally significant	Yes		(
Function Present	Yes		(S)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	:	Comments
Visible from primary viewing locations	Yes		No	
Views absent trash, debris, sign of degradation	Yes		No	·
Low noise level	Yes		No	
Visual landuse contrast with wetland	(Yes)		No	
Function Present	Yes		No	·
Degree of Function	High	Mod	10w	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	NB	
Wetland contains critical habitat for state or federal listed species	Yes	(P)	
Area appears in state or national database	Yes	(No)	

inction Present	Yes		(No)
gree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	No	No	Low	Low	20	Low	Low	Low	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ⊠		al Unit: Wea w average ☐ Average ☐ tory ☑ Scat ☑	Above Average □	me Start: N/A Time Stop: N/A Don't Know TBD nnow Traps Electro-shocking
Wetland Types(s) Cowardin/Golet Classificatio	1			
Class	Subclass	<u> </u>	•	
POW/ Open water	Vegetated Non-Vege	etated	· · · · · · · · · · · · · · · · · · ·	
PEM/PSS Deep Marsh	Dead Woody Shrub S	ub-shrub Robust	Narrow-leaved	Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved I	Floating leaved	·
PFL / Seasonally Flooded Flats	Emergent Shrub			
PEM / Wet Meadow	Ungrazed Grazed			
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquatic	<u> </u>
PEO / Wooded Swamp	Deciduous Evergreer	n Mixed forcet	•	
Bog	Compact shrub Bushy shr			
Water Regimes (Cowardin Modifier):		Season but are unsa	(Y) - soils saturated to turneted by end of season	surface, especially early in growing on in most years; surface water absent
Permanently flooded (H) - water covers land surfa	ce throughout year in all years	except for ground wa	ter seepage and overla	nd flow
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years			ent for brief periods during growing w soil surface for most of the season
Semi-permanently flooded (F) - surface water persmost years	sists throughout growing season in		(J) - substrate usually e out detectable seasonal	exposed, but surface water is present for I periodicity—
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		·		coding controlled by dikes dams, pumps,
Hydrology:			•	
Ground water discharges present: Y	es No	Depth to fro	ee water:	
If Present: Slope or Depressional		Depth to sa	aturation:	
Surface water depth: a	verage - maximum -	Signs of all	iered hydrology?	Yes No
Hydrology indicators: inundated	Saturated in upper 12" Water marks	Drift lines Sediment de	eposits Drainage p	patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumal stems, or roots Adventitious roots F			pertrophied lenticels ating leaves Flo	Stooling Inflated leaves, pating stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly	Poorly Ver	y Poorly Ma	apped Hydric Soil
Slope: (Nearly level) Gentle	Moderate Stee	p		
Upland Border:				٠.
Slope: Nearly level	Gentle Moderate	Steep		·
Cover Types: Mature forest	Sapling forest Shru	ib thicket Meadow	Mowed lawn	Farm
Vegetation Density(S/M/D): Tress	D Saplings S	Shrub>S Herbs	Grass	-
	-			

Soil: HrB-Houis fine sandy loan

Leaf litter:

(Weil developed

Moderately well developed

Absent

Cover objects:

Bark

Boulders

Rocks

Evidence of Erosion:

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+			Comments
Soils	Sand/gravel outwast	n Hardp	oan, tight fine-grained soils, w ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	®		
Slope	Gentle	Mode	rate or Steep	
Function Present	Yes No	<u> </u>		
Degree of Function	High	Mod	(Low)	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments	
Soils	Hardpan, shallow ledge			
Seeps, springs observed?	Yes	(No)		
Wetland microrelief	Well developed	Non/Poorly	-	· · · · · · · · · · · · · · · · · · ·
Wetland contains an outlet, no inlet	Yes	No Vdeveloped/	Isolated westend	
Function Present	Yes	(No)	Zoorag os overtana	_
Degree of Function	High Mod	Low	_	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	(Small)	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	NO NO	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	®	
Watershed has a history of economic loss due to flooding	Yes	No	unknown
Wetland outlet restricted	Yes)	No	No outlet - isolated wetland
Wetland vegetation density	High	Low	130 tages - Deliano
Wetland microrelief	Well developed	None/Poorty developed	

Function Present	Yes	No .		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	- 1	-	. -	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	-No		Yes	
Sandbar present at inlet?	No	Tona Cara	Yes	
Water transparency	High	The state of the s	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes	 -	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	•	Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS Excluding condition: Not associated with perennial stream

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No -	
Gravel spawning areas present	Yes	No	The state of the s
Barriers to anadromous fish (dams/high culveds) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	·
Substrate embeddedness by sand & silt	LOW	High	<u></u>
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few_	
Riparian zone	Wide	Narrow	
Watershed development .	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	•	Comments
Sources of sediments or toxicants upstream.	Yes	(No)	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes_	Tow	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	•
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	Diffuse	Channelized	2 11 16 16 - 116 1 - 200 200 - 110
Ponded water present	Yes	No	3 North/South dopressions - old farm
Wetland basin topographic gradient	(IOW)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No -	No watercourse
Indicators of erosion or high water velocities are present	Nio	Yes	140 Waser Coase
Function Present	(Fes)	No No	ito i - ito
Degree of Function	High N	nod (ow)	_ No inputs.

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	No)	
Wetland is saturated most of the season	Yes.	NO	
Emergent vegetation and/or dense woody stems are dominant	Yes	No —	
Water flow through wetland	Diffuse	Channelized)	-
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No.	
Deep or open water habitat is present	Yes	<u> </u>	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria		+	-	Comments
Wildlife food sources in wetland	Abundant		Few	
Vegetation density	High	High		
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No	
Wetland has high degree of plant community structure and species diversity	-Yes		No	
Detritus development is present within this welland	Yes	-	No	
Flowering plants used by nectar gatherers present	Yes		No	
Evidence of wildlife use in wetland	Yes		No	
Fish or shelifish develop/occur in wetland	Yes		No	
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	4			Comments
Topographical gradient in wetland	Yes	No		
Potential sediment sources upstream or upslope	Yes	No		
Wetland border >10' adjacent to pond or water	Yes	No		
Distinct shoreline or bank evident between wetland and water	No	Yes		
Open water fetch present	Yes	No		
Boating activity present	Yes	No		
Floodplain stabilizing trees and shrubs present	Yes	No	,	
Indications of erosion or siltation present	Yes	No		
Function Present	Yes	(M)		Isolated wetland
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria .	· +		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(N)	
Fishing is available in or from the wetland	Yes	(N)	
Hunting is permitted in welland	Yes	(6)	
Hiking occurs or has potential to occur in wetland	Yes	No	Potential-large area
Wetland is a valuable wildlife habitat	Yes	(NO)	

Wetland has high visual/aesthetic quality	Yes	(No)		
Boating or canoeing feasible in wetland	· Yes	6		
Off-road public parking near wetland available	Yes	No		
Safety Hazards (if present list them)	Yes	No		
Function Present		No	Potential	
Degree of Function	High 1	Aod (Colv)	10 46/6/30	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to High	·
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)		No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	(B)	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	(High)	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(Cow)	wooded swamp
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, Sapling, shrub, herb, leaf litter
Wetland plant species diversity	High Mod Low	,	, see of the or
Vernal pool	Yes		
Edge diversity (List types)			Forest
Water regime	Wetter	(Orier)	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Ew)	Logs
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	EW)	Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present	Absent)	- Day of the Control
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	

Criteria	-	+		Comments
Wetland contains listed species	Yės		(N)	
Wetland provides valuable wildlife habitat	(Tes)	•	No	moderate
Wetland class diversity	High	-	(ow)	moderate Wooded swany
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		(w)	Forest
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	Bowdoin College
Wetland contains perennial watercourse	Yes	•	(4)	Ų
Wetland contains pond/lake	Yes		6	
Safety hazards (if present list them)		•		·
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	. 4	+		Comments
Wetland contains listed species	Yes		(N)	
Wetland identified as exemplary natural community	Yes		(N)	
Wetland locally/regionally significant	Yes		(6)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	· · · · · · · · · · · · · · · · · · ·

VQA/VISUAL QUALITY/AESTHETICS

Criteria	÷	-	Comments
Visible from primary viewing locations	Yes	(Mo)	
Views absent trash, debris, sign of degradation	1785	No	
Low noise level	Y es	No	
Visual landuse contrast with wetland	Yes	No	
Function Present	Yes	No	
Degree of Function	High Mod (Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria _	÷	- 1	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(N)	
Wetland contains critical habitat for state or federal listed species	Yes	(N)	
Area appears in state or national database	Yes	(140)	

Function Present	Yes		(No)
egree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
LOW/NO	No	No	Low	No	No	Low	Mod	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

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Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

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Recreation (Consumptive and Non-consumptive): This value considers the sulfability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 45 D	ate: N/A Functional L	Jnit:	Weath	er: N/A	Time Start: N	/A Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Ro	ecent Precipitat	ion: N/A Below a	verage 🗌	Average 🗌	Above Average	Don't Kno	w 🗌 TBD 🖺
Wildlife Investigation Method: Cover search ⊠	Dip netting	g 🗌 Auditory	<i>t</i> 🖾	Scat 🛛	Tracks 🛛	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n .						
Class	Subclass						
POW/ Open water	Vegetated	. Non-Vegetat	ted				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-	-shrub	Robust	Narrow-leav	ved Broad	-leaved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Flo	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aq	uatic		
PFO / Wooded Swamp	Deciduous	Evergreen	mixed		•		
Bog	Compact shrul	b Bushy shrub		Wooded	the second second	ergent	
Water Regimes (Cowardin Modifier):							ially early in growing s; surface water absent
Permanently flooded (H) - water covers land surface	ce throughout ye	ar in all years			seepage and ov		s, surface water abacin
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the ye	ear except in years					riods during growing for most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout g	growing season in) - substrate usus detectable seas		urface water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		's especially early in	Artificiall etc	y flooded (K) - a	amount/duration	of flooding controlle	ed by dikes dams, pumps,
Hydrology:							
Ground water discharges present: Y	es N	o		Depth to free	water:	•	
If Present: Slope or Depressional				Depth to satu	ration:		
Surface water depth: a	verage -	maximum -		Signs of alter	ed hydrology?	Yes	No
Hydrology indicators: Inundated	aturated in uppe	r 12) Water marks	Drift lines	Sediment depo	osits Draina	ge patterns within t	wettands Other
Plant Adaptations to Hydrology: Pneumate stems, or roots Adventitious roots R	ophores P Rhizospheric oxid	olymorphic leaves lation Shallow	Buttressed tree root systems		rtrophied lenticels ng leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	i <u>v Well</u> s	omewhat Poorly	Poorty	Very F	oorly	Mapped Hydric S	oil
Slope: Nearly level Gentle	Moderate	Steep					•
Upland Border:							•
Slope: <u>Nearly level</u> G	Sentle	Moderate	Steep				
Cover Types: Mature forest	Sapling fo	orest Shrub t	hicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	D	agiings M	Shrubs 5	Herbs	Grass		
Soil BuB - Buxton silt	loam		_			*	

Leaf litter:

Well developed

Yes

Moderately well developed

Absent

Cover objects:

€ogs)

Bark

Boulders

Rocks

Evidence of Erosion:

(No)

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	©	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Me	od (Low) .	

GWD/GROUNDWATER DISCHARGE

Criteria	+			Comments	
Soils	Hardpan, shallow	iedge	,		·
Seeps, springs observed?	Yes		No	-	,
Wetland microrelief	Well developed	Į.	Non/Poorly developed		
Wetland contains an outlet, no inlet	Yes		'Ño')	Isolated wetland	
Function Present	Yes		No		
Degree of Function	High !	Mod	Low		

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Smail		
Amount of impervious surface in wetland watershed	Large	& mall		
Wetland Slope	Gentle	Moderate S	teep	
Wetland characterized by variable water level?	(P)	No		
Wetland in floodplain of adjacent watercourse	Yes	<u></u>		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No)		
Watershed has a history of economic loss due to flooding	Yes	No		Unknown
Wetland outlet restricted	(es)	No		No outlet- isolated wetland
Wetland vegetation density	High	(ow)		
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	'	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No .	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15.40%		Other	The state of the s
Direct stormwater discharge via culvert?	No	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	Yes	· ·
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal bloome, huisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	THE STREET CONTROL OF THE PARTY
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	A CONTRACTOR OF THE PROPERTY O
Instream habitat diversity (riffle, run, pool, shallow, deep)	High		
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

			-	
Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly toleran	t
Function Present	Yes		No	
Degree of Function	righ	Mod .	Low	·

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	(\$G)	
Duration of water retention in wetland	Long	(Short)	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	(No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	e LOW)	High	
Fine grained mineral or organic soils present	Yes	. No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	No watercourse
Indicators of erosion or high water velocities are present	(10)	Yes	100 00 -5. 5 00 -5
Function Present	Yes	No	
Degree of Function	High Mod	Low	No inputs

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	effuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists		No No	tow
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	LOW	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria		÷		Comments
Wildlife food sources in wetland	Abundant		Few	
Vegetation density	High		Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes			
Wetland has high degree of plant community structure and species diversity	Yes		No	
Detritus development is present within this wetland	Ves		No	
Flowering plants used by nectar gatherers present	Yes	Market Committee Committee Committee	No	
Evidence of wildlife use in wetland	Yes	•	Mo	
Fish or shellfish develop/occur in wetland	Yes		No	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	· 4-		-	Comments
Topographical gradient in wetland .	Yes	i	No.	
Potential sediment sources upstream or upstope	Yes	1	No	·
Wetland border >10' adjacent to pond or water	Yes	1	No	
Distinct shoreline or bank evident between wetland and water	. No		Yes	
Open water fetch present	· Yes	. 1	No	
Boating activity present	Yes	1	No	
Floodplain stabilizing trees and shrubs present	Yes		No	}
Indications of erosion or siltation present	Yes		No	
Function Present	Yes	[0	NS)	Isolated wetland
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	+ .	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes (NO	·
Fishing is available in or from the wetland	Yes	(No)	
Hunting is permitted in wetland	Yes	6	
Hiking occurs or has potential to occur in wetland	(Yes)	No	Petential - large area
Wetland is a valuable wildlife habitat	Yes	(No)	3

Wetland has high visual/aesthetic quality	Yes	(No.)		
Boating or canoeing feasible in wetland	Yes Yes	(No)		
Off-road public parking near wetland available	Yes	6		
Safety Hazards (if present list them)	Yes	(No)		
Function Present	(Yes)	No	Potential	
Degree of Function	High M	lod (Low)		

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Liftle or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Tes)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No.	
Size of landscape block in which wetland is located	targe	Small	
Wildlife food sources in wefland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Vooded Summe
Vegetation density	High	Low	8
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, capling, herb, leaf litter
Wetland plant species diversity	High Mod (Low)		Creation of the contract of th
Vernal pool	Yes	N6)	
Edge diversity (List types)			Forest
Water regime	Wetter	Driez	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(FW)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	/Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(es)	No	
Degree of Function	High (Mod	Low	

Criteria		+		Comments
Wetland contains listed species	Yes		(No)	
Wetland provides valuable wildlife habitat	F	· ·	No	moderate
Wetland class diversity	High	··	Low	Wooded Engamp
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		(Pa)	Moderate Wooded Swamp Forest
Off-road parking near wetland available	Yes		(b)	<u> </u>
Proximity to schools	Near		Far	Bourdoin college
Wetland contains perennial watercourse	Yes		(G)	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes .		(e)	
Function Present	Yes		(No	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes	<u> </u>	(Ng)	
Wetland identified as exemptary natural community	Yes		<u> </u>	
Wetland locally/regionally significant	Yes	·	1	<u>_</u>
Function Present	· Yes		(Ng)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments	<u>.</u>	
Visible from primary viewing locations	Yes			<u></u>	<u> </u>
Views absent trash, debris, sign of degradation	(Yes)	No			
Low noise level	To large	No		<u> </u>	
Visual landuse contrast with wetland	Yes	(No)			<u> </u>
Function Present	(6)	No			
Degree of Function	High Mo	od (Ow)			

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(4)	
Wetland contains critical habitat for state or federal listed species	Yes	(No)	
Area appears in state or national database	Yes	(No)_	

Function Present	Yes
Degree of Function	High Mod

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA_	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	\$&\$	ESH
Gh /wa)	No	NO	Cow	Ио	No	low	nuoé_	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ⊠ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: I	N/A Functional Unit: N/A Below average ☐ Auditory ☑	Weathe Average ☐ Scat ⊠	Above Average	Time Start: N/A ☐ Don't Know [Minnow Traps ☐	Time Stop: N/A ☐ TBD ☐ Electro-shocking ☐
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated				
PEM/PSS Deep Marsh	Dead Woody Shri	ub Sub-shrub	Robust	Narrow-leave	ed Broad-lea	ved
PA8/ Shallow Marsh	Robust Nar	row-leaved Broad-i	eaved Floa	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed				W
(PSS / Shrub Swamp	Sapling Bus	Shy Compa	ct Aqu	atic		
PFO / Wooded Swamp	Deciduous	Evergreen .		•		
Bog	Compact shrub	Bushy shrub	Wooded	Eme	ergent	
Water Regimes (Cowardin Modifier):					to surface, especially	
Permanently flooded (H) - water covers land surfa-	ce throughout year in a		son, put are unsatura ept for ground water		ason in most years; s e <u>rland flow</u>	urface water absent
Intermittently Exposed (Z)-surface water present to of extreme drought	throughout the year ex		nporarily flooded (A) son, but water table i	- surface water pr usually lies well b	resent for brief period elow soil surface for r	s during growing nost of the season
Semi-permanently flooded (F) - surface water persmost years	sists throughout growin	ng season in Inte		- substrate usuai	lly exposed, but surfa	ce water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		ecially early in Artii etc	icially flooded (K) - a	mount/duration o	f flooding controlled b	y dikes dams, pumps,
Hydrology:		•				
Ground water discharges present: Y	es No		Depth to free v	water:		
If Present: Slope or Depressional			Depth to satur	ation:		
Surface water depth; a	verage -	maximum -	Signs of altere	d hydrology?	Yes	No
Hydrology indicators: Inundated (S	aturated in upper 12"	Water marks Drift lines	Sediment depor	sits Drainag	e patterns within wetl	ands Other
Plant Adaptations to Hydrology: Pneumati stems, or roots Adventitious roots F	ophores Polymo Rhizospheric oxidation	orphic leaves Buttressed Shallow root systel		trophied lenticels g leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes; Well Moderate	ly Well Somew	vhat Poorly Po	orly Very Po	oorly	Mapped Hydric Soil	·
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:						
Slope: Nearly level	Gentle	Moderate St	еер			
Cover Types: Vlature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D); Trees	D sapling	M Shrubs/S	Herbs	Grass		

Soil: BuB - Buxton silt Loan

Leaf litter:

-Well developed

Moderately well developed

Absent

Cover objects:

1295

Bark

Boulders

Rocks

Evidence of Erosion:

(E)

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Crîteria	+	•	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	CNS)	·
Slope	Gentle	Moderate or Steep	
Function Present	Yese No		,
Degree of Function	· -	od (Lov)	

GWD/GROUNDWATER DISCHARGE

Criteria	+		-	Comments
Soils	Hardpan, shallow	ledge	· ·	
Seeps, springs observed?	Yes		6	
Wetland microrelief	Well developed	7 1	lon/Poorly leveloped	
Wetland contains an outlet, no inlet	Yes	-ننول	0.00	Isolated wetland
Function Present	Yes		<u>اوا</u>	
Degree of Function	High	Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	_		Comments
Wetland size in relation to watershed	Large	8mall		
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle	Moderate S	teep	
Wetland characterized by variable water level?	(ES)	No		_
Wetland in floodplain of adjacent watercourse	Yes	NO		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	100		
Watershed has a history of economic loss due to flooding	Yes	No		Unknown
Wetland outlet restricted	Yes	No		No outlet-is plated wetland
Wetland vegetation density	High	Low		The state of the s
Wetland microrelief	Well	None/Poorly developed		

Function Present	Yes .			
Degree of Function	High	Mod	Low	No outlet

F&SH/FINFISH HABITAT: POND &LAKE((Excluding condition: Not associated with pond/lake)

Criteria	+	-	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	·
Waterbody at least 10' deep	Yes		No	·
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	Action (Action (Action))
Sandbar present at inlet?	No	Name of the Owner	Yes	•
Water transparency	Hight		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition, Not associated with perennial stream)

Criteria	+ .	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	·
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	•	Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(Ow)	
Vegetation density	(High)	No.	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	NO .	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in welland	Yes	(No	No water course
Indicators of erosion or high water velocities are present	No	Yes	NO COURSE COURSE
Function Present	Yes	No	
Degree of Function	High Mod		No inputs

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	. Small	
Potential sources of excess nutrients upstream	Yes		
Wetland is saturated most of the season	Yes	(%)	
Emergent vegetation and/or dense woody stems are dominant	Yes	No ·	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	Fligh	Low	
Potential for sediment trapping exists	(Yes)	No	low
Deep or open water habitat is present	Yes	No)	
Soil type	Organic/htgh clay content	Sand/gravel	
Wetland basin topographic gradient	, lrow)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(es	/		No		
Degree of Function	High	gh M		d Low		No inputs
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)						
Criteria			+		-	Comments
Wildlife food sources in wetland		Abundant		٠.	Few	
Vegetation density		High			Low	The state of the s
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes			== NO	
Wetland has high degree of plant community structure and species diversity		Yes	and the same		No	·
Detritus development is present within this wetland	-	Yes			. No	
Flowering plants used by nectar gatherers present		Yes	•		No	
Evidence of wildlife use in wetland		Yes		**************	No.	
Fish or shellfish develop/occur in wetland		Yes			No	
Function Present		Yes			No	The state of the s
Degree of Function		High	High Mod		Łow]
S&SS/SEDIMENT/SHORELINE STABILIZATION				•		
Criteria		+			-	Comments
Topographical gradient in wetland	Yes			No		
Potential sediment sources upstream or upslope	Yes			No		
Wetland border >10' adjacent to pond or water	Yes	es		No		
Distinct shoreline or bank evident between wetland and water	No			Yes		
Open water fetch present	Yes			No		
Boating activity present	Yes			No		
Floodplain stabilizing trees and shrubs present	Yes			No		
Indications of erosion or siltation present	Yes	·		No		
Function Present	Yes			No		Isolated wetland
Degree of Function	High	Me	ođ	·	DW	Data a maria
REC/RECREATION						
Criteria		+		Ī	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes			(%)		
Fishing is available in or from the wetland	Yes		-	(NO)	•	
Hunting is permitted in wetland	Yes			(No)		
Hiking occurs or has potential to occur in wetland	Yes	>		No		Potential-large area
Wetland is a valuable wildlife habitat	(Yes)		ίΝο	<u> </u>	

Wetland has high visual/aesthetic quality	Yes	No		
Boating or canoeing feasible in wetland	Yes	6		
Off-road public parking near wetland available	Yes	160		
Safety Hazards (if present list them)	Yes	(N) (N)		
Function Present	Yes	Nó	n	
Degree of Function	High Mod	1 (Tow)	Potentral	•

WLH/WILDLIFE HABITAT

Criteria	+	_	Comments
Wetland degradation by human activity	Little or None	Moderate to	
		High	
Wetland fragmentation by development	deiffile or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	TIES 2	No	Forest
Buffer width	Good to Excellent	Fair to Poor	· · ·
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	(a)	
Upland islands	Present /	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	/LOW)	shrub swamp
Vegetation density	High	Low	· · · · · · · · · · · · · · · · · · ·
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Shrub, Tree, Herb
Wetland plant species diversity	High (Mod Low	_	
Vernal pool	Yes	(No)	
Edge diversity (List types)			Forest
Water regime	Wetter	(Drie)	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Eew)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wet(and (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High (Mod)	Low	

Criteria		+	1	Comments
Welland contains listed species	Yes		No.	-
Wetland provides valuable wildlife habitat	(Yes)		No	-
Wetland class diversity	High		Low	Charle Engues
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Shrub Ewamp Forest
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	Bowdoin College
Wetland contains perennial watercourse	Yes		M	j j
Wetland contains pond/lake	Yes		169	
Safety hazards (if present list them)		- <u>-</u>		
Site currently used for educational/scientific purposes	Yes		NO	
Function Present	Yes		N	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria ,	<u> </u>	. <u></u>	-	Comments	
Wetland contains listed species	Yes		100		
Wetland identified as exemplary natural community	Yes		(No)	-	
Wetland locally/regionally significant	Yes		(N)		
Function Present	Yes		No		
Degree of Function	High	Mod	Low		

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments
Visible from primary viewing locations	Yes	(No)	
Views absent trash, debris, sign of degradation	(Pes)	No	
Low noise fevel	(res)	No	
Visual landuse contrast with wetland	(Fe)	No	
Function Present	(Yes)	No	
Degree of Function	High Mod	(EW)	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	N	
Wetland contains critical habitat for state or federal listed species	Yes	(i)	
Area appears in state or national database	Yes	(No)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	8&8	ESH
Cow/No	Ne	No	(ow	Low	N_0	Low	mod	No	70	NO .	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 47 Date	: N/A Functional I	Jnit:	Weath	ier: N/A	Time Start:	N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation	n: N/A Below a	verage 🔲	Average 🗌	Above Average	e ☐ Don't Kr	now 🗌 TBD 🔲
Wildlife Investigation Method: Cover search 🔀	Dip netting] Auditory		Scat 🛛	Tracks 🛚	Minnow Traps	Biectro-shocking
Wetland Types(s) Cowardin/Golet Classification	1						
Class	Subclass	-					
POW/ Open water	Vegetated	Non-Vegetat	ted				
PEM/PSS Deep Marsh	Dead Woody S	hrub Sub-	-shrub	Robust	Narrow-lea	ved Broa	ad-leaved
PAB/ Shallow Marsh	Robust N	larrow-leaved	Broad-leave	ed Flo	ating leaved		-
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling B	lushy	Compact	Aq	uatic ,		
PFO / Wooded Swamp	Deciduous	Evergreen				•	
Bog	Compact shrub	Bushy shrub		Wooded	Em	ergent	AND ADDRESS OF THE PARTY OF THE
Water Regimes (Cowardin Modifier):							ecially early in growing ars; surface water absent
Permanently flooded (H) - water covers land surface	•		except for	or ground water	seepage and ov	erland flow	
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the year	except in years					eriods during growing of for most of the season
Semi-permanently flooded (F) - surface water pers most years	ists throughout grov	wing season in) - substrate usu: † detectable seas		surface water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		specially early in	Artificiali etc	y flooded (K) - a	amount/duration	of flooding contro	lled by dikes dams, pumps,
Hydrology:		•					
Ground water discharges present: You	es No			Depth to free	water:		
If Present: Slope or Depressional				Depth to satu	ration:		
Surface water depth: av	verage -	maximum -		Signs of alter	ed hydrology?	Yes	No
Hydrology indicators: Inundated S	aturated in upper 1	Water marks	Drift lines	Sediment depo	osits Draina	ge pattems within	wetlands Other
Plant Adaptations to Hydrology: Pneumato stems, or roots Adventitious roots R.	ophores Polyi hizospheric oxidatio	morphic leaves on Shallow	Buttressed tree root systems		rtrophied lenticel ng leaves	s Stooling Floating stems	g Inflated leaves,
Soil Drainage classes: Well Moderatel	ly Well Som	ewhat Poorly	Poorly	Very F	oorly	Mapped Hydric	Soil
Slope: Mearly level Gentle	Moderate	Steep					
Upland Border:							
Slope: (Nearly level) G	entle	Moderate	Steep		-		
Cover Types: Mature forest	Sapling fores	st Shrub ti	nicket	Meadow	Mowed lawn	Farm	•
Vegetation Density(S/M/D): <(rees)	D Sapl	ings 194	Shrubs	Herbs	Grass	•	
Soil: Sn - Scantic siff	loam			-		•	-

Leaf litter:	Well-developed	Mode	rately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	Yes	(Explain)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-1775077	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	·
Slope	Gentie	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments		
Soils	Hardpan, shallow ledg	le l			,
Seeps, springs observed?	Yes	C No			
Wetland microrelief	Well developed	Non/Poorly developed		, · · .	
Wetland contains an outlet, no inlet	Yes	#No")		-	
Function Present	Yes	TRO D		·	
Degree of Function	High Mod	Low			

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large C	Small	
Amount of impervious surface in wetland watershed	Large _	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	-Yes	No	-
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	-No ²)	
Watershed has a history of economic loss due to flooding	Yes	No	Unkercono
Wetland outlet restricted	Yes	(NB)	
Wetland vegetation density	High	Low	
Wetland microretief	Well developed	None/Poorly developed	

Function Present	Yes	No		
Degree of Function .	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		•	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%	بعيسين.	-Other	
Direct stormwater discharge via culvert?	No	Andrew Control of the	· Yes	
Sandbar present at inlet?	No	_	Yes	
Water transparency	High	AD-SOURCE STREET	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense alger blooms, nulsance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Łow	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments	
Channel shaded by riparian trees and/or shrubs	Yes	No		
Gravel spawning areas present	Yes	No)		
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	(Ves)	Culverted from under oirfield & und	er n
Dominant bottom substrate	Gravel/cobbles	Sant/Silt		
Substrate embeddedness by sand & silt	Low	High		
Instream habitat diversity (riffle, run, pool, shallow, deep)	(High)	Low		
Channel alterations (channelization, islands or point bars)	Absent or Eew	Numerous		
Bank stability	<u>Stable</u>	Unstable, eroding		
Bank vegetative cover	High (trees, shrubs)	Low	moderate-	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few		
Riparian zone	Wide	Narrow		
Watershed development (Low	High		
Water quality	Good	Poor	Unknown	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	Unknown
Function Present	Yes)		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	Νδι	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(Now _	Yes	
Water flow through wetland	ď Ďiffuse.	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	Cow	High	
Fine grained mineral or organic soils present	(\Xes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	*
Indicators of erosion or high water velocities are present	No	(YES)	Swiftly moving stream
Function Present	(Yes)	No	Jan San Court
Degree of Function	High	Mod Low	7

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	•	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	, No	
Emergent vegetation and/or dense woody stems are dominant	Yeş_	No -	-
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	(Yas)	No	low -no inputs
Deep or open water habitat is present	Yes	(No)	Not in wetland
Sofi type	Organic/high clay content	Sand/gravel	7707 770 50 510 50
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes		(Ng)	<u> </u>	· · · · · · · · · · · · · · · · · · ·
Degree of Function	High		Mod Low		144
	1 mgm		IVIGG		· · · · · · · · · · · · · · · · · · ·
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)		, · · · · ·			
Criteria			+	•	Comments
Wildlife food sources in wetland		Abundant		Few	
Vegetation density		High		Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(eyes)		No	
Wetland has high degree of plant community structure and species diversity		Yes		NO.	
Detritus development is present within this wetland	!	(P)		No '	
Flowering plants used by nectar gatherers present		Yes		<u>@</u>	
Evidence of wildlife use in wetland		Yes		(No)	
Fish or shellfish develop/occur in wetland		Yes		No	
Function Present		(Yes)		No	
Degree of Function		High	Mod	(10N)	<u></u>
S&SS/SEDIMENT/SHORELINE STABILIZATION					
Criteria		+		-	Comments
Topographical gradient in wetland	Yes		No)	
Potential sediment sources upstream or upsiope	Yes		No	>	·
Wetland border >10' adjacent to pond or water	Yes	>	No		
Distinct shoreline or bank evident between wetland and water	No		Yes		
Open water fetch present	Yes		€No.	>	
Boating activity present	Yes		€ ₹0)	
Floodplain stabilizing trees and shrubs present	Yes		No		•
Indications of erosion or siltation present	Yes		(No.)	
Function Present	Yes		No		
Degree of Function	High	Me	od	(ow)	
REC/RECREATION	•			<u>-</u>	
Criteria		+		-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes		V ₀		
Fishing is available in or from the wetland	Yes		- N)	
Hunting is permitted in wetland	Yes		No)	
Hiking occurs or has potential to occur in wetland	Yes)	No		
4	· · ·				1

No

Wetland is a valuable wildlife habitat

Wetland has high visual/aesthetic quality	Yes	No	-
Boating or canoeing feasible in wetland	Yes	6	· ·
Off-road public parking near wetland available	Yes	ano)	
Safety Hazards (if present list them)	Yes	(No.)	
Function Present	Yes	No	 -
Degree of Function	High Mo	d (Sw)	

WLH/WILDLIFE HABITAT

Criteria	+	"-	· •	Comments
Wetland degradation by human activity	ittle or None	2	Moderate to	- Constitution
Wetland fragmentation by development	Little or Nane	}	High . Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)		No No	Forest
Buffer width	-Good to Exce	elient	Fair to Poor	
Connectivity with other wetlands	Yes		No	
Size of landscape block in which wetland is located	Large		Small	
Wildlife food sources in wetland	Abundant		ew	
Interspersion of vegetation and open water	High		LOW	-
Upland islands	Present		Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		KOW	Wet meadows
Vegetation density	High	1	Low	77 0000000
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)				Sapling, shoul, herb, leaf litter
Wetland plant species diversity	High Mod	(Low)		, so b, ner b, teach that ep
Vernal pool	Yes		No \	
Edge diversity (List types)			<u> </u>	Forest
Water regime	Wetter		Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant		Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant		Eew	
Flat rocks in/near watercourse (stream salamanders)	Present		Absent	-
Sphagnum hummocks next to shallow pools	Present		Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Abseni	
Abundance of invasive exotic flora	►None or Low	>	High	
Function Present	Yes)	_ †	No .	
Degree of Function		Med)	Low	

Criteria	+	-	Comments
Wetland contains listed species	Yes	(6)	
Wetland provides valuable wildlife habitat	Yes	No	
Wetland class diversity	High	(Gw)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	LOW	Forest
Off-road parking near wetland available	Yes	No	
Proximity to schools	Near	Far	Bowdoin College
Wetland contains perennial watercourse	Yes	No	
Wetland contains pond/lake	Yes	1	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	Yes	No	
Degree of Function	High Mod	COW	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(Ng)	
Wetland identified as exemplary natural community	Yes		(No)	
Wetland locally/regionally significant	Yes	Yes		
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	÷	1 .	Comments
Visible from primary viewing locations	Yes	(No)	
Views absent trash, debris, sign of degradation	(fes)	No	
Low noise level	es	No	
Visual landuse contrast with wetland	Yes	No	
Function Present	Wes_	No	
Degree of Function	High (Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	100	
Wetland contains critical habitat for state or federal listed species	Yes	(Q)	
Area appears in state or national database	Yes	(MA)	

Function Present	Yes		(No)	
egree of Function	Hìgh	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	mod	Mod	low	೧೦	Low	تعاصرا	Mod	Low	No	Low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other fiving organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are infrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity,

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/A Dip netting	Functional Unit: Below average ☐ Auditory ☑		N/A Time Start: N/A verage ☐ Don't Know [] Minnow Traps ☐	Time Stop: N/A ☐ TBD ☐ Electro-shocking ☐		
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegetated					
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust Narro	w-leaved Broad-lea	aved		
PAB/ Shallow Marsh	Robust Narrow-	leaved Broad-leave	ed Floating leave	eđ			
PFL / Seasonally Flooded Flats	Emergent	Shrub					
P/EM / Wet Meadow	Ungrazed	Grazed _					
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquatic				
PFO / Wooded Swamp	Deciduous	Evergreen	•				
Bog	Compact shrub	Bushy shrub		Emergent			
Water Regimes (Cowardin Modifier): Seasonally saturated (Y) - soils saturated to surface, especially early in growing							
Permanently flooded (H) - water covers land surface throughout year in all years season, but are unsaturated by end of season in most years; surface water absent except for ground water seepage and overland flow							
Intermittently Exposed (Z) -surface water present I of extreme drought	hroughout the year except	- rempor		water present for brief period s well below soil surface for i			
Semi-permanently flooded (F) - surface water pers most years	sists throughout growing se	nucina	ently flooded (J) - substrat periods without detectable	te usually exposed, but surfa e seasonal periodicity~	ce water is present for		
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		H		ration of flooding controlled t	y dikes dams, pumps,		
Hydrology:	<i>*</i>	•					
Ground water discharges present: Y	es No		Depth to free water:				
If Present: Slope or Depressional			Depth to saturation:				
Surface water depth: a	verage - ma:	ximum -	Signs of altered hydrolog	gy? Yes	No		
Hydrology indicators: Inundated §	aturated in upper 12" Wa	iter marks Drift lines	Sediment deposits	Orainage patterns within wet	ands Other		
Plant Adaptations to Hydrology: Pneumatistems, or roots Adventitious roots R	ophores Polymorphi hizospheric oxidation	ic leaves Buttressed tree Shallow root systems	s Hypertrophied le Floating leaves	enticels Stooling Floating stems	Inflated leaves,		
Soil Drainage classes: Well Moderate	ly Well Somewhat	Poorly (Poorly	Very Poorly	Mapped Hydric Soil			
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:							
Slope: Nearly level	Gentie Mo	derate Steep					
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow Mowed I	awn Farm			
Vegetation Density(S/M/D): Trees	Saplings Saplings	Shrubs	Herbs Grass				

Soil: Ru-Rumney fine sandy loans

	,		
1	.eaf	ШΠ	e۳

Well-developed

Moderately well developed

Absent

Cover objects:

(Logs

Bark

Boulders

Rocks

Evidence of Erosion:

No &

(Explain) Unstable banks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	The state of the s	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	YES	No	
Slope	Gentle	Moderate or Steep	
Function Present	Ves No		
Degree of Function	High Moe	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+			Comments	-
Soils	Hardpan, shallow	ledge			
Seeps, springs observed?	Yes		(Ne)		
Wetland microrelief	Well developed		Nen/Poorly developed		
Wetland contains an outlet, no inlet	Yes	, <u> </u>	(NO)		
Function Present	Yes		No	-	
Degree of Function	High	Mod	Low	⊣ ·	•

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Śmall	
Wetland Slope	Gentie	Moderate Steer	
Wetland characterized by variable water level?	1 1 1 1 1 1 1 1 1 1	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No	
Watershed has a history of economic loss due to flooding	Yes	No _	Unknow h
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorty developed	

Function Present	Yes	No	•	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	-	-	Comments .
Dominant land use adjacent to Waterbody	Forest, Shrub	Forest, Shrub, Meadow		
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No	\sim	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed2	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	(es)	No	
Gravel spawning areas present	Yes	100	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	∕(es)	Mere Brook from under airfield
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low .	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	islands
Bank stability	Stable	dinstable.) eroding	
Bank vegetative cover	High (frees shrubs)	Low	Moderate
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	Unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant	Mostly tolerant	/Inknowsh
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	Fish obs. in stream

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	_	Comments
Sources of sediments or toxicants upstream	Yes	No)	
Duration of water retention in wetland	Long	8hort)	
Evidence of sediment trapping in wetland	· Yes	Cow	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Łow	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse)	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	N	· · · · · · · · · · · · · · · · · · ·
Indicators of erosion or high water velocities are present	No	6	Cutto marine et com brace to a
Function Present	Yes	No	Swifty moving stream, trees down near bank. I
Degree of Function	High Mod	(Low)	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse)	Channelized	
Vegetation density	High	Low	-
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	Nổ	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	,		No			
Degree of Function	High		Mod		Low	2	·
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)						•	
Criteria ·			+		-	Comment	S
Wildlife food sources in wetland	2	Abundant)		Few		
Vegetation density	[]	High			Low		
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes			No		
Wetland has high degree of plant community structure and species diversity	Č	Yes			No		
Detritus development is present within this wetland	(Yes		•	No		
Flowering plants used by nectar gatherers present	<	Yes			No		
Evidence of wildlife use in wetland	2	Yes			No	Sia. Ve	unal pool # 22
Fish or shellfish develop/occur in wetland		Yes			No	Untro	<u>unal pool #32</u> rwn
Function Present	₹	Yes			No	,	•
Degree of Function	K	High	Mod		Low		
S&SS/SEDIMENT/SHORELINE STABILIZATION							
Criteria		+			-	Comment	s
Topographical gradient in wetland	Yes			VD	-		
Potential sediment sources upstream or upslope	Yes		1	(§)			
Wetland border >10' adjacent to pond or water	Yes		Ĩ	Νo			-
Distinct shoreline or bank evident between wetland and water	No			7es/			
Open water fetch present	Yes		- h	(a)			
Boating activity present	Yes			(e)			
Floodplain stabilizing trees and shrubs present	Yes			No			
							1 .
Indications of erosion or siltation present	(Mes)			No		Trees de	own along back

Degree of Function REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	M	
Hunting is permitted in wetland	Yes	(MO)	
Hiking occurs or has potential to occur in wetland	(Yes)	No	
Wetland is a valuable wildlife habitat	Yes	No	Sig. vernal pool #32

Low

Wetland has high visual/aesthetic quality	Yes	No.)		<u></u>
Boating or canoeing feasible in wetland	Yes	100)		
Off-road public parking near wetland available	Yes	MO.)		· , .
Safety Hazards (if present list them)	Yes	No		
Function Present	Yes	No	Potential	
Degree of Function	High N	1od Low		

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	±ittle or None	Moderate to High	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	LOW)	
Upland islands	Present	Absent	<u> </u>
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	2000	wet meadens
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Sig vernal pool #32
Wetland plant species diversity	High (Mod Low		
Vernal pool	Yes	No	Sia vernal nool #32
Edge diversity (List types)			Forest
Water regime -	Wetter	Drier	(77-2)
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Fey	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes?)	No	
Degree of Function	/High Mod	Low	

Criteria	+	-	Comments	
Wetland contains listed species	Yes	(GP)	-	
Wetland provides valuable wildlife habitat	TO TO	,No	· · · · · · · · · · · · · · · · · · ·	
Wetland class diversity	High	(Loy)		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	LOW	Forest	
Off-road parking near wetland available	Yes	No		
Proximity to schools	Near	Far	Bowdoin College	
Wetland contains perennial watercourse	Yes	No	7	
Wetland contains pont/lake	Yes	No		·
Safety hazards (if present list them)		<u> </u>	·	
Site currently used for educational/scientific purposes	Yes	(No)	·	
Function Present	Yes	No		
Degree of Function	High (Mod	Low		

U/H/UNIQUENESS/HERITAGE

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland identified as exemplary natural community	Yes	(ON)	
Wetland locally/regionally significant	Yes	No	Sig-vernal pool #32
Function Present	(eg)	No	
Degree of Function	High	Mod Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+ .	-	Comments
Visible from primary viewing locations	Yes	No	
Views absent trash, debris, sign of degradation	(Zes)	No	
Low noise level	(Yes)	No	
Visual landuse contrast with wetland	Yes	No	
Function Present	(fes)	No	
Degree of Function	High (Mod)	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No.	
Wetland contains critical habitat for state or federal listed species	Yes ((No)	·
Area appears in state or national database	Yes ·	No	

Function Present	Yes		(No)
egree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	Mod	Mod	Lew	Low	High	Low	Hian	Mod	Mod	Mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 49 Date: N/A	Functional Unit:	Weath	er: N/A	Time Start: N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios R	tecent Precipitation: N/A	Below average	Average 🗌	Above Average	☐ . Don't Know [] TBD □
Wildlife Investigation Method: Cover search 🗵	Dip netting 🗌	Auditory 🛛	Scat 🗵	Tracks 🛛	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classificatio	n	. •				
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated	•			
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leav	ed Broad-lea	ved ,
PAB/ Shallow Marsh	Robust Narrow-I	leaved Broad-leav	ed Floa	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed				
SS / Shrub Swamp	Sapling Bushy	Compact	Aqu	ıatic		
PFO / Wooded Swamp	Deciduous	Evergreen				
Bag	Compact shrub	Bushy shrub	Wooded	Eme	ergent "	
Water Regimes (Cowardin Modifier):		,			l to surface, especially ason in most years; su	
Permanently flooded (H) - water covers land surfa-	ce throughout year in all ye		, but are unsature for ground water :			mace water absent
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the year except	, i cuibo			resent for brief periods nelow soil surface for n	
Semi-permanently flooded (F) - surface water pers most years	sists throughout growing se	рисини	tently flooded (J)		lly exposed, but surfac anal periodicity~	e water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		ly early in Artificia etc	liy flooded (K) - a	mount/duration o	of flooding controlled by	y dikes dams, pumps,
Hydrology:						
Ground water discharges present: Y	es No		Depth to free v	water:		
If Present: Slope or Depressional	•		Depth to satur	ation:		
Surface water depth: a	verage - max	kimum -	Signs of altere	d hydrology?	Yes	No
Hydrology indicators: Inundated S	aturated in upper 12" Wat	ter marks Drift lines	Sediment depo	sits Drainag	e patterns within wetla	ands Other
Plant Adaptations to Hydrology: Pneumali stems, or roots Adventitious roots F	ophores Polymorphic Rhizospheric oxidation	c leaves Buttressed tree Shallow root systems	2) ''	rophied lenticels g leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	Somewhat F	Poorly Poorly	Very Po	oorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:						
Slope: Nearly level	Sentie Mod	derate Steep				
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Tree 1	Saplings	Shrubs	Herbs	Grass		

Soil : BuB - Buxton silt loam

Leaf litter:

Moderately well developed -

Absent

Cover objects:

Evidence of Erosion:

Yes

Bark

(Explain)

Boulders

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	÷		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
	Gentle	Moderate or Steep	
Function Present	Yes No	·	
Degree of Function	High Mod) Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow led	ge	
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	No)	
Degree of Function	High Mc	d Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Crîteria	+	-	Comments
Wetland size in relation to watershed	Large	(Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Ste	ер
Wetland characterized by variable water level?	Yes	(No)	
Wetland in floodplain of adjacent watercourse	Yes	No.	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	·
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes	(No.)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

·				
Function Present	. (LYes	No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	•	No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No >	<	Yes	
Water transparency	bligh		ow	***
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	•	Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	-	Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	• •	Comments
Channel shaded by riparian trees and/or shrubs	Yes	(No)	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	Mere Brook from under airfield
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	Many down trees along edges
Bank vegetative cover	High (trees, shrubs)	Low	J
Cover objects (fallen logs, boulders, undercut banks)	Matry	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant	Mostly tolerant	Unknow n
Function Present	Yes	No	The share world
Degree of Function	High Mod	Low	Figh-elpserved

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	No ·	
Duration of water retention in wetland	Long	(Short)	_
Evidence of sediment trapping in wetland	Yes	Cow	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(N92	Yes	
Water flow through wetland	Diffuse	Channelized	-
Ponded water present	Yes	No	
Wetland basin topographic gradient	o TOW	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	
indicators of erosion or high water velocities are present	No	Yes	
Function Present	(fes)	No	
Degree of Function	High Mo	d (OW)	1

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	•	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	Ø	"
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	765)	No	
Deep or open water habitat is present	Yes	(No)	· · · · · · · · · · · · · · · · · · ·
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Gw	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	No	
Degree of Function	High	Mod Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	(bundant)	Few	
Vegetation density	حطولك	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(es)	No	
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	(es)	No	
Flowering plants used by nectar gatherers present	(Peg)	No	
Evidence of wildlife use in wettand	Yes	No	Great Blue Heron present
Fish or shellfish develop/occur in wetland	Yes	No	Careat Blue Heron present
Function Present	Yes	No	
Degree of Function	High Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	Yes	(No)	
Wetland border >10' adjacent to pond or water	Yes	No	
Distinct shoreline or bank evident between wetland and water	No	Yes	
Open water fetch present	Yes		
Boating activity present	Yes	(No)	
Floodplain stabilizing trees and shrubs present	(Yes)	No	Moderate-Shrubs.
Indications of erosion or siltation present	Yes	No	Many downed trees along code
Function Present	MESS	No	7
Degree of Function	High M	od Low	

REC/RECREATION

Criteria	+	-	Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)		
Fishing is available in or from the wetland	Yes	(a)		
Hunting is permitted in wetland	Yes	(PP)		
Hiking occurs or has potential to occur in wetland	(es)	No		
Wetland is a valuable wildlife habitat	Yes	No		

Wetland has high visual/aesthetic quality	Yes	No		
Boating or canoeing feasible in wetland	Yes	No	· ·	
Off-road public parking near wetland available	Yes	(_No		
Safety Hazards (if present list them)	Yes	(No		
Function Present	Yes	No		
Degree of Function	High	Viod Low	Potential	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	Cutverted along reads.
Wetland fragmentation by development	Liftle or None	Moderate to	J
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No No	Shrub [meadow
Buffer width	Good to Excelle	pt Fair to Poor	_
Connectivity with other wetlands	(es)	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(ow)	Shrub swamp
Vegetation density	(digh)	. Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Shrub, herb, leaf litter
Wetland plant species diversity	High Mod	Low	
Vernal pool	Yes	(Ng)	
Edge diversity (List types)			
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	Follen logs, snags
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	Loas/branches
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	37 2.27
Sphagnum hummocks next to shallow pools	Present	Absen	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	-
Abundance of invasive exotic flora	None or Law	High	
Function Present	(TES)	No	
Degree of Function	(High) Mc	od Low	·

Criteria	+	-	Comments
Wetland contains listed species	Yes	- (No)	
Wetland provides valuable wildlife habitat	/res)	No	
Wetland class diversity	High	(Ow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	GD .	Forest
Off-road parking near wetland available	Yes	(No)	
Proximity to schools	Near	. Far	Bowdoin College
Wetland contains perennial watercourse	6	No	Danage Caustie
Wetland contains pond/lake	Yes	No	
Safety hazards (if present list them)			-
Site currently used for educational/scientific purposes	Yes	100	
Function Present	₩êş)	No No	-
Degree of Function	High (Mod)	Low	-

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes		1/10	
Wetland identified as exemplary natural community	Yes			
Wetland locally/regionally significant	Yes		No -	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	-

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	
Visible from primary viewing locations	Yes	(No)		
Views absent trash, debris, sign of degradation	Yes	No		-
Low noise level	(es)	No		-
Visual landuse contrast with wetland	Yes	No		-
Function Present	(res)	No		_ _
Degree of Function	High (Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	 <u> </u>	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(Ng)	
Wetland contains critical habitat for state or federal listed species	Yes	 (Q)	
Area appears in state or national database	Yes	 (6)	

Function Present	Yes		(NB)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	\$&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Modro	Wood	Mod	Low	Low	High	mod	High	Mod	No	Mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Arny Goodstine & Chris Akios R	•	N/A Functional Unit: N/A Below average	Weath Average □	er: N/A Tin Above Average ☐	ne Start: N/A Don't Know □	Time Stop: N/A
Wildlife Investigation Method: Cover search ⊠	Dip netting ∐	Auditory 🛛	Scat ⊠		now Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classificatio	n -	•			.*	_
Class (EZEM-emergent)	Subclass			•		
POW/ Open water	Vegetated	Non-Vegetated				
PEM/PSS Deep Marsh	Dead Woody Sh	rub Sub-shrub	Robust	Narrow-leaved	Broad-leave	ed
PAB/ Shallow Marsh	Robust Na	errow-leaved Broad	leaved Flo	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed				
PSS / Shrub Swamp	Sapling Bu	ishy Comp	act Aqu	uatic	·· <u> </u>	
PFO / Wooded Swamp	Deciduous	Evergreen				
Bog	Compact shrub	Bushy shrub	Wooded	Emerge		
Water Regimes (Cowardin Modifier):			asonally saturated (Y ason, but are unsatur			
Permanently flooded (H) - water covers land surfa	ce throughout year in		cept for ground water			add Adior Goodie
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year ex	, ,	mporarily flooded (A) ason, but water table	- surface water prese usually lies well below	ent for brief periods on soil surface for mo	during growing ost of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout growi	1114	ermittently flooded (J)	•	•	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		pecially early in Ar etc	ificially flooded (K) - a	amount/duration of flo	oding controlled by	dikes dams, pumps,
Hydrology:						
Ground water discharges present: Y	es No		Depth to free	water:		
If Present: Slope or Depressional			Depth to satu	ration:		-
Surface water depth: a	verage -	maximum -	Signs of altere	ed hydrology?	Yes	No
Hydrology indicators: (nundated)	aturated in upper 12°	Water marks Drift lines	Sediment depo	osits Drainage pa	atterns within wetlar	ids Other
Plant Adaptations to Hydrology: Pneumate stems, or roots Adventitious roots F	ophores Polym Rhizospheric oxidation	orphic leaves Buttresse n Shallow root syste		trophied lenticels ng leaves Flo	Stooling ating stems	Inflated leaves,
Soil Drainage classes (Well) Moderate	ely Welf Some	what Poorly P	porty Very P	oorly Ma	pped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:						
Slope: Nearly level G	Sentle	(Moderate S	teep	•		•
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (rees	D Saplin	ngs M Shrubs	Herbs	Grass		

Soil: SuD2-Suffield Silt Icam

Leaf litter:	Well developed	,	Moderately well developed	Absent
Cover objects:		Bark	Boulders	Rocks

Evidence of Erosion: No Yes (Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	. -	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	(Yes)	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	. +			-	Comments	
Soils.	Hardpan, shallow [ledge				
Seeps, springs observed?	Yes		Nach			
Wetland microrelief	Well developed		Non/Pod develop			
Wetland contains an outlet, no inlet	Yes		No	ou	Both inlet & outlet	
Function Present	Yes	<u></u> .	(No)			 -
Degree of Function	High N	Mod	Low			

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	4		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Stee	p ·
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	unknowh
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Vveil developed	None/Poorly developed	

Function Present	Yes	No		
Degree of Function	High	(fow	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding Condition: Not associated with pond/lake)

Criteria	4	+		Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	Mark and a second
Waterbody at least 10' deep	Yes		No No	w man
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	No		
Sandbar present at inlet?	No		Yes	
Water transparency	High	High		
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	No		
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function@resent	Yes		No	
Degree of Function	High	Mod	Low	· ·

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	(Yes)	No	·
Gravel spawning areas present	Yes	(No)	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	Currented above
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	(Low)	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	(Wide	Narrow	
Watershed development		High	,
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly	intolera	ant	Mostly tolerant	Unknown
Function Present	(Yes/			No	Fish present in pooled areas
Degree of Function	High)	Mod	Low	11.

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	No)	-
Duration of water retention in wetland	Long	. Short	
Evidence of sediment trapping in wetland	Yes	(Low)	
Vegetation density	(High)	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	No	Yes	·
Water flow through wetland	Diffuse	Channelized	
Ponded water present	(Yes)	No	· · · · · · · · · · · · · · · · · · ·
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	(Yes)	No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Tes)	No	No inputs
Degree of Function	High Mod	Low	<u></u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	- + .	- .	Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	(Yēs	No	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	· · · · · · · · · · · · · · · · · · ·
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	(Yes)	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes			No		·
Degree of Function	High		Mo	9	Low	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	-			,		
Criteria		T	+		-	Comments
Wildlife food sources in wetland	-	Abunda	ant)		Few	
Vegetation density		High			Low	
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes			No	
Wetland has high degree of plant community structure and species diversity		Yes			(No)	
Detritus development is present within this wetland	į	Yes			No.	
Flowering plants used by nectar gatherers present		Yes			(No)	
Evidence of wildlife use in wetland		(es)			No	
Fish or shellfish develop/occur in wetland		(G)			No	
Function Present		(es)			No	·
Degree of Function		High	. N	lod	Low	
S&SS/SEDIMENT/SHORELINE STABILIZATION				_		
Criteria		+			-	Comments
Topographical gradient in wetland	Yes			(M)		
Potential sediment sources upstream or upslope	Yes			(No)	i	·
Wetland border >10' adjacent to pond or water	Yes			No		
Distinct shoreline or bank evident between wetland and water	No			Yes	_	
Open water fetch present	Yes			No)		
Boating activity present	Yes			(No))	
Floodplain stabilizing trees and shrubs present	Yes		_	No		
Indications of erosion or silitation present	Yes			(No))	
Function Present	(Pes)			No		
Degree of Function	High		Mod	(Low	
REC/RECREATION						
Criteria	+			·	Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes			(Z)		
Fishing is available in or from the wetland	Yes			<u> </u>		
Hunting is permitted in wettand	Yes			(No	<u> </u>	
Hiking occurs or has potential to occur in wetland	(Yes)			No		potential
Wetland is a valuable wildlife habitat	Yes			No		

Wetland has high visual/aesthetic quality	(Yes)	No	
Boating or canoeing feasible in wetland	Yes	(ii)	
Off-road public parking near wetland available	Yes	(No)	
Safety Hazards (if present list them)	Yes	No.	
Function Present	(Ŷês)	No	
Degree of Function	High (M	lod) Low	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to High	
Wetland fragmentation by development	Liffie or None	Moderate to High	<u> </u>
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(ES)	No No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(es)	No	
Size of landscape block in which wetland is located	(Large)	Small	
Wildlife food sources in wetland	Abundant	Few '	
Interspersion of vegetation and open water	(High)	Low	
Upland islands	Present	Absent	,
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Emarge march
Vegetation density	High	Low	Emergent marsh
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		,	Herb, leaf Litter
Wetland plant species diversity	High Mod (Low)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Vernal pool	Yes .	(No)	
Edge diversity (List types)		_	
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	(Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	(Yes)	No.	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	Yes	(No)	<u> </u>
Proximity to schools	Near	Far	Bowdoin College
Wetland contains perennial watercourse	(No	O .
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			·
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	(es)	No	
Degree of Function	High M	lod (Low)	
	<u> </u>		

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes		(No)	
Wetland locally/regionally significant	Yes		(M9)	
Function Present	Yes		(1/20)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	÷		Comments
Visible from primary viewing locations	Yes	1(0)	
Views absent trash, debris, sign of degradation	Yes	(No)	
Low noise level	(PS)	No	
Visual landuse contrast with wetland	(Yes)	No	
Function Present	(Yes)	No	
Degree of Function	High Mod	(Low)	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	N	
Wetland contains critical habitat for state or federal listed species	Yes	(%)	
Area appears in state or national database	Yes	(Ng	

				<u> </u>
Function Present	Y	'es		(No)
Degree of Function	Н	ligh	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/40	Mod	High	Mod	Wod	High	Mod	Mod	low	No	low	No "

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, takes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 51 Da	ate: N/A	Functional Un	t:	Weaf	her: N/A	Time Start: N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Re	ecent Precipitati	ion: N/A	Below ave	rage 🗌 .	Average 🗌	Above Average	☐ Don't Know ☐	I TBÐ □
Wildlife Investigation Method: Cover search ⊠	Dip netting		Auditory D	3	Scat 🛛	Tracks 🗵	Minnow Traps □	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	1	-						
Class	Subclass				· <u>-</u>			
POW/ Open water	Vegetated		Non-Vegetated				<u>_</u>	
PEM/PSS Deep Marsh	Dead Woody	Shrub	Sub-st	rub	Robust_	Narrow-leav	ved Broad-leav	ed
PAB/ Shallow Marsh	Robust	Narrow	-leaved	Broad-leave	d Fl	oating leaved		
PFL / Seasonally Flooded Flats	Emergent		Shrub			<u> </u>		
PEM / Wet Meadow	Ungrazed		Grazed		<u></u>	_	<u> </u>	_ _
PSS / Shrub Swamp	Sapling	Bushy		Compact	A	quatic _	<u>-</u>	
PEO/Wooded Swamp	Deciduous	_	Evergreen €	_				<u> </u>
Bog	Compact shrul	b _	Bushy shrub	<u>-</u>	Wooded		ergent	- sylve in grouding
Water Regimes (Cowardin Modifier):	- -			season.	but are unsati	urated by end of se	d to surface, especially eason in most years; su	rface water absent
Permanently flooded (H) - water covers land surfa				except fo	or ground wate	er seepage and ov	erland flow	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the ye	ar excep	ot in years	season,	but water tabi	le usually lies well	present for brief periods below soil surface for m	ost of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout g	growing s	eason in	intermitt variable	ently flooded (periods witho	(J) - substrate usua ut detectable seas	ally exposed, but surfactional periodicity~	e water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period most years	ls especi	ally early in	Artificiall etc	y flooded (K)	- amount/duration	of flooding controlled by	/ dikes dams, pumps
Hydrology:	•	•						
Ground water discharges present:	/es N	lo			Depth to fre	e water:		
If Present: Slope or Depressional					Depth to sa	turation:		
Surface water depth:	average - ·	m	aximum -		Signs of alt	ered hydrology?	Yes	No
Hydrology indicators: Inundated	Saturated in uppe	er12" W	/ater marks _ [rift lines	Sediment de	-	nge patterns within wette	
Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots	tophores F Rhizospheric oxid	Polymorp dation		Buttressed tree root systems	es Hyp Floa	pertrophied lentice Sting leaves	ls Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate		Somewha	it Poorly	Poorly	Very	/ Poorty	Mapped Hydric Soil	·
Slope: Nearly level Gentle	Moderate	<u> </u>	Steep				•	•
Upland Border:								·
	Gentle	يائمر	oderate	Steep				
Cover Types: Mature forest	Sapling f	orest	Shrub th	cket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees) Þ :	Saplings	;	Shrubs	Herbs	Grass		
Soil: Bucz-Buxto	n silt L	oau						

1	.eaf	lit4	er

Well developed

Moderately well developed

Absent

Cover objects:

Yes

Bark

Boulders

Rocks

Evidence of Erosion:

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wettand associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes (No)		
Degree of Function	High A	od Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledg		- Comments
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	Well developed	Non/Poorly)	
Wetland contains an outlet, no inlet	Yes	developed	
Function Present	Yes	7/6)	Inlet & outlet
Degree of Function	High Mod	Low	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	\$malj	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentie	Moderate Stee	n
Wetland characterized by variable water level?	Yes	No	*
Wetland in floodplain of adjacent watercourse	Yes	No	· · · · · · · · · · · · · · · · · · ·
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No .	
Wetland outlet restricted	(Pes)	No -	
Wetland vegetation density	High	(Low)	
Wetland microrelief	Well developed	None/Poorly developed	

	~\			
Function Present	Yes	No	water impounded by berm-culveted	
Degree of Function	High	(Mod) Low	into Harps well Cove.	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

		_		
Criteria		+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shru	ib, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	National Control of the Control of t
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	ANTENNAME	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	_High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u> </u>	Yes	
Function Present	Yes_	<u> </u>	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	- Application
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	PARTITION OF THE PARTY OF THE P
Dominant bottom substrate	Gravel/cobbles	Sand/silt	· www.mist.mist.mist.mist.mist.mist.mist.mist
Substrate embeddedness by sand & silt	Low	High	The Control of the Co
Instream habitat diversity (riffle, run, pool, shallow, deep)	"High	LOW	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	ana .
Bank vegetative cover	High (trees, shrubs)	Low	The state of the s
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	and a second
Riparian zone	Wide	Narrow	
Watershed development	Low	High	The state of the s
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intole	erapit	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	1

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	- +		Comments
Sources of sediments or toxicants upstream	Yes	(No)	Confidents
Duration of water retention in wetland	(Long)	Short	
Evidence of sediment trapping in wetland	Yes	(Low)	
Vegetation density	High	(N <u>o</u>)	
Wetland edge broad and intermittently aerobic	Yes	(Low)	
Drainage ditches in wetland	(NO)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	(Yes)	No	<u> </u>
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No.	<u> </u>
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	<u> </u>
Indicators of erosion or high water velocities are present	<u> </u>	Yes	Impounded by berm
Function Present	(Yes)		
Degree of Function	High (Mod	Low	-
NEDDAN ITOITH DEPONAL INC.		LOW	<u> </u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Crîteria	+		T
Wetland size in relation to watershed	Large	(C	Comments
Potential sources of excess nutrients upstream	Yes	(Small)	
Wetland is saturated most of the season	(Yes)		
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	(No)	
Vegetation density	High	Channelized)	
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	Yes	No No	
Soil type	Organic/high clay	Sand/gravel	
Welland basin topographic gradient	Low	High	
Wetland microrellef	Well developed	None, poorly developed	

Function Present	Yes/		No				
Degree of Function	High		(Mod)	<u> L</u>	ow		
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)			_				
Criteria			+		Comments		
Wildlife food sources in wetland		Abundant	_	Eew		<u> </u>	
Vegetation density		High		(ow)			<u>_</u>
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes	_	, No	<u> </u>		
Wetland has high degree of plant community structure and species diversity		Yes					_
Detritus development is present within this wetland		Yes		No			
Flowering plants used by nectar gatherers present		Yes		N _Q		<u>-</u>	
Evidence of wildlife use in wetland		Yes		<u>@</u>)		
Fish or shellfish develop/occur in wetland	·	Yes	<u>_</u>	(No			
Function Present		Yes	<u></u>	No			
Degree of Function		High	Mod	(Low)		<u> </u>	
S&SS/SEDIMENT/SHORELINE STABILIZATION							<u>.</u>
Criteria		+		<u> </u>	Comments	<u>-</u>	
Topographical gradient in wetland	Yes)	<u> </u>	No				
Potential sediment sources upstream or upstope	Yes		Q			_	
Wetland border >10' adjacent to pond or water	Yes		(W	ريو	·	<u> </u>	
Distinct shoreline or bank evident between wetland and water	(NO)		Ye	<u> </u>			· <u> </u>
Open water fetch present	Yes	_ <u>-</u> _		<i>-</i>			
Boating activity present	Yes	<u>.</u>	(N		_		
Floodplain stabilizing trees and shrubs present	(Yes	<u> </u>	N-				
Indications of erosion or siltation present	Yes	<u> </u>	(N		·		_
Function Present	(Yes) 	N				
Degree of Function	High	: Îv	tod	(Low)			

Criteria	. +		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	(No) ·		
Fishing is available in or from the wetland	Yes	(6A)		
Hunting is permitted in wetland	Yes	(No)		<u>. </u>
Hiking occurs or has potential to occur in wetland	Yes	No	Potential	
Wetland is a valuable wildlife habitat	Yes	(NO)		

Yes	
1 169	(No)
Yes	(No)
Yes	(No)
High Mo	The country
	Yes

WLH/WILDLIFE HABITAT

Criteria	+	T -	Comments
Wetland degradation by human activity	Little or None	(Vioderate to	Continents
Wetland fragmentation by development	Little or None	High Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(Yes)	No.	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	w
Vegetation density	High ·	(ow)	. (//
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			T - 1 - 1 - 1
Wetland plant species diversity	High Mod Low	 	Tree, leaflitter, herb
Vernal pool	Yes	(No)	
Edge diversity (List types)		 	
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few _	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance	None or Low	High	
Ermatin Du	Yes	No	
Degree of Europian	High (Mod)	Low	i

Criteria	+		Comments
Wetland contains listed species	Yes	(Ng)	· · · · · · · · · · · · · · · · · · ·
Wetland provides valuable wildlife habitat	Yes	No	moderate
Wetland class diversity	High	LOW)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	. Yes		
Proximity to schools	Near	Far	Bowdoin College
Wetland contains perennial watercourse	Yes	(A)	<u> </u>
Wetland contains pond/lake	(es)	No	
Safety hazards (if present list them)			<u> </u>
Site currently used for educational/scientific purposes	Yes	(N6)	
Function Present	(es)	No	
Degree of Function	High Mod	Low	·

U/H/UNIQUENESS/HERITAGE

Criteria	<u> </u>	+		Comments
Wetland contains listed species	Yes			
Wetland identified as exemplary natural community	Yes		<u>@</u>	<u> </u>
Wetland locally/regionally significant	Yes	. <u>_</u>	(Q)	
Function Present	Yes			
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments
Visible from primary viewing locations	Yes	(NO)	
Views absent trash, debris, sign of degradation	Yes	Ke)	
Low noise level	(Yes)	No _	
Visual landuse contrast with wetland	Yes	No	
Function Present	(Yes)	No	
Degree of Function	High Mod	(Low)	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(%)	
Wetland contains critical habitat for state or federal listed species	Yes		
Area appears in state or national database	Yes	(No)	

Function Present	Yes		(No)		
Degree of Function	High	Mod	Low		

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

G	WR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
	No	Mod	No	Mod	mod	low	low	mod	Low	No	Low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 52 D	ate: N/A l	Functional U	nit:	Weat	her: N/A	Time Start: N/	A Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Re	ecent Precipitat	ion: N/A	Below av	erage 🗌	Average 🗌	Above Average	☐ Don't Know	v □ TBD □
Wildlife Investigation Method: Cover search ⊠	Dip netting	3 □	Auditory	X.	Scat 🗵	Tracks 🛚	Minnow Traps 🗌	Electro-shocking [
Wetland Types(s) Cowardin/Golet Classification	າ							<u></u>
Class	Subclass	_	<u> </u>			<u>-</u>	<u>.</u>	<u>-</u>
POW/ Open water	Vegetated		Non-Vegetate	:d			<u> </u>	<u> </u>
PEM/PSS Deep Marsh	Dead Woody	Shrub	Sub-s	shrub	Robust	Narrow-leav	ed Broad-	eaved
PAB/ Shallow Marsh	Robust	Narrow-	leaved	Broad-leave	d Fi	oating leaved		<u></u>
PFL / Seasonally Flooded Flats	Emergent		Shrub	<u>.</u>				<u> </u>
PEM / Wet Meadow	Ungrazed	_	Grazed	<u></u>	_			<u>.</u>
PSS / Shrub Swamp	Sapling	Bushy	· · ·	Compact	A	quatic		<u> </u>
PFO / Wooded Swamp	Deciduous	_	Evergreen					
Bog	Compact shru	b	Bushy shrub	· 	Wooded		ergent	W Lain mousing
Water Regimes (Cowardin Modifier):	_			/season.	but are unsate	urated by end of se	eason in most years	ally early in growing s; surface water absent
Permanently flooded (H) - water covers land surfa				except fo	or ground wate	er seepage and ove	erland flow	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the y	ear excep	t in years	season,	but water tabl	e usually lies well i	below soil surface f	iods during growing or most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout	growing s	eason in	Intermitt <i>variabl</i> e	ently flooded (periods witho	(J) - substrate usua ut detectable seas	ally exposed, but su onal periodicity~	rface water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period most years	ds especia	ally early in	Artificial etc	ly flooded (K)	- amount/duration	of flooding controlle	ed by dikes dams, pumps
_ Hydrology:								
Ground water discharges present:	es N	10			Depth to fre	e water:		
if Present: Slope or Depressional					Depth to sa	turation:		
Surface water depth:	average -	ma	aximum -		Signs of alt	ered hydrology?	Yes	No
Hydrology indicators: doundated	Saturated in upp	er 12) W	ater marks	Drift lines	Sediment de	posits Draina	ge patterns within v	
Plant Adaptations to Hydrology: Pneuma	tophores l Rhizospheric oxi	 Polymorph dation		Buttressed tree root systems		ertrophied lenticel iting leaves	s Stooling Floating stems	inflated leaves,
Soil Drainage classes: Well Moderat	ely Well	Somewha	t Poorly	Poorly	Very	/ Poorly	Mapped Hydric S	oil
Slope: Nearly level Gegile	Moderat	е	Steep					
Upland Border:						•		
_ 	Gentle	M	oderate	Steep				
Cover Types: Mature forest	Sapling	forest	Shrub t	hicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (Trees	D <	Saplings	D	Shrubs	Herbs	Grass		

Soil: Bucz - Buxton Silt loam

Leaf litter:	Well developed	Mode	rately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)		Noono

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	l
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present Degree of Function	Yes No	<u> </u>	
Degree of Pulletion	High (Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge	- 	Comments
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly	
Wetland contains an outlet, no inlet	(Yes)	developedNo	
Function Present	(Yes)	No	
Degree of Function	High Mod	Low	
			<u> </u>

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	(Smail)		Comments
Amount of impervious surface in wetland watershed	Large	Small)		
Wetland Slope	Gentie	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No.		
Wetland in floodplain of adjacent watercourse	Yes	(No)		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)		
Watershed has a history of economic loss due to flooding	Yes	No		lation
Wetland outlet restricted	Yes	(No)	<u> </u>	10000-1000-1
Wetland vegetation density	High	Low)		
Wetland microrelief	Well	None/Poorly developed	_ _	

Function Present	Yes	No		
Degree of Function	:High	Mod	.ow)	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		<u>-</u>	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	i.awn_	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	- Michigan Children
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		_Yes	
Sandbar present at inlet?	No		Yes _	
Water transparency	High		-Low_	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	<u> </u>
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	_ -	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	÷		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, poot, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	<u> </u>
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly into	lerant	Mostly tolerant	_
Function Present	Yes		No	
Degree of Function	fligh	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	(Ng)	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Sw -	
Vegetation density	(High)	No	
Wetland edge broad and intermittently aerobic		Low	<u> </u>
Drainage ditches in wetland	No No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	(Low)	High	<u> </u>
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	
Indicators of erosion or high water velocities are present	(No)		
Function Present	Yes	Yes	
Degree of Function	High Mod	No	<u> </u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Community
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant.	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No.	
Deep or open water habitat is present	Yes	No	-
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	content		
Wetland microrelief	Well developed	High None, poorly developed	

	\mathcal{A}						
Function Present	Yes			No.			
Degree of Function	High		(100 <u>)</u>	<u>) </u>	Low		
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)			-				
Criteria			+		-	Comments	
Wildlife food sources in wetland		Abundant			Few	}	
Vegetation density		High			Low	<u> </u>	
Nutrients and/or organic matter flushed out of wetland into watercourse		(Yes)		•	No		
Wetland has high degree of plant community structure and species diversity		(es)			No		
Detritus development is present within this wetland		(Yes)			No		
Flowering plants used by nectar gatherers present		Yes			(NO)		
Evidence of wildlife use in wetland		(es)			No	Vernal	pools
Fish or shellfish develop/occur in wetland		Yes			(No)_		<u>-</u>
Function Present		(Ye)			No		
Degree of Function		(High)	Mod	d	Low		
S&SS/SEDIMENT/SHORELINE STABILIZATION							
Criteria		+			•	Comments	
Topographical gradient in wetland	Yes			No			<u> </u>
Potential sediment sources upstream or upslope	Yes			(vi)		<u> </u>	
Wetland border >10' adjacent to pond or water	Yes			No		<u> </u>	<u> </u>
Distinct shoreline or bank evident between wetland and water	No)			Yes			<u> </u>
Open water fetch present	Yes			(M)		<u>.</u>	
Boating activity present	Yes			(M)	<u> </u>	<u> </u>	
Floodplain stabilizing trees and shrubs present	(Yes)		No			
Indications of erosion or siltation present	Yes			<u>(%)</u>		<u> </u>	
Function Present	(Yes	<u> </u>		No			
Degree of Function	High	(Mc	<u> 연기</u>	!	Low ·	_	
REC/RECREATION						· ·	·
Criteria		+			-	Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	<u></u>		(No)		<u> </u>	
Fishing is available in or from the wetland	Yes			(w)	·	<u> </u>	
Hunting is permitted in wetland	Yes			(No)	· 	<u> </u>	
Hiking occurs or has potential to occur in wetland	(Yes			No		Poten	tial
Wetland is a valuable wildlife habitat	Yes	<u>) </u>		No			

Wetland has high visual/aesthetic quality	Yes	(No)		
Boating or canoeing feasible in wetland	Yes	(No)		
Off-road public parking near wetland available	Yes	No		
Safety Flazards (if present list them)	Yes	(No)	<u> </u>	
Function Present	Yes	No		
Degree of Function		od (w)	Potential	

WLH/WILDLIFE HABITAT

Criteria	+	<u> </u>	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	(Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	High	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No -	
Size of landscape block in which wetland is located	Large	Smail	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Cresent	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(low)	wooded swamp
Vegetation density	Migh	Low	soce swarms
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, Sapung, Herb, leaf litter
Wetland plant species diversity	High Mod (Low)	-	Tree, capang, Frevo, Tear litter
Vernal pool	Yes	No	
Edge diversity (List types)			Forest
Water regime	Wetter	(Drier)	- Gresi
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	(Absent)	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	Mene or Low	High	
unction Present	(Yes)	No	
Degree of Function	High Mod	Low	

Criteria	+	-	Comments
Wetland contains listed species	Yes	(N)	
Wetland provides valuable wildlife habitat	(Yes)	No	
Wetland class diversity	High	(w)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(Fow)	Forest
Off-road parking near wetland available	Yes	(No.)	
Proximity to schools	Near	Far	Bowdoin College
Wetland contains perennial watercourse	Yes	(No)	
Wetland contains pond/lake	Yes	No	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	(Yēs₁	No	
Degree of Function	High Mod	(Low)	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes	•	(49)	
Wetland locally/regionally significant	Yes		(Ng)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	·

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments
Visible from primary viewing locations	Yes	(No)	<u>-</u>
Views absent trash, debris, sign of degradation	Yes	(No)	
Low noise level	(Yes)	No	
Visual landuse contrast with wetland	Yes	(Nô)	
Function Present	(Yes)	No	
Degree of Function	High Mod	(Low)	

ESH/ENDANGERED SPECIES HABITAT

Criteria .	+	-	Comments		
Wetland contains or known to contain federal listed species or habitat	Yes	(No)			
Wetland contains critical habitat for state or federal listed species	Yes	(No)			
Area appears in state or national database	Yes	(No)		_	

Function Present	Yes	S	(b)
of Function	High	h Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/mod	low	No_	Mod	Mod	High	low	brah	low	No	Mod	Nh
CHARRADY A	E FUNCTIONS		· -			·	77	·	· — ·		

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo # 241 Direction: S MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 53 D	ate: N/A F	Functional Un	it:	Weat	her: N/A	Time Start:	N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitat	ion: N/A	Below ave	erage 🗌	Average 🗌	Above Average	. ☐ Don't	Know □	TBD 🔲
Wildlife Investigation Method: Cover search ⊠	Dip nettin	g 🛚	Auditory D	₹	Scat 🛛	Tracks 🛛	Minnow Traps	š 🔲	Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classification	n					<u>. </u>			· .
Class	Subclass								
POW/ Open water	Vegetated		Non-Vegetated	<u>i</u>	·				
PEM/PSS Deep Marsh	Dead Woody	Shrub	Sub-si	hrub	Robust	Narrow-lea	ved B	road-leave	ed
PAB/ Shallow Marsh	Robust	Narrow-l	eaved	Broad-leave	d Fl	oating leaved			
PFL / Seasonally Flooded Flats	Emergent_	;	Shrub	<u></u>	<u></u>				
PEM / Wet Meadow	Ungrazed		Grazed	_	-				
(PSS / Shrub Swamp)	Sapling (Bushy)	Compact	A	quatic			
PFO / Wooded Swamp	Deciduous		Evergreen				_,		
Bog	Compact shru	b	Bushy shr <u>u</u> b	<u>-</u>	Wooded		ergent		
Water Regimes (Cowardin Modifier):				Seasona season	illy saturated (but are unsatu	Y) - soils saturate	d to surface, e: eason in most '	specially e vears; sur	early in growing face water absent
Permanently flooded (H) - water covers land surfa-	ce throughout ye	ear in all ye	ears	except fo	or ground wate	er seepage and ov	erland flow	•	
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the y	ear except	in years	Tempora season,	arily flooded (A but water tabl	() - surface water o usually lies well	present for brie below soil surf	f periods (ace for mo	during growing ost of the season
Semi-permanently flooded (F) - surface water pers	sists throughout	growing se	eason in	Intermitte variable	ently flooded (periods withou	J) - substrate usu ut detectable seas	ally exposed, b conal periodicity	ut surface /~	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period most years	is especia	lly early in		•				dikes dams, pumps,
Hydrology:	-								
Ground water discharges present: Y	'es N	ţo.			Depth to fre	e water:			
If Present: Slope or Depressional	•				Depth to sat	uration:			
Surface water depth:	verage -	ma	ximum -		Signs of alte	ered hydrology?	Yes		No
Hydrology indicators: inundated S	Saturated in uppe	er 2" Wa	iter marks - E	Orift lines	Sediment de	posits Draina	ige patterns wi	thin wetiar	nds Other
Plant Adaptations to Hydrology: Pneumal stems, or roots Adventitious roots F	ophores l' Rhizospheric oxid	Polymorphi dation		Buttressed tree root systems		ertrophied lentice ling leaves	ls Stoo Floating sten	_	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well S	Somewhat	Poorly	Poorly	} Very	Poorly	Mapped Hyd	ric Soil	
Slope: Nearly level Gentle	Moderate	e	Steep				•		
Upland Border:									
`	3entle	Mo	derate	Steep					•
Cover Types: Malure forest)	Sapling f	orest	Shrub thi	icket	Meadow	Mowed lawn	Farn	a	
Vegetation Density(S/M/D): Prees	M/0 "	Saplings.	D 5	Shrubs	Herbs	Grass			

Soil: Sn - Scantic silt loam . Hydric soil

Leaf litter:	Well developed	Mo	derately well developed	Absent			
Cover objects:	Cogs	Bark	Boulders	Rocks			
Evidence of Erosion:	No Yes	(Explain)	· · · · · ·				
GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)							

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow-ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(No.	
Slope	Gentie	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High M	od Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well-developed	Non/Poorly	
Wetland contains an outlet, no inlet	Yes	developed No	
Function Present	Yes	No -	
Degree of Function	High (Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	(\$mall)	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(Rio)	· · · · · · · · · · · · · · · · · · ·
Watershed has a history of economic loss due to flooding	Yes	No	unknown
Wetland outlet restricted	Yes	No	Curverted into stream
Wetland vegetation density	High	Low	Converse into stream
Wetland microrelief	Well developed	None/Poorly developed	

	<u>/</u>		
Function Present	Yes	No	
Degree of Function	High (Mod Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	-			- Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral-zone with emergent vegetation present?	Yes		No	<u>-</u>
Waterbody at least 10" deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	The state of the s
Direct stormwater discharge via culvert?	-No		-Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	<u></u>	No	
Degree of Function	High	Mod	Low	v

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	÷	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	·
Barriers to anadromous fish-(dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	- Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Nаrrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolera	ant	Mostly tolerant	
Function Present	 Yes	· ·	No	
Degree of Function	 Hìgh	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	_	Comments
Sources of sediments or toxicants upstream	(Yes)	No.	Golfcourse
Duration of water retention in wetland	Long	Short	Golf Course
Evidence of sediment trapping in wetland	Yes	LÓW	
Vegetation density	(High)	No	
Wetland edge broad and intermittently aerobic	Yes	(LOW)	-
Drainage ditches in wetland	No	(Yes)	
Water flow through wetland	Diffuse	Channelized	Culverted under dirt Rd.
Ponded water present	(Yes)	No	<u> </u>
Wetland basin topographic gradient	16W)	High	
Fine grained mineral or organic soils present	Yes	No.	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	
indicators of erosion or high water velocities are present		Yes	
Function Present	Yes	No No	
Degree of Function	High (Mod		_

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	÷		Comments
Wetland size in relation to watershed	Large	(Smatt)	Continents
Potential sources of excess nutrients upstream	Yes	No -	
Wetland is saturated most of the season	(Yes)	No	Golf course
Emergent vegetation and/or dense woody stems are dominant	(es)	No .	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	(Yes)	No -	
Deep or open water habitat is present	Yes	(No)	-
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(ow)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)	No	
Degree of Function	(Aigh)	Mod Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(F)	No	
Wetland has high degree of plant community structure and species diversity	(Yes)	No	
Detritus development is present within this wetland	(Ŷes)	No	
Flowering plants used by nectar gatherers present	(Yes)	No	
Evidence of wildlife use in wetland	(Yes)	No	Vernal pool
Fish or shellfish develop/occur in wetland	Yes	(%)	
Function Present	(es)	No	
Degree of Function	(High) Mod	Low	

\$&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+				Comments
Topographical gradient in wetland	(Yes		No		
Potential sediment sources upstream or upslope	Yes		No		
Wetland border >10' adjacent to pond or water	Yes		No		
Distinct shoreline or bank evident between wetland and water	No		Yes		<u> </u>
Open water fetch present	Yes		No		
Boating activity present	Yes		No		<u></u>
Floodplain stabilizing trees and shrubs present	Yes		No	<u> </u>	
Indications of erosion or siltation present	Yes		No		
Function Present	Yes		(M)		
Degree of Function	High	Mod		Low	

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	(Yes)	Nο	Adi to golf course, trails
Fishing is available in or from the wetland	Yes	®	
Hunting is permitted in wetland	Yes	(No)	· · · · · · · · · · · · · · · · · · ·
Hiking occurs or has potential to occur in wetland	Yes	No	
Wetland is a valuable wildlife habitat		No	

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canoeing feasible in wetland	Yes	NO -	
Off-road public parking near wetland available	(Yes)	No No	
Safety Hazards (if present list them)	Yes	(No)	
Function Present	(Yes)	_ No	
Degree of Function	High (M		

WLH/WILDLIFE HABITAT

Criteria	+			Comments
Wetland degradation by human activity	Little or None	_	Moderate to High	Altered with culverts
Wetland fragmentation by development	Little or None	_	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes		High	Bisected by dirt rd. Forest + shrub thicket
Buffer width	Good to Excel	Jent .	Fair to Poor	TO THE TOTAL POLICE
Connectivity with other wetlands	(Yes)	_	No	
Size of landscape block in which wetland is located	Large		Small	
Wildlife food sources in wetland	Abundant		Few	
Interspersion of vegetation and open water	High		Low	
Upland islands	Present		(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	_	(COW)	Shrub swamp
Vegetation density	High		Low	The at gooding
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		 i		Sapling, shrub, herb, reaflitter
Wetland plant species diversity	(High) Mod	Low		Jen of the state
Vernal pool	Yes		No	
Edge diversity (List types)				
Water regime	(Wetter)		Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant		(FeV)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant		/Few)	
Flat rocks in/near watercourse (stream salamanders)	Present		Absen	
Sphagnum hummocks next to shallow pools	Present		Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	. 8	Absent	
Abundance of invasive exotic flora	None or Low		High	Cana la management de and
Function Present	Yes		No	Some Japanese knotweed at S. end
Danier		l fod	Low	
			1 1	

Criteria	+	-	Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	(Yes	No	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest, Sapting / Shrub, Golf course
Off-road parking near wetland available	(Yes)	Ν̈́ο	
Proximity to schools	Near	Far	Boudain college Culverted into officerun
Wetland contains perennial watercourse	Yes	No	Culverted into France
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(6)	
Function Present	(es)	No	
Degree of Function	High (Mod)	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+ .	-	Comments
Wetland contains listed species	Yes		(A)	
Wetland identified as exemplary natural community	Yes		NO .	
Wetland locally/regionally significant	Yes		(e)	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	· +	-	Comments
Visible from primary viewing locations	Yes	(No)	
Views absent trash, debris, sign of degradation	Yes	No	
Low noise level	Yes	(NO)	Near airfield
Visual landuse contrast with wetland	Yes	No	
Function Present	Yes	No	
Degree of Function	High Mod	(w)	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	
Wetland contains critical habitat for state or federal listed species	Yes	(e/A)	
Area appears in state or national database	Yes	(No)	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE .	REC	WLH	ED/S	U/H	S&S	ESH
comprod	mod	No	Waq	High	High	Mod	High	Mod	No	No	No
CHISSES & DOZ	T			//	11		n			-	

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo # 242 Direction: E MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ⊠ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/. Dip netting	A Functional Unit: A Below average Auditory ⊠	Weat ☐ Average ☐ Scat ☑	Above Average	e Start: N/A Don't Know ☐ now Traps ☐	Time Stop: N/A TBD ☐ Electro-shocking [
Class	Subclass	·				
POW/ Open water	(Vegetated)	Non-Vegetated				
PEM/PSS Deep Marsh	Dead Woody Shrut	Sub-shrub	Robust	Narrow-leaved	Broad-leave	ed
PAB/ Shallow Marsh	Robust Narro	w-leaved Bro	ad-leaved Fl	loating leaved		
PFL / Seasonally Flooded Flats	Emergent	-Shrub				
PEM / Wet Meadow	Ungrazed	Grazed			·	
PSS / Shrub Swamp	Sapling Bush	y Cor	npact A	quatic		
PFO / Wooded Swamp	Deciduous	Evergreen		<u>-</u>		
Bog	Compact shrub	Bushy shrub	Wooded	Emerger		
Water Regimes (Cowardin Modifier):			Seasonally saturated (season, but are unsatu	Y) - soils saturated to surated by end of season	urface, especially e in most vears: surl	arly in growing face water absent
Permanently flooded (H) - water covers land surface	ce throughout year in all	years		er seepage and overlan		
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the year exce	ept in years	Temporarily flooded (A season, but water table	\) - surface water prese e usually lies well below	nt for brief periods o v soil surface for mo	during growing ost of the season
Semi-permanently flooded (F) - surface water pers	sists throughout growing	season in	Intermittently flooded (variable periods withou	J) - substrate usually ex ut detectable seasonal p	xposed, but surface periodicity~	water is present fo
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		cially early in	Artificially flooded (K) efc	- amount/duration of floo	oding controlled by	dikes dams, pumps
Hydrology:						•
Ground water discharges present:	es No		Depth to free	e water:		
If Present: Slope or Depressional			Depth to sat	turation:		
Surface water depth: a	verage -	naximum -	Signs of alte	ered hydrology?	Yes	No
Hydrology indicators: (Inundated) S	aturated in upper 12" \	Water marks Drift lin	nes Sediment de	posits Drainage pa	itterns within wetlar	nds Other
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	ophores Polymor _i Rhizospheric oxidation	ohic leaves Buttre Shallow root s	* *	ertrophied lenticels ting leaves Floa	Stooling ating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ly Well Somewh	at Poorly	Poorly Very	Poorly Mar	oped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep			-	
Upland Border:						
Slope: Nearly level	Sentie 1	Moderate	Steep	•		
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (Trees)	Saplings	M (Shrub	S (Herbs) S	Grass) S		

Leaf litter:

Well developed

Yes

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

(No)

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	Somewhat poorly drained soils
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle)	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mod	Low	Soits could allow some groundwater retherge

GWD/GROUNDWATER DISCHARGE

Criteria		-	Comments
Soils	(Hardpan, shallow ledge)		Somewhat poorly drained soils
Seeps, springs observed?	Yes	No	y diamond dona
Wetland microrelief	(Well developed)	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	[Yes]	·No	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	_		Comments
Wetland size in relation to watershed	(Large)	Small		
Amount of impervious surface in wetland watershed	Large	(Small)		
Wetland Slope	Gentle)	Moderate	Steep	
Wetland characterized by variable water level?	(Yes)	No	<u> </u>	Semi-permanently flooded
Wetland in floodplain of adjacent watercourse	Yes	(NO)		Serve ber mentalik 4/00068
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)		
Watershed has a history of economic loss due to flooding	Yes	No		unknown
Wetland outlet restricted	Yes	(ÑO)		No outlet observed
Wetland vegetation density	(High)	Low		IND OUTLES ODSERVED
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	No No		wetland does hold water for a significant period
Degree of Function	High	(Mod)	Low	of time.

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow	Lawn	Forest
Shallow littoral zone with emergent vegetation present?	Yes	No	
Waterbody at least 10' deep	Yes	(No)	
% of pond covered by submerged or emergent vegetation	15-40%	Other	>40% emergent
Direct stormwater discharge via culvert?	(No)	Yes	•
Sandbar present at inlet?	(No)	Yes	No inlet observed
Water transparency	(High)	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	(No)	Yes	
Pond size ≥0.5 acre	Yes	No)	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	Yes	None observed
Function Present	(Yes)	No	Only semi-permanently flooded. No fish
Degree of Function	High Mod	Low	observed.

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

*Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravei/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	-High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	-Absent or Few	Numerous	
Bank stability	Stable	Unstable: eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	1
Function Present	Yes		No	
Degree of Function	High	Mod	Low	7

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	,	Comments
Sources of sediments or toxicants upstream	Yes	(a)	
Duration of water retention in wetland	(Long)	Short	
Evidence of sediment trapping in wetland	Yes	(Low)	
Vegetation density	(High)	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No.	Yes	
Water flow through wetland	(Diffuse)	Channel	ized
Ponded water present	(Yes)	No	
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	(Yes)	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	Mo colorania
Indicators of erosion or high water velocities are present	(No)	Yes	No watercourse present
Function Present	(Yes)	No	If sediment were present, long retention
Degree of Function		Mod Low	If sediments were present, long retention time 4 no outlet would prevent runoff.

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	4-	-	Comments
Wetland size in relation to watershed	Large	Small	·
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	(Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	(Diffuse)	Channelized	
Vegetation density	(High\	Low	-
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	(Yes)	No	
Soil type	Organic/high clay content	Sand/gravel	Lamoine sill loam
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)			·No		•	If excess nutrient were present, retention time a no outlet	
Degree of Function	(High)		Mod	l	Low		would prevent runoff	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)								
Criteria			÷			Comment	s	
Wildlife food sources in wetland		Abundar	ıt		Few	<u></u>		
Vegetation density		High .		_	Low	<u>.</u> .		
Nutrients and/or organic matter flushed out of wetland into watercourse		Ýes			No			
Wetland has high degree of plant community structure and species diversity	•	Yes			No		<u> </u>	
Detritus development is present within this wetland		Yes			No			
Flowering plants used by nectar gatherers present	:	Yes			No	_		
Evidence of wildlife use in wetland		Yes			No		<u> </u>	
Fish or shellfish develop/occur in wetland		Yes			No		<u></u>	
Function Present		Yes			No			
Degree of Function	gree of Function		Mo	:d	Low		- 	
S&SS/SEDIMENT/SHORELINE STABILIZATION					-			
Criteria		+			- Соп		s	
Topographical gradient in wetland	Yes			No				
Potential sediment sources upstream or upslope	Yes			No		· .	·	
Wetland border >10' adjacent to pond or water	Yes	ş		No		ŀ	<u>.</u>	
Distinct shoreline or bank evident between wetland and water	No			Yes			<u> </u>	
Open water fetch present	Yes	<u></u>		No			<u>-</u>	
Boating activity present	Yes	s		No			<u>-</u>	
Floodplain stabilizing trees and shrubs present	Yes		No		. <u>-</u>	_	<u> </u>	
Indications of erosion or siltation present	Yes		No			_		
Function Present	Yes			No		_		
Degree of Function	High		Mod		Low	<u> </u>	·	
REC/RECREATION								
Criteria		. +	_			Commen	ts	
Wetland is part of recreation area, park, refuge, etc.	Yes			(No)		1	<u> </u>	
Fishing is available in or from the wetland	Yes	· ·		(2)				
Hunting is permitted in wetland	Yes			(No)		<u> </u>		
Hiking occurs or has potential to occur in wetland	Yes			No		Some L	caging roads	
Wetland is a valuable wildlife habitat	(Yes)	}		No				

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canoeing feasible in wetland	Yes	<u> </u>	
Off-road public parking near wetland available	Yes	No	
Safety Hazards (if present list them)	Yes	No	
Function Present	Yes	No.	Not used for recreation.
Degree of Function	High	Mod) Low	The state of the s

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	(Little or None)	Moderate to	Old logging road at Sw end,
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	(No)	
Size of landscape block in which wetland is located	Large	(Small	stoor - dC-ourse the state that
Wildlife food sources in wetland	Abundant\	Few	Near golfcourse and residential development
Interspersion of vegetation and open water	(High)	Low	
Upland islands	Present	(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Company of the second second
Vegetation density	(High)	Low	Open water and emergent marsh
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Short de franches
Wetland plant species diversity	High (Mod) Low	<u> </u>	Shrubs + herbaceous vegetation
Vernal pool	(Yes)	No	Catails dominant
Edge diversity (List types)		<u> </u>	wood frog and spotted salomander egg masses
Water regime	Wetter	Drier	Eorest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	(Abundant)	Few	Sugge of the land
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant \	Few	Snags + fallen logs Logs + branches
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	Logs & branches
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site) .	Present	(Absent)	
Abundance of invasive exotic flora	(None or Low)	<u> </u>	None observed.
Function Present	Yes	No	work observed.
Degree of Function	(High) Mod	Low	·

Criteria	÷	-	Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	(Yes)	No	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(Low)	Forest
Off-road parking near wetland available	Yes	No	Golf course
Proximity to schools	Near	Far	Bowdoin College
Wetland contains perennial watercourse	Yes	(NO)	3
Wetland contains pond/lake	(Yes)	No	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	No	
Function Present	Yes	No	Vernal pool habitat
Degree of Function	(High) Mod	Low	·

U/H/UNIQUENESS/HERITAGE

Criteria	}	+	-	Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes		No)	
Wetland locally/regionally significant	Yes		(No)	
Function Present	Yes		<u>[No]</u>	Not a unique site.
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments	
Visible from primary viewing locations	Yes	(No)		
Views absent trash, debris, sign of degradation	(Yes)	No		
Low noise level	Yes	(No)	Near airfield	
Visual landuse contrast with wetland	Yes	No		<u>_</u>
Function Present	Yes	No	Not highly accessible.	
Degree of Function	High (Mod	I) Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	÷	<u> </u>	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	
Wetland contains critical habitat for state or federal listed species	Yes	(No)	, ,
Area appears in state or national database	Yes	(No)	

Function Present		Yes		(NO)	No listed spp. present.	
Degree of Function	•	High	Mod	Low	1	·

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
mod/mod	Mod	low	High	4rgl,	No	Mod	High	High	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo # 243 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/A Below a Dip netting Auditory	verage Average Above A	N/A Time Start: N/A verage ☐ Don't Know ☐ ☑ Minnow Traps ☐	Time Stop: N/A ☐ TBD ☐ Electro-shocking ☐
Class	Subclass			
POW/ Open water	Vegetated Non-Vegetal	ed		<u> </u>
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-	shrub Robust Narr	ow-leaved Broad-lea	ved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved Floating leav	ed	
PFL / Seasonally Flooded Flats	Ernergent Shrub	<u>-</u>	·	<u></u>
PEM / Wet Meadow	Ungrazed Grazed			
PSS / Shrub Swamp	Sapling Bushy	Compact Aquatic		
PFO / Wooded Swamp	Deciduous Evergreen			
Bog Water Regimes (Cowardin Modifier):	Compact shrub Bushy shrub	Wooded Seasonally saturated (Y) - soils s	Emergent	r early in growing
Permanently flooded (H) - water covers land surfa Intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water personst years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	throughout the year except in years sists throughout growing season in r extended periods especially early in	except for ground water seepage Temporarily flooded (A) - surface season, but water table usually li- Intermittently flooded (J) - substra- variable periods without detectab Artificially flooded (K) - amount/detect	water present for brief period as well below soil surface for r ate usually exposed, but surfa le seasonal periodicity~	most of the season ce water is present for
Hydrology: Ground water discharges present: (Yes No	Depth to free water:		
If Present: Slope or Depressional		Depth to saturation:		
•	average - maximum -	Signs of altered hydrol	ogy? Yes	No
	Saturated in upper 12" Water marks	Drift lines Sediment deposits	Drainage patterns within wet	lands Other
Plant Adaptations to Hydrology: Pneumat	tophores Polymorphic leaves Rhizospheric oxidation Shallov	Buttressed trees Hypertrophied v root systems Floating leaves		Inflated leaves,
Soil Drainage classes; Well Moderate	· · · · · · · · · · · · · · · · · · ·	Poorly Very Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate Steep			
Upland Border:	·		•	
Slope: Nearly level Cover Types: Mature forest Vegetation Density(S/M/D): Trees	Gentle Moderate Sapling forest Shrub Saplings M	Steep thicket Meadow Mowed Shrubs S Herbs S Grass		white pine/red ma

Soil; No Value

J	aaf	TT#	٠
- 1	ear	ш	rer

Well developed

Yes

Moderately well developed

Absent

Cover objects:

(Logs)

Bark

Boulders

Rocks

Evidence of Erosion:

(NO)

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mor	i (Low)	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledg		- Community
Seeps, springs observed?	Yes		
Wetland microrelief	Well developed	Non/Poorly)	
Wetland contains an outlet, no inlet	(Ye)	developed*	
Function Present	Yes	(No)	
Degree of Function	High Mod	Low	_

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Carge	Small	
Wetland Slope	Gentle	Moderate) Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	(es)	No No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(Pis)	No	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	(Yes)	No	
Wetland vegetation density	High	(Low)	Culverted under road
Wetland microrelief	Well developed	None/Poorly developed	

	Yes	No		
Degree of Function	High	Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+	-	-	Comments
Dominant land use adjacent to Waterbody	Forest Shrub,	Meadow	Lawn	Golf course road ways
Shallow littoral zone with emergent vegetation present?	Yes		No ,	
Waterbody at least 10' deep	(Yes)		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	< 1570
Direct stormwater discharge via culvert?	No		(Yes)	Under roadway into perennial stream
Sandbar present at inlet?	No _		Yes	No inlet
Water transparency	High	•	(Low)	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		(Yes)	Fertilizers from golf course
Pond size ≥0.5 acre	Yes		(No)	21175 sq. ft = 0.49 acres
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	unknown, none observed
Function Present	Yes		No	
Degree of Function	High	Mod	(Low)	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high-culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/sitt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	•
Bank stability .	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, underaut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant		Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	(Yes)	No	Runoff from roadway or golf course
Duration of water retention in wetland	(Long)	Short	Court Hash I bushall of your Courte
Evidence of sediment trapping in wetland	Yes	(Low)	
Vegetation density	High	(No)	Little vegetation within ponded area
Wetland edge broad and intermittently aerobic	Yes	(Low)	Narrow wetland edge
Drainage ditches in wetland	(No)	Yes	Warren mertang enge
Water flow through wetland	Diffuse	(Channelized)	
Ponded water present	(Yes)	No ·	
Wetland basin topographic gradient	(COV)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	(NO)	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Yes)	No	
Degree of Function	High (Mod	Low	1

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	. +	-	Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	(Yes)	No	T (32-a, C - 18
Wetland is saturated most of the season	Yes	No	Fertilizer from golf course
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	-
Water flow through wetland	Diffuse	(Channelized)	
Vegetation density	High .	LOW	
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	(Yes)	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	(None, poorly developed)	Namow wetland border

		,				
·	Yes	,	No			
Degree of Function	Higi	h (Mo	[a)	Low		

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	÷		Comments
Wildlife food sources in wetland	Abundant	Few	·
Vegetation density .	High	(Low)	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	Yes	(No)	
Detritus development is present within this wetland	(Yes)	No -	
Flowering plants used by nectar gatherers present	(Yes)	No	
Evidence of wildlife use in wetland	Yes	No	Birds
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	(Yes)	No	Not a highly productive wetland or
Degree of Function	High (Mod)	Low	pond,

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments			
Topographical gradient in wetland	(Yes)	No				
Potential sediment sources upstream or upslope	Yes	No				
Wetland border >10' adjacent to pond or water	Yes	No)	Narrow wetland edge			
Distinct shoreline or bank evident between wetland and water	No.	Yes				
Open water fetch present	(Pes)	No				
Boating activity present	Yes	(No)	-			
Floodplain stabilizing trees and shrubs present	(Yes)	No				
Indications of erosion or siltation present	Yes	No	water is not clear			
Function Present	(Yes)	No	Ponded area isculverted under road into stream and may provide some stabilization to the stream.			
Degree of Function	High (Mo	d) Low	stabilization to the stream.			

REC/RECREATION

Crîterîa	+		Comments
Wetland is part of recreation area, park, refuge, etc.	(Yes)	No	Adjacent to golf course
Fishing is available in or from the wetland	Yes	No)	
Hunting is permitted in wetland	Yes	®	
Hiking occurs or has potential to occur in wetland	(Tes)	No	1
Wetland is a valuable wildlife habitat	Yes	(B)	

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canoeing feasible in wetland	Yes	(No)	
Off-road public parking near wetland available	(Yes)	No	At a off course
Safety Hazards (if present list them)	Yes	(Ñ)	M doll co says
Function Present	(Fes)	No.	while ponded area is adjacent to a
Degree of Function	High	Mog Low	golf course, it does not provide a recreational value

WLH/WILDLIFE HABITAT

Criteria	÷		Comments
Wetland degradation by human activity	Little or None	Moderate to High	Area is highly offered by culvert and
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes .	No	Forest
Buffer width	Good to Excellent	Fair to Poor	while some forested buffer exists, ponded area is also adjacent to roadway.
Connectivity with other wetlands	Yes	(No)	Ponded area culverted into stream
Size of landscape block in which wettand is located	Large	(Small)	The state of the s
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	(Low)	Open water with a narrow wetland border
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Narrow shrub edge
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	<u> </u>		
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	(No)	
Edge diversity (List types)			
Water regime	(Wetter)	Drier	-
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	Some loas and branches
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	4
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	(Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	(High)	Japanese knotweed present approx 200 ft away
Function Present	(Yes)	No _	P. Seer Contract P. Seer Captor 20071 20029
Degree of Function	High Mod	Low)	

Criteria		+		Comments
Wetland contains listed species	Yes		(No)	
Wetland provides valuable wildlife habitat	Yes		(No)	·
Wetland class diversity	High		(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest .
Off-road parking near welland available	Yes		No	At acif course
Proximity to schools	(Near)		Far	Bowdoin College
Wetland contains perennial watercourse	(Yes)		No	panded area culverted into stream
Wetland contains pond/lake	(Yes)		No	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No)	·
Function Present	Yes	-	No	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		-	•	Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes		(No)	
Wetland locally/regionally significant	Yes		[Ng)	
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	(Yes)		No	
Views absent trash, debris, sign of degradation	Yes		(NO)	Trash along roadway
Low noise level	Yes		69	Near airfred and roadway
Visual landuse contrast with wetland	(Yes)		No	
Function Present	(Yes)		No	
Degree of Function -	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	÷	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(N)	
Welfand contains critical habitat for state or federal listed species	Yes	[No)	
Area appears in state or national database	Yes	(No)	

Function Present	Yes	Yes		No listed spp.
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
LOW/NO_	Mos	Cow	Mod	Mol	low	Wod	low	No	No	Wod	Ne

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters, it adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 244 Direction: NW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 56 Date: N/A Functional Unit:	Weather: N/A T	ime Start: N/A Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios R	lecent Precipitation: N/A Below average	Average 🗌 Above Average] Don't Know ☐ TBD ☐
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory ☑	Scat 🛛 💮 Tracks 🖾 🐧	tinnow Traps 🗌 Electro-shocking 🗌
Wetland Types(s) Cowardin/Golet Classification	n ·	·	
Class	Subclass		
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leave	i Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Bro	pad-leaved Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub		<u>-</u>
PEM / Wet Meadow	Ungrazed Grazed		
PSS / Shrub Swamp	Sapling Bushy Co	mpact Aquatic	<u></u>
PFO / Wooded Swamp	Deciduous Evergreen		<u></u>
Bog	Compact shrub Bushy shrub	Wooded Emer	
Water Regimes (Cowardin Modifier):	-	Seasonally saturated (Y) - soils saturated to season, but are unsaturated by end of sea	o surface, especially early in growing son in most years; surface water absent
Permanently flooded (H) - water covers land surfa	•	except for ground water seepage and over	land flow
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	Temporarily flooded (A) - surface water pre season, but water table usually lies well be	esent for brief periods during growing low soil surface for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout growing season in	Intermittently flooded (J) - substrate usually variable periods without detectable season	vexposed, but surface water is present for all periodicity—
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods especially early in n most years	Artificially flooded (K) - amount/duration of etc	flooding controlled by dikes dams, pumps,
Hydrology:			
Ground water discharges present:	Yes) No	Depth to free water:	
if Present: Slope or Depressional	-	Depth to saturation:	
Surface water depth:	average - maximum -	Signs of altered hydrology?	Yes No
Hydrology indicators: Inundated S	Saturated in upper 12 Water marks Drift I	nes Sediment deposits Drainage	patterns within wetlands Other
Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots	tophores Polymorphic leaves Buttre Rhizospheric oxidation Shallow root	essed trees Hypertrophied lenticels systems Floating leaves	Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderate	ely Weli Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep		
Upland Border:			
Slope: Nearly level>	Gentle Moderate	Steep	• • • • • • • • • • • • • • • • • • •
Cover Types: Vature forest	Sapling forest Shrub thicket	Meadow Mowed laws	Farm
Vegetation Density(S/M/D): (ree)	D Saplings M Shru	os Herbs Grass D	

Soil: 15A - Haplaguents - Lamoline complex

Leaf	litter:
------	---------

Well developed

Moderately well developed

Absent

Cover objects:

Evidence of Erosion:

TOPS

Bark

(Explain)

Boulders

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+			Comments
Soils	Sand/gravel outwa	sh	Hardpan, tight fine-grained solfs, shallow ledge	
Wetland associated w/ perennial or, seasonal watercourse	(PES)		No	
Slope	Gentle		Moderate or Steep	
Function Present	Yes No	<u> </u>		
Degree of Function	High	Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	No	
Degree of Function	High: Mod	Low	- -

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	Alt to If among
Wetland Slope	Gentle	Moderate) Steel	Adj. to golf course
Wetland characterized by variable water level?	Yes	0	
Wetland in floodplain of adjacent watercourse	(Yes)	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	NO COM	
Watershed has a history of economic loss due to flooding	Yes .	No	Unknown
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Pacriy developed	

Function Present	ves)	No		·
Degree of Function		Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	4		-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	a in the state of
Shallow littoral-zone with emergent vegetation present?	Yes	'	No	and the second second
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	NO THE PARTY NAMED IN COLUMN TO THE PARTY NAM	Yes	
Sandbar present at inlet?	-No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes -		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+ _		Comments
Channel shaded by riparian trees and/or shrubs	(Yes)	No	
Gravel spawning areas present	Yes	160	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	(Yes)_	Ponded + culverted
Dominant bottom substrate	Gravel/cobbles	Sand/si)t	
Substrate embeddedness by sand & silt	Low	(fligh)	
Instream habitat diversity (riffle, run, pool, shallow, deep)	(High)	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	moderate - golf course + Fourt
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	0
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	Unknow n
Function Present	Yes	_	No	
Degree of Function	High	(Mod)	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	. +.	-	Comments
Sources of sediments or toxicants upstream	Yes	No	Potential rupoff from golf course
Duration of water retention in wetland	Long	(Short)	OTENTIAL VIGASIT FISHERIST COURSE
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	(High)	No	
Wetland edge broad and intermittently aerobic	Yes)	Low	
Drainage ditches in wetland	No.	Yes	
Water flow through wetland	(Diffuse)	Channelized	
Ponded water present	Yes	(No	
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	(Yes)	No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	Yes	No	
Degree of Function	High Mod	} 	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	(Yes)	No .	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	(res)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low .	-
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes		
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Lów)	High	
Wetland microrelief	Well developed	None, poorly developed	

			<u> </u>
Function Present	(Yes/	No	
Degree of Function	High (Mo	d) Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density		Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	(Yes)	No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	TES .	No	Birds
Fish or shellfish develop/occur in wetland	Yes	No)	
Function Present	Yes2	No	-
Degree of Function	High/ Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	•	Comments
Topographical gradient in wetland	(6)	No	
Potential sediment sources upstream or upslope	Yes	No .	
Wetland border >10' adjacent to pond or water	(es)	No	
Distinct shoreline or bank evident between wetland and water	No	(Yes)	
Open water fetch present	Yes	M	
Boating activity present	Yes	(vo)	
Floodplain stabilizing trees and shrubs present	(Yes)	No	
Indications of erosion or siltation present	Yes	(No)	
Function Present	(Yes)	No	
Degree of Function	High Mo	Low	

REC/RECREATION

Criteria	* +	.	Comments
Wetland is part of recreation area, park, refuge, etc.	(Yes)	No	Golfcourse
Fishing is available in or from the wetland	Yes		
Hunting is permitted in wetland	Yes	160	·
Hiking occurs or has potential to occur in wetland	(es)	No	
Wetland is a valuable wildlife habitat	(Yes)	No	

·			
Wetland has high visual/aesthetic quality	\\	No	
Boating or canoeing feasible in wetland	Yes	1703	
Off-road public parking near wetland available	(es)	No	
Safety Hazards (if present list them)	Yes	No	
Function Present	Yes	No	
Degree of Function	(High)	Mod Low	-
· · · · · · · · · · · · · · · · · · ·			

WLH/WILDLIFE HABITAT

Criteria	+	_	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(P)	High No	· · · · · · · · · · · · · · · · · · ·
Buffer width	Good to Excellent	(Fair to Poor)	
Connectivity with other wetlands	(es)	No.	-
Size of landscape block in which wetland is located	Large	Small .	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	(High)	Low	
Upland islands	Present	(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(Cow)	Wooded Sangua
Vegetation density	(ligh)	Low	wooded swamp
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	_		Tree, sapling, shoub, hurb, leaflitter
Wetland plant species diversity	High Mod Low		The service of the se
Vernal pool	Yes	1	
Edge diversity (List types)			Forest, golf cours e
Water regime	Wetter	Drier	, 101. 050-10
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	-
Abundance of invasive exotic flora	(None or Low)	High	
Function Present	(es)	No	
Degree of Function	High (Mod)	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	No	
Wetland provides valuable wildlife habitat	(es)	No	
Wetland class diversity	High	Cow	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest golf course
Off-road parking near wetland available	(Yes)	No	/ /
Proximity to schools	Near	Far	Bowdoin
Wetland contains perennial watercourse	(Veg)	No	
Wetland contains pond/lake	Yes	(6)	
Safety hazards (if present list them)			Goff balls
Site currently used for educational/scientific purposes	Yes	(Nô)	
Function Present	(Yes)	No	
Degree of Function	High Mod	Low .	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		1	
Wetland identified as exemplary natural community	Yes		B	
Wetland locally/regionally significant	Yes		®	
Function Present	Yes		Nd	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	~ +	-	Comments	
Visible from primary viewing locations	(es)	No	·	
Views absent trash, debris, sign of degradation	(Yès)	No		
Low noise level	Yes	N		
Visual landuse contrast with wetland	(Tes)	No	·	
Function Present	Yes	No		
Degree of Function	High (N	lod) Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	. +	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	6	
Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	(1/10)	· .

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
No/High	Mod	Mod	Mod.	mod	High	High	Mod	Mo I	Ne	mod	Nο

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a welfand to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or offier active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or offier resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland,

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 245 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 57 Date: N/A Functional Unit:	Weather: N/A	Time Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation: N/A Below average	☐ Average ☐ Above Average	e 🗌 Don't Know 🖺 TBD 🗒
Wildlife Investigation Method: Cover search	Dip netting ☐ Auditory 🛛	Scat 🛛 💮 Tracks 🖾	Minnow Traps ☐ Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classification	n		<u></u>
Class	Subclass		<u>-</u>
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-lea	ved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Bro	ad-leaved Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub		
PEM / Wet Meadow	Ungrazed Grazed	<u> </u>	
PSS / Shrub Swamp	Sapling Bushy Cor	npact Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen		·
Bog	Compact shrub Bushy shrub		nergent
Water Regimes (Cowardin Modifier):		Seasonally saturated (Y) - soils saturate season, but are unsaturated by end of s	d to surface, especially early in growing eason in most years; surface water absent
Permanently flooded (H) - water covers land surfa	ce throughout year in all years	except for ground water seepage and o	verland flow
Intermittently Exposed (Z) -surface water present of extreme drought		Femporarily flooded (A) - surface water season, but water table usually lies well	present for brief periods during growing below soil surface for most of the season
Semi-permanently flooded (F) - surface water pers most years		intermittently flooded (J) - substrate usu variable periods without detectable seas	ally exposed, but surface water is present for sonal periodicity-
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	was at traces	Artificially flooded (K) - <i>amount/duration</i> etc	of flooding controlled by dikes dams, pumps,
Hydrology:			
Ground water discharges present: Y	es No	Depth to free water:	
If Present: Slope or Depressional		Depth to saturation:	
Surface water depth:	everage - maximum -	Signs of altered hydrology?	Yes No
Hydrology indicators: Inundated S	Saturated in upper 12 Water marks Drift lin	es Sediment deposits Draina	age patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	ophores Polymorphic leaves Buttres Rhizospheric oxidation Shallow root sy	sed trees Hypertrophied lentice stems Floating leaves	ls Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: (Nearly level) Gentle	Moderate Steep		
Upland Border:			
Slope: Nearly level	Sentle Moderate	Steep	
Cover Types: Aviature forest	Sapling forest Shrub thicket	Meadow Mowed lawn	Farm
Vegetation Density(S/M/D): (ress	5 (Saplings) W. Shrubs	Herbs Grass D	
Soil: 15A- Haplaque	nts-lampline temp	€×	

E C	Ifffer	
-cai		

Well developed

Yes

Moderately well developed

Absent

Cover objects: .

ြေဝင်

Bark

Boulders

Rocks

Evidence of Erosion:

No

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments			
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge				- :-
Wetland associated w/ perennial or seasonal watercourse	(Yes)	No			<u> </u>	
Slope	Gentie	Moderate or Steep				
Function Present	Yes No		_		'	-
Degree of Function	High Mo	d (Low)				

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Pes	No	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	<u> </u>		Comments
Wetland size in relation to watershed	Large	("Small)		
Amount of impervious surface in wetland watershed	Large	Small	_	
Wetland Slope	(Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Yes	(ÑO)	'	
Wetland in floodplain of adjacent watercourse	(Yes	No	' _	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes .	<u>@</u>	_	
Watershed has a history of economic loss due to flooding	Yes	No		Unknower
Wetland outlet restricted	Yes	No.		
Wetland vegetation density	High)	Low	_	
Wetland microrelief	Well developed	None/Poorly developed	·	

	_			
Function Present	(Yes	No	,	·
Degree of Function	High ·	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	1	·	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High	The same of the sa	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	<u> </u>
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal-blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	÷		Comments
Channel shaded by riparian trees and/or shrubs	(G)s	No	
Gravel spawning areas present	Yes	No.	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	(es)	Ponsed a culverted along read
Dominant bottom substrate	Gravel/cobbles	Sand/silt	3
Substrate embeddedness by sand & silt	Low	(High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(Ow)	
Channel alterations (channelization, islands or point bars)	Absent or Few	(Numerous)	Channelized
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	(High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	(Narrow)	·
Watershed development	Low	High,	
Water quality	Good	Poor	Duknown_

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	Unknower
Function Present	(Yes)		No	
Degree of Function	Hìgh	(No)	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(low)	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	(Gow)	High	
Fine grained mineral or organic soils present	Yes	No No	
Watercourse, if present, has visible velocity decreases in welland	(Yes)	No No	-
Indicators of erosion or high water velocities are present	No	Yes	
Function Present	(Fig)	No	
Degree of Function	High (M)d	Low	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	(Yes)	No	-
Wetland is saturated most of the season	(Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No ·	-
Water flow through wetland	(Diffuse)	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	(es)	No.	
Deep or open water habitat is present	Yes	1	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient		High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Fe)	No		_
Degree of Function	High	(Mod)	Low_	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments	
Wildlife food sources in wetland	Abundant	Few		<u> </u>
Vegetation density	High	Low		
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	<u> </u>	
Wetland has high degree of plant community structure and species diversity	(Yes	No	<u> </u>	<u>_</u>
Detritus development is present within this wetland	Yes	No		
Flowering plants used by nectar gatherers present	(Yes)	No		<u> </u>
Evidence of wildlife use in wetland	©	No	Birds	
Fish or shellfish develop/occur in wetland	Yes	No		
Function Present	yes)	No		
Degree of Function	(High) Mod	Low		

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments
Topographical gradient in wetland	(Yes)	No	
Potential sediment sources upstream or upslope	(Yes)	No	
Wetland border >10' adjacent to pond or water	/Ŷes)	No .	
Distinct shoreline or bank evident between wetland and water	No	(es)	<u> </u>
Open water fetch present	Yes	<u></u>	
Boating activity present	Yes		·
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes	®	
Function Present	Yes	No_	
Degree of Function	High M	og Low	<u> </u>

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	(es)	No	
Fishing is available in or from the wetland	Yes	<u> </u>	
Hunting is permitted in wetland	Yes	New	
Hiking occurs or has potential to occur in wetland	(Yes)	No	
Wetland is a valuable wildlife habitat	(Yes)	No .	<u> </u>

Wetland has high visual/aesthetic quality	(Yes)	No.	<u> </u>	
Beating or canceing feasible in wetland	Yes	®	-	
Off-road public parking near wetland available	(es)	No	 	
Safety Hazards (if present list them)	Yes	No	<u> </u>	<u> </u>
Function Present	(Yes)	No No		<u> </u>
Degree of Function		od Low	-	

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	fligh — Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	©	High /	Forest
Buffer width	Good to Excellent	Fair to Poor	V V - 22
Connectivity with other wetlands	(es)	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Should
Vegetation density	l(tigh)	Low	Shrub Swamp
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb Lt=Leaf litter)	(6)		Shrub, herb, leafliffer
Wetland plant species diversity	High Mod Low	 -	man, nero, rear carer
Vernal pool	Yes	(No)	
Edge diversity (List types)	<u> </u>	 ("/- 	
Water regime	Wetter	Drier	Forest, golf course
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	·
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near welland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	<u> </u>
Function Present	Ves	No	
Degree of Function	High (Mod)	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	(Yes)	No	
Welland class diversity	High	(ow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest, of elf cours &
Off-road parking near wetland available	(yes)	No	, ,
Proximity to schools	Near	Far	Bowdonn
Wetland contains perennial watercourse	(Yes)	No	
Wetland contains pend/lake	Yes	(B)	
Safety hazards (if present list them)	·		
Site currently used for educational/scientific purposes	Yes	(No	
Function Present	Yes)	No	,
Degree of Function	High (Mod)	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	d contains listed species Yes		(No)	
Wetland identified as exemplary natural community	Yes		No.	
Wetland locally/regionally significant	Yes	Yes		
Function Present	Yes		1	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments
Visible from primary viewing locations	(Yes)	No	
Views absent trash, debris, sign of degradation	(Yes	No	
Low noise level	Yes	(No)	
Visual landuse contrast with wetland	(Yes)	No	
Function Present	(Yes)	No ·	
Degree of Function	High Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	<u>~</u> -	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	
Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	(Ng)	

Function Present	Yes		(Ng)
Degree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	\$&\$	ESH
Lowford	Mod	Mod	Mod	mod	High	High	Mod	Mod	No	Mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 246 Direction: E MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 58 Date: N/A Functional Unit:	Weather: N/A Tim	ne Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios F	Recent Precipitation: N/A Below averag	e ☐ Average ☐ Above Average ☐	Don't Know ☐ TBD ☐
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory ☑	Scat 🛛 Tracks 🖾 Min	now Traps Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n		
Class	Subclass	-	
POW/ Open water	Vegetated Non-Vegetated	-	
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leaved	Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Br	oad-leaved Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub		
PEM / Wet Meadow	Ungrazed Grazed	·	
PSS / Shrub Swamp	Sapling Bushy Co	ompact Aquatic	
PEO-Wooded Swamp	Deciduous Evergreen	·	·
Bog	Compact shrub Bushy shrub	Wooded Emerge	
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surfa-	ace throughout year in all years	Seasonally saturated (Y) - soils saturated to season, but are unsaturated by end of season except for ground water seepage and overlar	n in most years; surface water absent 🌖 💎
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	Temporarily flooded (A) - surface water presessesson, but water table usually lies well below	
Semi-permanently flooded (F) - surface water per most years	sists throughout growing season in	Intermittently flooded (J) - substrate usually e variable periods without detectable seasonal	
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		Artificially flooded (K) - amount/duration of floetc	oding controlled by dikes dams, pumps,
Hydrology:			
Ground water discharges present:	Yes No	Depth to free water:	
If Present: Slope or Depressional		Depth to saturation:	
Surface water depth:	average - maximum -	Signs of altered hydrology?	Yes No
Hydrology indicators: Inundated	Saturated in upper 12 Water marks Drift I	nes Sediment deposits Drainage pa	atterns within wetlands Other
	tophores Polymorphic leaves Buttre Rhizospheric oxidation Shallow root s	essed trees Hypertrophied lenticels systems Floating leaves Flo	Stooling Inflated leaves, ating stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorty	Poorly Very Poorly Ma	pped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep		•
Upland Border:	_ 		
Slope: Nearly level	Gentle Moderate	Steep	
Cover Types: Mature forest	Sapling forest Shrub thicket	Meadow Mowed lawn	Farm Near/Golf cours
Vegetation Density(S/M/D): Trees	Saplinos Shrut	os M (Herbs) to (Grass) 17	•

Soil: 15x - Haplagnews - Lamoline complex

	litter:

Well developed

Moderately well developed

(Absent) in golf coure areas

Cover objects:

Logs

Bark

· Boulders

Rocks

Evidence of Erosion:

(No)

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	•	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	(Yes)	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	Hìgh Mo	1600	

GWD/GROUNDWATER DISCHARGE

Criteria	+			Comments	_	
Soils	Hardpan, shallow i	ledge				
Seeps, springs observed?	Yes	No		-		
Wetland microrelief	Well developed	∕Ñor	/Poorly eloped		 •	
Wetland contains an outlet, no inlet	Yes	No			 	· · · · · · · · · · · · · · · · · · ·
Function Present	Yes	<u> </u>			 	
Degree of Function	High 1		ow			

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

+	-	Comments
Large	(Small.)	
Large	Small	
Gentle	Moderate Steep	
Yes	No '	
(Yes)	No	
Yes	(No)	
Yes	No	Unknown
Yes	(No)	
(High)	Low	
Weil developed	(None/Poorly) developed	
	Large Large Gentle Yes Yes Yes Yes Yes High Well	Large Small Large Small Gentle Moderate Steep Yes No Yes No Yes No Yes No High Low Well None/Poorly

	·~ `				 	
Fanction Fresent	(Yes)	No				_
Degree of Function	High	Mod	(Low)	<u>_</u> .		

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition; Not associated with pond/lake)

Criteria		+		Comments		<u> </u>	_	· <u>-</u> .
Dominant land use adjacent to Waterbody	Forest, Shrui	b, Meadow	Lawn	_	·			_
Shallow littoral zone with emergent vegetation present?	Yes		No					
Waterbody at least 10' deep	Yes		No	The state of the s	_	_		_
% of pond covered by submerged or emergent vegetation	15-40%		Other		_	<u></u>		
Direct stormwater discharge via culvert?	No		Yes		•		<u> </u>	
Sandbar present at inlet?	No		Yes		_			
Water transparency	High		Low					· ·
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes		·	_		_
Pond size ≥0.5 acre	Yes		No_					_
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u>.</u>	Yes			-		<u>-</u>
Function Present	Yes	·	No					
Degree of Function	High	Mod	Low		No. of Street, St. of S	••.		_

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	<u> </u>	Comments
Channel shaded by riparian trees and/or shrubs	(Yes)	No	
Gravel spawning areas present	Yes	(No)	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	<u> (69</u>	Interna outlow culverted
Dominant bottom substrate	Gravel/cobbles	(Sand/silt)	
Substrate embeddedness by sand & silt	Low	(Fig.)	<u> </u>
Instream habitat diversity (riffle, run, pool, shallow, deep)	Gkligh >	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	(High (trees shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	<u> </u>
Riparian zone	Wide	Narrow	·
Watershed development	Low .	(High)	
'Water quality	Good	Poor	lunknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant	Mostly tolerant	Unknows
Function Present	(es)	No	
Degree of Function	High M	od (ow)] .

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	_	Comments
Sources of sediments or toxicants upstream	(Yes)	No	Comments
Duration of water retention in wetland	Long	Short)	
Evidence of sediment trapping in wetland	Yes	/EW)	
Vegetation density	High	No No	 -
Wetland edge broad and intermittently aerobic	Ves	Low	
Drainage ditches in wetland	(NO)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	Low	(Fligh)	
Fine grained mineral or organic soils present	Yes	No No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	
indicators of erosion or high water velocities are present	(Ng)	Yes	
Function Present	/Yes	No	
Degree of Function	High Mod		-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	(Yes)	No	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	(Yes)	No	W 04 .
Deep or open water habitat is present	Yes		
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	(ligh)	
Wetland microrelief	Well developed	(None, poorly developed)	

Function Present	(es)	No	_	-
Degree of Function	High	Mod	Low)	
		· ·		

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	(High)	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	(Yes)	No	<u> </u>
Flowering plants used by nectar gatherers present	(Kes)	No	
Evidence of wildlife use in wetland	Yes	No	Birds
Fish or shellfish develop/occur in wetland	Yes	NO) _	
Function Present	(Yes)	NO _	
Degree of Function	(Aigh) Mod	Low	<u> </u>

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments	<u>-</u>
Topographical gradient in wetland	(Ves)	No		<u>-</u>
Potential sediment sources upstream or upslope	(Yeg)	No		
Wetland border >10' adjacent to pond or water	Yes	No		<u> </u>
Distinct shoreline or bank evident between wetland and water	No	(es)		
Open water fetch present	Yes	(vo)		
Boating activity present	Yes	(6)		
Floodplain stabilizing trees and shrubs present	(Yes)	No		
Indications of erosion or siltation present	Yes	(w)		
Function Present	(PeS)	No		
Degree of Function	High [N	fod Low		<u>,</u>

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	(Yes)	No	Got course
Fishing is available in or from the wetland	Yes	No	
Hunting is permitted in wetland	Yes	<u></u>	
Hiking occurs or has potential to occur in wetland	(Yes)	No	
Wetland is a valuable wildlife habitat	Yes	No	<u> </u>

Wetland has high visual/aesthetic quality	Yes			<u> </u>	
Boating or canoeing feasible in wetland	Yes	(Ñ)			
Off-road public parking near wetland available	Yes	W6)			
Safety Hazards (if present list them)	Yes	No			
Function Present	(Yes)	No		<u></u>	
Degree of Function	High	Mod (Low)			
-			<u></u>	<u>-</u> _	i

WLH/WILDLIFE HABITAT

Criteria	÷	T	Comments
Wetland degradation by human activity	Little or None	Moderate to	Comments
Wetland fragmentation by development	Little or None	High Moderate to	
·Buffer exists (F=forest_M=Meadow_S=Sapling/shrub thicket_L=Lawn	 	(High	-
A=Agriculture)	(Yes)	No	
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands		No	
Size of landscape block in which wetland is located	Large	Small/	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(£ovy	1.) 00 5 6 7
Vegetation density	High	Low	wooden samue
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			T,S,SH,H,L
Wetland plant species diversity	High Mod Low	- -	1, 3, 34, H, W
Vernal pool	Yes	160	
Edge diversity (List types)		055	the state of the s
Water regime	Wetter	Drier)	Golf course, fields
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	E D	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	None or Low	High	-
Function Present	(es)	No	
Degree of Function	High Mod)	Low	
EPPMEDUOATIONAL (CONTINUE)	1.6.7		

Criteria	+		Comments
Wetland contains listed species	Yes	(No.)	
Wetland provides valuable wildlife habitat	(Yes)	No	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	@	Golfcourse d Gelds
Off-road parking near wetland available	Yes	(6)	
Proximity to schools	Neas	Far	Bowdoin
Wetland contains perennial watercourse	Yes	No	
Wetland contains pond/lake	Ýes	(4)	
Safety hazards (if present list them)			Gelf balls
Site currently used for educational/scientific purposes	Yes	No	
Function Present	(Yes)	No	
Degree of Function	High Mod	(fow)	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		100	
Wetland identified as exemplary natural community	Yes		®	
Wetland locally/regionally significant	Yes		100	
Function Present	Yes		100	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments
Visible from primary viewing locations	(Ŷēs)	No	_
Views absent trash, debris, sign of degradation	Yes	(No)	
Low noise level	Yes	(_V O)	
Visual landuse contrast with wetland	Y SS	No	
Function Present	(Fe)	No	
Degree of Function	High Mod	(OW)	

ESH/ENDANGERED SPECIES HABITAT

Criteria	÷	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes		
Wetland contains critical habitat for state or federal listed species	Yes	(No)	
Area appears in state or national database	Yes	(Ñò,	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Welland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
TemINO	(ow	low	mod	Mod	Hrah	low	mod	low	No	Mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo#: 247 Direction: NW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 59 Date: N/A Functional Un	nit: Weather	: N/A Time s	Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	tecent Precipitation: N/A Below av	erage 🗌 Average 🗌 📝	Above Average 🗌	Don't Know ☐ TBD ☐
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory	⊠ Scat ⊠	Tracks 🛛 Minno	w Traps Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n	_		
Class	Subclass			<u> </u>
POW/ Open water	Vegetated Non-Vegetate	d		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-s	hrub Robust	Narrow-leaved	Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved Float	ing leaved	·
PFL / Seasonally Flooded Flats	Emergent Shrub	<u> </u>	<u> </u>	·
PEM / Wet Meadow	Ungrazed Grazed	<u>-</u> -	1	
PSS / Shrub Swamp	Sapling Bushy	Compact Aqua	tic	
PFO / Wooded Swamp	Deciduous Evergreen			
Bog	Compact shrub Bushy shrub	Wooded	Emergent	
Water Regimes (Cowardin Modifier):		Seasonally saturated (Y) season, but are unsaturated	- soils saturated to sur led by end of season in	rface, especially early in growing n most years; surface water absent
Permanently flooded (H) - water covers land surfa	ace throughout year in all years	except for ground water s		
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	Temporarily flooded (A) - season, but water table u	surface water present sually lies well below s	for brief periods during growing soil surface for most of the season
Semi-permanently flooded (F) - surface water per most years	sists throughout growing season in	Intermittently flooded (J) - variable periods without of		nosed, but surface water is present for eriodicity~
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season is	r extended periods especially early in n most years	Artificially flooded (K) - an	nount/duration of flood	fing controlled by dikes dams, pumps,
Hydrology:			, 4F	
Ground water discharges present:	Yes No	Depth to free w	ater:	
If Present: Slope or Depressional		Depth to satura	ition:	
Surface water depth:	average - maximum -	Signs of altered	i hydrology?	Yes No
Hydrology indicators: Inundated	Saturated in upper 12" Water marks	Orift lines Sediment depos	its Drainage patt	terns within wetlands Other
	, -,,	Buttressed trees Hyperti root systems Floating	rophied lenticels leaves Floati	Stooling Inflated leaves, ing stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly	Poorly Very Po	orly Mapp	oed Hydric Soil
Slope: Nearly level Gentle	Moderate Steep			
Upland Border:	# £ 1			
Slope: Nearly level	Gentle Moderate	Steep		
Cover Types: Mature forest	Sapling forest Shrub th	icket Meadow	Mowed lawn	Farm
Vegetation Density(S/M/D): Trees	Saplings (Shrubs M Herbs M	Grass D	

Leaf	litter

Well developed

Moderately well-developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

	-	
r	No l	
ŧ.		

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	(Vell developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No)	Borders Stream
Function Present	(es)	No	Der bler & STEAM
Degree of Function	High Mod	Now)	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	(Small)	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No .	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	NS)	
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	(es)	No	Culverted under golf concrete walkway
Wetland vegetation density	(High	Low	Catory Co writer you consiss comeway
Wetland microrelief (Well developed	None/Poorly developed	

Function Present	Yes		No			
Degree of Function	High	(Mod) -	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		-Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?			Yes	
Water transparency	High		Low	<u> </u>
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low .	<u></u>

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	÷		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	(No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt)	
Substrate embeddedness by sand & silt	Low -	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(Ow)	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	Emergent veg
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	, , ,
Riparian zone .	Wide	Narrow	
Watershed development	Low	(High	
Water quality	Good	Роог	Unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	Unknown
Function Present	(Yes)		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short)	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High)	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	· ·
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	Yes	No	
Degree of Function	High (Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse)	Channelized	-
Vegetation density	Tight	Low	
Potential for sediment trapping exists	(Yes)	No -	
Deep or open water habitat is present	Yes	(No)	-
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	(Well developed)	None, poorly developed	

Function Present	Yes	No	
Degree of Function :	High	Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	(High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	_
Wetland has high degree of plant community structure and species diversity	Yes	No	Not a lot of sop diversity
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	O	No	
Evidence of wildlife use in wetland	(Pes)	No	Great blue horses
Fish or shellfish develop/occur in wetland	Yes	No	ancat blu have
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	· ·

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	(Feg)	No	
Potential sediment sources upstream or upslope	Yes	No	
Wetland border >10' adjacent to pond or water	₹	No	
Distinct shoreline or bank evident between wetland and water	No	Yes	
Open water fetch present	Yes	(No)	
Boating activity present	Yes	6	
Floodplain stabilizing trees and shrubs present	Yes	(No)	
Indications of erosion or siltation present	Yes	No	
Function Present	(Yes)	No	
Degree of Function	High Mod	i (Low)	

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	(Yes)	No	
Fishing is available in or from the wetland	Yes	(Mg)	
Hunting is permitted in wetland	Yes	NO	
Hiking occurs or has potential to occur in wetland	(Yes)	No	
Wetland is a valuable wildlife habitat	(Yes)	No	

Wetland has high visual/aesthetic quality	Yes	No		
Boating or canoeing feasible in wetland	Yes	No)		
Off-road public parking near wetland available	Yes	, No		
Safety Hazards (if present list them)	(Yes)	No	Gosf balls	
Function Present	Yes	No	0017 19 0000	·
Degree of Function	High (Mod	Low		

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Mederate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)	No	Sapling/Shrub thicket
Buffer width	Good to Excellent	Fair to Poon	143.0.
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few)	-
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(Low)	Wm
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	_	<u> </u>	Herb
Wetland plant species diversity	High Mod (Low)		
Vernal pool	Yes .	(N)	
Edge diversity (List types)			Shruk thicket mowed laws
Water regime (Wetter	Drier)
Habitat features (S=Snags: L=Fallen logs: SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	(Absent)	· · · · · · · · · · · · · · · · · · ·
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	:
Degree of Function	High (Mod)	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	Yes	No	
Wetland class diversity	High	(low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	- High	Low	S, mowed lawn
Off-road parking near wetland available	Yes	No	
Proximity to schools	Near	Far	Bowdoin
Wetland contains perennial watercourse	Yes	No	
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			Golfbails
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	Yes	No	
Degree of Function	High Mo	od (Low)	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes		(NO)	· · · · · · · · · · · · · · · · · · ·
Wetland locally/regionally significant	Yes	,	®	
Function Present	Yes	<u> </u>	(6)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments	•	
Visible from primary viewing locations	(Ye)		No			
Views absent trash, debris, sign of degradation	Yes		(No)			
Low noise level	Yes		(No)	Near airfield		
Visual landuse contrast with wetland	Yes		No			
Function Present	(Yes)	*	No			
Degree of Function	High	Mod	L(ow)]	•	•

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	
Wetland contains critical habitat for state or federal listed species	Yes		
Area appears in state or national database	Yes	(No)	

CONCLUSION: SUMMARY TABLE (X-present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Moderan	mol	Low	mos_	Mod	Mod	Mod	Mod	low	Low	low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo#: 248 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 60 Date: N//	A Functional Unit:	Weath	ier: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation: N/A	A Below average 🗌	Average 🗌	Above Average	☐ Don't Know ☐	
Wildlife Investigation Method: Cover search	Dip netting 🗌	Auditory 🛛	Scat 🗵	Tracks 🗵	Minnow Traps	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n					 .
Class	Subclass					
POW/ Open_water	Vegetated	Non-Vegetated	<u></u>		· <u>-</u>	
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leav	edBroad-leave	≱d
PAB/ Shallow Marsh	Robust Narrov	w-leaved Broad	leaved Fig	pating leaved		
PFL / Seasonally Flooded Flats	Emergent _	Shrub	. <u> </u>		<u> </u>	_
PEM / Wet Meadow	Ungrazed	Grazed	<u>.</u>	<u></u>		· <u>-</u>
PSS / Shrub Swamp	Sapling Bushy	Comp	act Aq	uatic	_ - :	
PFO / Wooded Swamp	Deciduous	Evergreen	<u> </u>			
Bog	Compact shrub	Bushy shrub			ergent	
Water Regimes (Cowardin Modifier):		/ se	asonally saturated (\ ason. but are unsatu	() - soils saturated rated by end of se	I to surface, especially e ason in most years; sur	ariy in growing face water absent
Permanently flooded (H) - water covers land surfa		years ex	cept for ground wate	r seepage and ove	erland flow	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year exce	pt in years ⊤∈ se	mporarily flooded (A) ason, but water table) - surface water p usually lies well i	resent for brief periods pelow soil surface for m	during growing ost of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout growing	season in Ini va	ermittently flooded (criable periods withou	l) – substrate usua t detectable seas	illy exposed, but surface onal periodicity~	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season, in	extended periods espec most years	ially early in Ar et		amount/duration (of flooding controlled by	dikes dams, pumps,
Hydrology:	_			•		
Ground water discharges present:	No No		Depth to free	water:		
If Present: Slope or Depressional			Depth to sate	ıration:		
Surface water depth:	verage - n	naximum -	Signs of alter	red hydrology?	Yes	No .
Hydrology indicators: Inundated	saturated in upper 12") V	Vater marks Drift lines	Sediment dep	osits Draina	ge patterns within wetla	nds Other
Plant Adaptations to Hydrology: Pneumal stems, or roots Adventitious roots	ophores Polymorp Rhizospheric oxidation	ohic leaves Buttresse Shallow root syst		ertrophied lenticels ing leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Somewh	at Poorly F	oorly Very	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle) Moderate	Steep		•		
Upland Border:						•
Slope: Nearly level	Sentle 1	vloderate S	Steep			
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (Trees)	D @olings	NY Shrubs	Herbs	Grass		
Boil: 26A - Gouldaboro	silt loam					

Leaf litter:	Well developed	Moderately v	Absent	
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Sails	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	NO.	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	(es)	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	No No	
Degree of Function	(High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	, Small	 -	
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Yes	(No)		
Wetland in floodplain of adjacent watercourse	Yes	No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes			
Watershed has a history of economic loss due to flooding	Yes	No	_	Vaknown
Wetland outlet restricted	Yes	(No)	_	10001
Wetland vegetation density	High	Low		
Wetland microrelief	Weil	None/Poorly developed		

Function Present	Yes	No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shru	b, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%	<u>-</u>	Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfow) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes	- '	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No _	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low .	High	
Water quality	Good	Poor	<u> </u>

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolera	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High _	Mod	Low	•

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments	-
Sources of sediments or toxicants upstream	Yes	No	- Odimicitis	-
Duration of water retention in wetland	Long	Short		· · · · · · · · · · · · · · · · · · ·
Evidence of sediment trapping in wetland	Yes	Low		<u> </u>
Vegetation density	High	-	-	
Wetland edge broad and intermittently aerobic	Yes	Low	-	
Drainage ditches in wetland	No	Yes	_	<u> </u>
Water flow through wetland	Diffuse	Channelized		
Ponded water present	Yes	No		
Wetland basin topographic gradient	-LOW)	High	· 	
Fine grained mineral or organic soils present	Yes	No		<u> </u>
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	-	<u> </u>
Indicators of erosion or high water velocities are present	No	Yes	<u> </u>	
Function Present	Yes	No		
Degree of Function			-	
		Mod (Low)	<u> </u>	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	Connicients
Potential sources of excess nutrients upstream	Yes	Nos	
Wetland is saturated most of the season	YES	No	· · · · · · · · · · · · · · · · · · ·
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	- - ·
Vegetation density	High		-
Potential for sediment trapping exists	Yes	No.	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	· ·

1 unction Flesent	(Yes)	No	_	
Degree of Function	High	Mod	(ow)	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	(Few	
Vegetation density	High	(Tow)	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	·
Wetland has high degree of plant community structure and species diversity	Yes	(A)	
Detritus development is present within this wetland	(Yes	. No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	Yes	(F)	
Fish or shellfish develop/occur in wetland	Yes	No	
Function Present	©	No	
Degree of Function	High Mod	(ow)	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	- Co	omments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	Yes	No	
Wetland border >10' adjacent to pond or water		No'	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	(No)	
Boating activity present	Yes		
Floodplain stabilizing trees and shrubs present	(Yes)	No	
Indications of erosion or siltation present	Yes	_ (6)	
Function Present	(Ge	No	
Degree of Function	High Mod		

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	(N <u>o</u>)	
Hunting is permitted in wetland	Yes	(No)	
Hiking occurs or has potential to occur in wetland	Yes	No	Potential
Wetland is a valuable wildlife habitat	(Yes)	No	

Wetland has high visual/aesthetic quality	Yes	(N)		
Boating or canceing feasible in wetland	Yes	(%)		 .
Off-road public parking near wetland available	Yes	(No		
Safety Hazards (if present list them)	Yes	(F)		
Function Present	(Yes)	No		
Degree of Function	High	Mod Kow	— Potential	

WLH/WILDLIFE HABITAT

Criteria	4.	-	Comments
Wetland degradation by human activity	⊭iffle or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Pes)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Wooded Swamp
Vegetation density	(High)	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, sapling
Wetland plant species diversity	High Mod (Low)		, , , , , , , , , , , , , , , , , , ,
Vernal pool	Yes	1 100	
Edge diversity (List types)			Forest
Water regime	(Wetter)	Drier	T O F Sorter
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absept	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	A es	No	·
Wetland class diversity	High	£600)	
Adjacent upland cover types (F=forest_M=Meadow_S=Sapling/shrub thicket_A=Agriculture)	High	(D)	Forest
Off-road parking near wetland available	Yes	No	
Proximity to schools	Near	. Far	Bowdoin
Wetland contains perennial watercourse	Yes	®	
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			·
Site currently used for educational/scientific purposes	Yes	(B)	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	+	,	-	Comments
Wetland contains listed species	Yes		(2)	
Wetland identified as exemplary natural community	Yes		6	
Wetland locally/regionally significant	Yes		®	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments
Visible from primary viewing locations	Yes	No	
Views absent trash, debris, sign of degradation	(%)	No	
Low noise level	Yes	6	Near airfield
Visual landuse contrast with wetland	(Yes)	No	
Function Present	(es)	No	
Degree of Function	High (Mod)	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	1	
Wetland contains critical habitat for state or federal listed species	Yes	(NO)	
Area appears in state or national database	Yes	(No)	

Function Present	Yes	<u></u>	(No)
Degree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
No/High	No	No	Low	Low	Low	Low	mod	Low	No	لنص	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, takes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or offier active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo#:249 Direction: SE

	MOL	DIFIED FUNCTION	NS AND VALUES	ASSESSMEN	l i		
Project Name: Brunswick NAS Wet Id#:	FA 61 Da	te: N/A Function	al Unit:	Wea	ther: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation	on: N/A Belo	w average 🗌	Average 🗌	Above Averag	e 🗌 Don't Know [] T8D [<u>]</u>
Wildlife Investigation Method: Cover search ⊠	Dip netting	☐ Audi	itory 🛛	Scat 🛛	Tracks 🛚	Minnow Traps 🗌	Electro-shocking [
Wetland Types(s) Cowardin/Golet Classification	1						
Class	Subclass						
POW/ Open water	Vegetated	Non-Veg	etated			· 	
PEM/PSS Deep Marsh	Dead Woody	Shrub S	Sub-shrub	Robust	Narrow-lea	aved Broad-lea	ved
PAB/ Shallow Marsh	Robust	Narrow-leaved	. Broad-leav	ed F	Floating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed	· · · · · · · · · · · · · · · · · · ·				
PSS / Shrub Swamp	Sapling	Bushy	Compact	. /	Aquatic		
PFO / Wooded Swamp	Deciduous	Evergree	en)				
Bog	Compact shrub	Bushy st		Wooded		nergent	
Water Regimes (Cowardin Modifier):	<u> </u>		Seasor	ally saturated	(Y) - soils saturate	ed to surface, especially season in most years; s	early in growing
Permanently flooded (H) - water covers land surface	ce throughout yea	ır in all years	except	, but are unsa fo <u>r ground wa</u>	ter seepage and o	verland flow	made water absent
Intermittently Exposed (Z) -surface water present to fextreme drought	hroughout the yea	ar except in years	Tempo season	rarily flooded (), but water tab	A) - surface water de usually lies wel	present for brief period I below soil surface for i	s during growing πost of the season
Semi-permanently flooded (F) - surface water pers most years	ists throughout gr	rowing season in	Intermi variable	ttently flooded e periods with	(J) - substrate use out detectable sea	ually exposed, but surfa sonal periodicity~	ce water is present fo
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		s especially early i	n Artificia etc	illy flooded (K)	- amount/duration	of flooding controlled b	y dikes dams, pumps
Hydrology:			•				
Ground water discharges present:	es) No)		Depth to fre	ee water:		
If Present: Slope or Depressional	_			Depth to sa	aturation:		
Surface water depth: a	verage -	maximum -		Signs of all	tered hydrology?	Yes	No
Hydrology indicators: Inundated	aturated in upper	12") Water mark	s Drift lines	Sediment de	eposits Drain	age patterns within wet	ands Other
Plant Adaptations to Hydrology: Pneumatic stems, or roots Adventitious roots F	ophores Po Rhizospheric oxida	olymorphic leaves ation · Sha	Buttressed tre liow root systems		pertrophied lentice ating leaves	els Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ly Well So	mewhat Poorly	Poorly	y Ver	y Poorly	Mapped Hydric Soil	-
Slope: Nearly-level Gentle	Moderate	Ste	ер				
Upland Border:							
Slope; Nearly level	entie	Moderate	Steep	•			
Cover Types: Mature forests	Sapling for	rest Shr	ub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Grees) s	aplings D	Shrubs	Terbs n	(Grass		

Leaf litter:	(Well developed	Moder	Absent	
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	(Ng). Yes	(Explain)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	4		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes		
Slope	Gentle	Moderate or Steep	
Function Present	(Yes) No		-
Degree of Function	High Mog	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	(Yes)	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	No -	
Degree of Function	High (Mod)	Low	·

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	, No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	linknown
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	No		
Degree of Function	High	Mod	LOW	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn	·
'Shallow littoral zone with emergent vegetation present?	Yes		No No	
Waterbody at least 10' deep	Yes	معمنىنىسىنىد.	No	
% of pond covered by submerged or emergent vegetation	15-40%	* PETERSON AND AND AND AND AND AND AND AND AND AN	Other	
Direct stormwater discharge via culvert?	-No		Yes	
Sandbar present at inlet?	No		Yes	•
Water transparency	Hìgh		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	New to
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No .		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	.+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravei/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent-or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	· .
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wiđe	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intole	cani	Mostly tolerant	 	_	 	 	
Function Present	Yes	_	No			 <u> </u>	<u> </u>	
Degree of Function	High	Mod	Low					

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	4		Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short	<u> </u>
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes)	Low	
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	(No)	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic softs present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No ·	
Indicators of erosion or high water velocities are present	1600	Yes	
Function Present	Yes	No	
Degree of Function		100) Low	No inputs
MARRIAN		/	11.0 1.0012

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small)	-
Potential sources of excess nutrients upstream	Yes	Alon .	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	(Diffuse)	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	>Well developed)	None, poorly developed	_

Function Present	Yes			No				
Degree of Function	High	· - -	Мо		Low			
			1	-		<u> </u>	· · · · · · · · · · · · · · · · · · ·	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	_					, <u> </u>	<u> </u>	
Criteria			+		-	Comments	·	
Wildlife food sources in wetland		Abund	ant	- Andrews	Few			
Vegetation density		High	The same of the sa		Low			
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes			No			_
Wetland has high degree of plant community structure and species diversity		Yes			No	<u>]. </u>	-	
Detritus development is present within this wetland		Yes			No		<u> </u>	
Flowering plants used by nectar gatherers present		Yes	_		No		<u></u> .	_
Evidence of wildlife use in wetland		Yes			No			
Fish or shellfish develop/occur in wetland		Yes			No		<u></u>	
Function Present	<u></u> ::	Yes			No			
Degree of Function		High	M	od	Low			<u></u>
S&SS/SEDIMENT/SHORELINE STABILIZATION								·
Criteria		+	_		_	Comments	·	
Topographical gradient in wetland	Yes			No				
Potential sediment sources upstream or upslope	Yes			No	. <u></u>		<u>_</u>	
Wetland border >10' adjacent to pond or water	Yes			No				
Distinct shoreline or bank evident between wetland and water	No	_		Yes			<u></u>	· <u>-</u> .
Open water fetch present	Yes			No				
Boating activity present	Yes			No		<u> </u>	. .	
Floodplain stabilizing trees and shrubs present	Yes	_	<u>.</u>	No		-	_	_
Indications of erosion or siltation present	Yes			No		_		
Function Present	Yes			No)				
Degree of Function	High		Mod		Low	_		
REC/RECREATION							<u></u>	
Criteria		. +				Comment	s	
Wetland is part of recreation area, park, refuge, etc.	Yes			No.		<u> </u>	<u></u> .	
Fishing is available in or from the wetland	Yes			(No))	<u> </u>		
Hunting is permitted in wetland	Yes			(No)				
Hiking occurs or has potential to occur in wetland	(Yes	<u> </u>		No		Poter	utial _	
Wetland is a valuable wildlife habitat	(Yes)		No				

.

Wetland has high visual/aesthetic quality	Yes	No		
Boating or canoeing feasible in wetland	Yes	No)		
Off-road public parking near wetland available	Yes	(_N)		
Safety Hazards (if present list them)	Yes	No)		
Function Present	Yes	No		
Degree of Function	High	Mod) Low	- totential	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	Was some failil
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	Weapons facility Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No No	
Size of landscape block in which wetland is located	(Large)	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	N/u mun
Upland islands	Present	Absent	No open water
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	- * 	wooded curame
Vegetation density	(High	Low	0-00000
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Wooded swamp Tree, Sapting, herb, LL
Wetland plant species diversity	High (Mod) Lo	w	Tracing rary, 20
Vernal pool	Yes	(No)	
Edge diversity (List types)			Forest
Water regime	Wetter	(Drier)	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant)	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	∠-Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	·
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

Criteria	+	-	Comments
Wetland contains listed species	Yes	(G)	
Wetland provides valuable wildlife habitat	(res)	No	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	· Yes	No	
Proximity to schools	Near	Far	Bowdoin
Wetland contains perennial watercourse	Yes	No.	
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)		<u> </u>	
Site currently used for educational/scientific purposes	Yes	(No.)	
Function Present	(Fès)	No	<u> </u>
Degree of Function	High Mod	Low	··

U/H/UNIQUENESS/HERITAGE

Criteria	·	+	-	Comments
Wetland contains listed species	Yes		No.	
Wetland identified as exemplary natural community	Yes		RIS.	
Wetland locally/regionally significant	Yes		<u>6</u>	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	<u></u>

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments
Visible from primary viewing locations	Yes	(%)	
Views absent trash, debris, sign of degradation	Yes	(Nô)	Near weapons facility
Low noise level	Yes	(No)	Near airfield
Visual landuse contrast with wetland	Yes	(No)	
Function Present	Yes	X (0)	
Degree of Function	High Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria		+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	/	18 ₉	
Wetland contains critical habitat for state or federal listed species	Yes			
Area appears in state or national database	Yes		(Ng)	

Function Present	Yes		(N°)
Degree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Modfarod	Low	No_	mod	low	No	Mod	High	low	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat; For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the welfand to provide habitat for various types and populations of animals typically associated with welfands and the welfand edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo#: 256 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 62 Date: N/A Functional Unit:	Weather: N/A	Time Start: N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	tecent Precipitation: N/A Below average	☐ Average ☐ Above Average	□ Don't Know □ TBD □
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory ☑	Scat 🛛 Tracks 🖾	Minnow Traps ☐ Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classification	n.		
Class	Subclass		
POW/ Open water	Vegetated Non-Vegetated	<u> </u>	
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leav	ved Broad-leaved
PAB/ Shailow Marsh	Robust Narrow-leaved Bro	ad-leaved Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub		
PEM / Wet Meadow	Ungrazed Grazed		
PSS / Shrub Swamp	Sapling Bushy Con	mpact Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen		
Bog	Compact shrub Bushy shrub		ergent
Water Regimes (Cowardin Modifier):	-	Seasonally saturated (Y) - soils saturated	d to surface, especially early in growing eason in most years; surface water absent
Permanently flooded (H) - water covers land surfa-	ace throughout year in all years	except for ground water seepage and ov	erland flow
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	Temporarily flooded (A) - surface water pseason, but water table usually lies well	present for brief periods during growing below soil surface for most of the season
Semi-permanently flooded (F) - surface water per most years	sists throughout growing season in	intermittently flooded (J) - substrate usus variable periods without detectable seas	ally exposed, but surface water is present for onal periodicity—
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods especially early in n most years	Artificially flooded (K) - amount/duration etc	of flooding controlled by dikes dams, pumps,
Hydrology:			
Ground water discharges present:	Yes No	Depth to free water:	•
if Present: Slope or Depressional		Depth to saturation:	
Surface water depth:	average - maximum -	Signs of altered hydrology?	Yes No
Hydrology indicators: nundated	Saturated in upper 12" Water marks Drift lin	nes Sediment deposits Draina	ge patterns within wetlands Other
	tophores Polymorphic leaves Buttre Rhizospheric oxidation Shallow root s	ssed trees Hypertrophied lenticel ystems Floating leaves	s Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderat	ely WelD Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep		
Upland Border:			•
Slope: Nearly level	Gentle Moderate	Steep	•
Cover Types: Mature forest	Sapling forest Shrub thicket	Meadow Mowed lawn	Farm Adjacent to EOD pit.
Vegetation Density(S/M/D): Teas	M Saplings M Shrub	s Herbs Grass	EOD Prt.

Soil: WrB - Wood bridge fine sandy loam

1	Oat	litter:
1	.vai	IIII COL

Well developed

Yes

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

No

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes (No)		
Degree of Function	High M	od Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	(Well developed)	Non/Poorty developed	
Wetland contains an outlet, no inlet	(Yes)	No	
Function Present	rves)	No	
Degree of Function	High (Mod)	Low	
Degree of Function		Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Smail	
Wetland Slope	Gentle	Moderate Stee	p
Wetland characterized by variable water level?	(Ps)	No	
Wetland in floodplain of adjacent watercourse	Yes	No No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	No No	
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes ((No)		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	_	+		Comments
Dominant land use adjacent to Waterbody	(Forest,	Shrub, Meadow	Lawn	EOD Pit
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	unknown
% of pond covered by submerged or emergent vegetation	15-40%	(6)	Other	
Direct stormwater discharge via culvert?	N _O		Yes	
Sandbar present at inlet?	No		Yes	·
Water transparency	Alim)	_ ·	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	(NO)		Yes	
Pond size ≥0.5 acre	(Yes)	,	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u></u>	Yes	Unknown
Function Present	(Yes)		No	
Degree of Function	High	(Mod)	Low	·

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	-Stable	Unstable; eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intole	rant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	·

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		-	Comments
Sources of sediments or toxicants upstream	(Yes)		No	EOD Pit?
Duration of water retention in wetland	Long		Short	B00 1011 "
Evidence of sediment trapping in wetland	Yes		Low)	
Vegetation density	High		No	
Wetland edge broad and intermittently aerobic	//ēs		Low	
Drainage ditches in wetland	785 T		Yes	
Water flow through wetland	Diffuse		Channelized	
Ponded water present	Yes	_	No.	
Wetland basin topographic gradient	(Low)		High	
Fine grained mineral or organic soils present	Yes		No	
Watercourse, if present, has visible velocity decreases in wetland	Yes		No —	
Indicators of erosion or high water velocities are present	(No)		Yes	
Function Present	(Yes)		No	
Degree of Function	High)	Mod	Low	1
Mobalium				<u> </u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	No	Unknown
Wetland is saturated most of the season	(es)	No	I CA ELLOWA
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	fligh)	Low	
Potential for sediment trapping exists		No	
Deep or open water habitat is present	(Yes)	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present		No			
Degree of Function	(High)	Mod	Low	<u></u>	
PE/PROBUCTION EXPORT (Excluding Condition: No Outlet)		•			

Criteria	+	-	Comments
Wildlife food sources in wetland	(Abundant)	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	(Yg)	No	
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	(Yes)	No	
Evidence of wildlife use in wetland	6	No	Birds
Fish or shellfish develop/occur in wetland	Yes	No	Potential_
Function Present	(Yes)	No	
Degree of Function	(High) Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments	
Topographical gradient in wetland	(Tes)	No		
Potential sediment sources upstream or upslope	(Yes)	. No		
Wetland border >10' adjacent to pond or water	Yes	No		
Distinct shoreline or bank evident between wetland and water	(No)	Yes		<u>-</u>
Open water fetch present	(Yes	No		
Boating activity present	Yes	(No)		<u>-</u> .
Floodplain stabilizing trees and shrubs present	(Yes)	No		<u>.</u>
Indications of erosion or siltation present	Yes			<u>-</u>
Function Present	Yes	No		
Degree of Function	High (Mod Low		· <u>-</u>

REC/RECREATION

Criteria	÷		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)		
Fishing is available in or from the wetland	Yes	(No)		
Hunting is permitted in wetland	Yes	No)	_	<u></u>
Hiking occurs or has potential to occur in wetland	Yes	No)_		
Wetland is a valuable wildlife habitat	(Yes)	No		<u> </u>

Wetland has high visual/aesthetic quality	Yes	(No)		all tens it
Boating or canoeing feasible in wetland	Yes	(No	}	Adj. to EOD pit
Off-road public parking near wetland available	Yes			
Safety Hazards (if present list them)	Yes)	- 1 No		FOD Pit
Function Present	Yes	No		POD PIT
Degree of Function	High	TMod	Low	-

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	(Moderate to)	·
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No No	Shrub thicket, Forest
Buffer width	Good to Excellent	Fair to Poor	State Land Land
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	(Abundant)	Few	<u> </u>
Interspersion of vegetation and open water	(Hop)	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	
Vegetation density	High	Low	Shrub swamp, Open water
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Sh. H LL
Wetland plant species diversity	High Mod Low	- -	ON, H. CC
Vernal pool	Yes	No	
Edge diversity (List types)			Forest. Shrube
Water regime	Wetter	Drier	porest, on urg
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	<u> </u>
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absept	
Bare well drained sandy soils near wetland (turtle nest site)	Present)	Absent	For Pil
Abundance of invasive exotic flora	(None or Low)	High	EOD Pit
Function Present	Yes	No	· ·
Degree of Function	High (Mod)	Low	

Criteria	+	-	Comments
Wetland contains listed species	Yes	Rio	
Wetland provides valuable wildlife habitat	Y(E)	No	
Welland class diversity	High		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest, shreb
Off-road parking near wetland available	Yes	(No)	
Proximity to schools	(Near	Far	Roudoin_
Wetland contains perennial watercourse	Yes	(No)	
Wetland contains pond/lake	(Yes)	· No	
Safety hazards (if present list them)			EOD Pit
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	Yes	(No)	·
Degree of Function	High	Mod Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(N)	
Wetland identified as exemplary natural community	Yes		No	
Wetland locally/regionally significant	Yes		No	
Function Present	Yes		(No)	:.
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments			
Visible from primary viewing locations	Yes		(No)			<u></u>	
Views absent trash, debris, sign of degradation	Yes	<u> </u>	(No)				
Low noise level	Yes		(No)			·	<u></u>
Visual landuse contrast with wetland	(ves)		No			<u> </u>	. <u>.</u>
Function Present	Yes		(N ₀)		-		
Degree of Function	High	Mod	Low				

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	160	
Wetland contains critical habitat for state or federal listed species	Yes	(N)	
Area appears in state or national database	Yes	(Ng	

Function Present	Yes		Np		-		 	
Degree of Function	High	Mod	Low	1				

CONCLUSION: SUMMARY TABLE (X-present, P-Principle Wetland Function)

	GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
.	Nolmad	No_	mod	High	High	High	No	Mod	No	No	mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, takes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 267 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	PA 63 Date: N/A Functional L	Jnit: Weat	ner: N/A time	Start: IV/A Time Stop. IV/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation: N/A Below a	verage 🗌 Average 🗌	Above Average 🗌	Don't Know 🗌 TBD 🔲
Wildlife Investigation Method: Cover search ⊠	Dip netting ☐ Auditory	Scat 🛛	Tracks 🛛 Minno	ow Traps ☐ Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classification	n			
Class	Subclass	<u> </u>		<u>_</u>
POW/ Open water	Vegetated Non-Vegetat	ed		<u></u> ,
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-	shrub Robust	Narrow-leaved	Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved Fl	oating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub		_	
PEM / Wet Meadow	Ungrazed Grazed			<u>-</u>
PSS / Shrub Swamp	Sapling Bushy	Compact A	quatic	<u> </u>
PFO / Wooded Swamp	Deciduous Evergreen	(Mixed)		
Bog	Compact shrub Bushy shrub		Emergent	
Water Regimes (Cowardin Modifier):		Seasonally saturated (Y) - soils saturated to sui	rface, especially early in growing in most years; surface water absent
Permanently flooded (H) - water covers land surfa	ce throughout year in all years	except for ground wate	rated by end of season in or seepage and overland	flow
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	Temporarily flooded (A season, but water table	.) - surface water present e usually lies well below :	t for brief periods during growing soil surface for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout growing season in	Intermittently flooded (J) - substrate usually exp it detectable seasonal pe	oosed, but surface water is present for eriodicity
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods especially early in a most years	Artificially flooded (K) - etc	amount/duration of flood	ding controlled by dikes dams, pumps
Hydrology:				
·	es No	Depth to free	e water:	
If Present: Slope or Depressional		Depth to sat	uration:	•
Surface water depth:	iverage - maximum -	Signs of alte	red hydrology?	Yes No
Hydrology indicators: (Inundated)	Saturated in upper 12" Water marks	Drift lines Sediment de	oosits Drainage pat	terns within wetlands Other
Plant Adaptations to Hydrology: Pneumal stems, or roots Adventitious roots			ertrophied lenticels ing leaves Float	Stooling Inflated leaves, ling stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly	Poorly Very	Poorly Maps	oed Hydric Soil
Slope: Nearly level Gentle	Moderate Steep			•
Upland Border:				
•	Gentle Moderate	Steep		•
Cover Types: Mature forest	Sapling forest Shrub t	thicket Meadow	Mowed lawn	Farm
Vegetation Density(S/M/D): Trees	Saplings M	Shrubs Herbs	Grass	

Leaf litter:	Well developed	Moder	ately well developed	Absent
Cover objects:	Logs	Bark	Boulders	· Rocks
Evidence of Frosion:	(No.) Ves	(Evaloin)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	_	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No .	-
Slope	Gentle	Moderate or Steep	
Function Present	Yes. No		
Degree of Function	High (Mod		

GWD/GROUNDWATER DISCHARGE

+	-	Comments
Hardpan, shallow ledge	_	
Yes	No	
Weil developed	Non/Poorly	
Yes	No	
Yes	No No	
High Mod	Low	
	Yes Well developed Yes	Yes No Well developed Non/Poorly developed No No No

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large ا	Small	
Amount of impervious surface in wetland watershed	Large (Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No)	
Watershed has a history of economic loss due to flooding	Yes	No)	
Wetland outlet restricted	Yes)	No	Culverted under dirt pood
Wetland vegetation density	High	Low	CILLOWICE UNRES GIFF ROUS
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	No	
Degree of Function	High	Mod (Low)	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		t	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrut	Forest, Shrub, Meadow		
Shallow littoral zone with emergent vegetation present?	Yes	Yes		
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	. No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	 '	Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	. <u> </u>
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

_			AL PROPERTY.		
Pol	llution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Fu	nction Present	Yes		No	
De	gree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria		+	Comments	
Sources of sediments or toxicants upstream	Yes	No		
Duration of water retention in wetland	Long	Short	-	
Evidence of sediment trapping in wetland	Yes	LOW		-
Vegetation density	High	No		
Wetland edge broad and intermittently aerobic	Yes) Low		
Drainage ditches in wetland	(No)	Yes	-	
Water flow through wetland	Diffuse	Channelize	d	
Ponded water present	Yes	No	<u>- </u>	
Wetland basin topographic gradient	(Low)	High		
Fine grained mineral or organic soils present	Yes	No		
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	-	
Indicators of erosion or high water velocities are present	(No)	Yes		<u> </u>
Function Present	Yes	No		· · · · · · · · · · · · · · · · · · ·
Degree of Function	High	(Mod) Low	- -	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	÷	-	Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	(Fes)	No	
Emergent vegetation and/or dense woody stems are dominant		No	
Water flow through wetland	(Diffuse)	Channelized	<u> </u>
Vegetation density	High	Low	<u> </u>
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(ow)	High	
Wetland microrelief	Well developed	None, poorly developed	

		<u> </u>				
Function Present	Yes	<i>)</i>		No		
Degree of Function	High	<u>/</u> i	Mod)		Low	
		_				

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	(Abundant)	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	(Yes)	No	<u></u>
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	Yes	No	Significant vernal poo
Fish or shellfish develop/occur in wetland	Yes	No	
Function Present	Yes	No	
Degree of Function	High (Mod)	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+			Comments	
Topographical gradient in wetland	Yes	No	······································		
Potential sediment sources upstream or upslope	Yes	No			
Wetland border >10' adjacent to pond or water	Yes	No			_
Distinct shoreline or bank evident between wetland and water	-No	Yes			
Open water fetch present	Yes	No			
Boating activity present	Yes	No			
Floodplain stabilizing trees and shrubs present	Yes	No			
Indications of erosion or siltation present	Yes	Мо			
Function Present	Yes	No)		
Degree of Function	High	Mod	Low		

REC/RECREATION

Criteria	4		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)		<u></u>
Fishing is available in or from the wetland	Yes	(No)		•
Hunting is permitted in wetland	Yes	(No.)		. <u> </u>
Hiking occurs or has potential to occur in wetland	Yes	No)		<u> </u>
Wetland is a valuable wildlife habitat	(Yes)	No		<u> </u>

Wetland has high visual/aesthetic quality	Yes	(1	No)	
Boating or canoeing feasible in wetland	Yes	<u> </u>	(0)	
Off-road public parking near wetland available	Yes		(<u>i</u>	-
Safety Hazards (if present list them)	(Yes)			Next to EOD Pit
Function Present	Yes		(9)	1000 FIT
Degree of Function	Hìgh	Mod	Low	- -

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	5
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	₹	High No	Forest
Buffer width	Good to Excellent	(Fair to Boor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	/Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	(High)	Low	
Upland islands	Present	(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Wooded Silea on D
Vegetation density	(High)	Low	
Vegetation strata (T=Free S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Sapling, Shrub, Herb, U
Wetland plant species diversity	High Mod Low	-	saparing, sin ub, Herb, u
Vernal pool	Yes	No.	
Edge diversity (List types)		1.72	Torrect mon made
Water regime	Wetter	Drier	Forest EOD roadways
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No No	
Degree of Function	High (Mod)	Low	

Criteria		†		Comments
Wetland contains listed species	Yes		(No)	
Wetland provides valuable wildlife habitat	(Yes)		No	<u> </u>
Wetland class diversity	High		LOW	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	. <u>-</u>	Low	Forest, EDD pit
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	Bowdein
Wetland contains perennial watercourse	Yes		No.	
Wetland contains pond/lake	Yes		(No.7)	
Safety hazards (if present list them)				_ EOD 7:+
Site currently used for educational/scientific purposes	Yes		(No.)	
Function Present	Yes		<u> </u>	
Degree of Function	High	Mod	Low	<u> </u>

U/H/UNIQUENESS/HERITAGE

Crîteria		+	<u> </u>	Comments
Wetland contains listed species	Yes		<i>(</i> №)	<u> </u>
Wetland identified as exemplary natural community	Yes	,	No_	
Wetland locally/regionally significant	Yes		(Ño)	
Function Present	Yes	•	(a)	·
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	Yes	_	No	
Views absent trash, debris, sign of degradation	Yes		(No)	
Low noise level	Yes		146)	Near airfield
Visual landuse contrast with wetland	/res)		No	
Function Present	Yes		N	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	:	+		Comments			_
Wetland contains or known to contain federal listed species or habitat	Yes		(No.			. <u>.</u>	
Wetland contains critical habitat for state or federal listed species	Yes		(No)		<u> </u>	<u>-</u>	
Area appears in state or national database	Yes		(No)				

Function Present	Yes		(w)	, ,
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH	l
Mod/Mod	low	No	mad	mod	Mod	No	mod	No	No	No	No	

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 259 Direction: NW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 65 Date:	: N/A Functional Un	it:	Weather:	N/A Tin	ie Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	cent Precipitation:	: N/A Below ave	rage 🗌 💢 Av	verage 🗌 💢 Ab	ove Average 🗌	Don't Know ☐	TBD □
Wildlife Investigation Method: Cover search ⊠	Dip netting 🗌	_	₫ . so	cat 🛛 Tra	acks 🛛 Mir	now Traps □	Electro-shocking □
Wetland Types(s) Cowardin/Golet Classification	ì						<u>-</u> .
Class	Subclass	-					<u>-</u> .
POW/ Open water	Vegetated	Non-Vegetated	<u> </u>				
PEM/PSS Deep Marsh	Dead Woody St	hrub Sub-si	ilnp	Robust	Narrow-leaved	Broad-leave	ed
PAB/ Shallow Marsh	Robust_ Na	larrow-leaved	Broad-leaved	Floating	g leaved		···-
PFL / Seasonally Flooded Flats	Emergent	Shrub	<u>_</u>				·
PEM / Wet Meadow	Ungrazed	Grazed					
(PSS / Shrub Swamp)	Sapling (B	ushy	Compact	Aquatio	<u>-</u>	<u> </u>	
PFO / Wooded Swamp	Deciduous	Evergreen		_			
Bog	Compact shrub	Bushy_shrub	<u>_</u>	Wooded	Emerge		
Water Regimes (Cowardin Modifier):			Seasonally	r saturated (Y) - s it are unsaturated	oils saturated to I by end of seaso	surface, especially e n in most years; sur	arly in growing face water absent
Permanently flooded (H) - water covers land surface	ce throughout year ir	n all years	except for	ground water see	page and overla	nd flow	
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the year o	except in years	Temporarii season, bu	iy flooded (A) - su ut water table usu	ırface water pres ally lies well belo	ent for brief periods (w soil surface for mo	during growing ost of the season
Semi-permanently flooded (F) - surface water pers most years	ists throughout grow	wing season in	Intermitten variable pe	tly flooded (J) - s eriods without det	ubstrate usually (ectable seasonal	exposed, but surface periodicity~	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods es most years	specially early in	Artificially f	Rooded (K) - <i>amo</i>	unt/duration of fl	poding controlled by	dikes dams, pumps,
Hydrology:	•						
Ground water discharges present: Y	es No	-	ı	Depth to free wat	er:		
If Present: Slope or Depressional			1	Depth to saturation	on:		
Surface water depth: a	verage -	maximum -	:	Signs of altered h	ydrology?	Yes	No
Hydrology indicators: nundated S	Saturated in upper 12	2" Water marks D	rift lines S	ediment deposits	s Drainage p	oatterns within wetlar	
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	ophores Polyi Rhizospheric oxidatio		uttressed trees oot systems	Hypertrop Floating le	ohied lenticels eaves Fl	Stooling pating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Some	ewhat Poorly	Poorly	Very Poor	iy Ma	apped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:							
Slope: Nearly level C	Sentl e	Moderate	Steep				
Cover Types: Mature forest	Sapling fores	st Shrub thi	cket N	Meadow M	lowed lawn	Farm	
Vegetation Density(S/M/D): (Tees)	to sapl	lings An s	Shrubs F	lerbs G	rass		

-1	eaf	litte	r

Well developed .

Yes

Moderately well developed

Absent

Cover objects:

(Logs

Bark

Boulders

Rocks

Evidence of Erosion:

No

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	Ť		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes) No		
Degree of Function	High Mō	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge	-	
Seeps, springs observed?	Yes	N	
Wetland microrelief	Welf developed	Non/Poorly	
Wetland contains an outlet, no inlet	Yes	developed No	
Function Present	Yes	(No)	
Degree of Function	High Mod	Low	·

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+ .	-		Comments
Wetland size in relation to watershed	Large	(Small)		
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Stope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Ves	No		
Wetland in floodplain of adjacent watercourse	Yes	No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		
Watershed has a history of economic loss due to flooding	Yes	No	-	Unknown
Wetland outlet restricted	(Yes)	No		Unknown Culverted under road
Wetland vegetation density	High	Low		curverted uriage 70ug
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		Comments
Dominant land use adjacent to Waterbody	(Forest) Shrub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	No	
Waterbody at least 10' deep	(Yes)	No	
% of pond covered by submerged or emergent vegetation	15-40%)	Other	
Direct stormwater discharge via culvert?	No	Yes	
Sandbar present at inlet?	No	Yes	_
Water transparency	High	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	(6)	Yes	•
Pond size ≥0.5 acre	Yes	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	Yes	Unknown
Function Present	(Yes)	No	<u>.</u>
Degree of Function	High (Mod)	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Law	- High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	- Absent or Few	Numerous	
Bank stabilitý	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	<u> </u>
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly into	lerant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Yes		Comments
Marine Programme Control of the Cont	l No	
		
Yes		
High	- No	<u> </u>
Yes	11 /-	
No	. •	
— \	_	
- \	·	
		
- `		
		
		
		
	. 1	-
	High Yes No Diffuse (Yes) (ow) Yes Yes (No) (es)	Yes Low High No Yes Cow No Ow Ow High Yes No High Yes No Yes No Yes No Yes No Yes No Yes No Yes No No No No No No No No No No No No No N

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(Low)	
Potential for sediment trapping exists	(Les	No	-
Deep or open water habitat is present	(Yes)	No No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)	No		
Degree of Function	High	Mod	(Low)	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments	
Wildlife food sources in wetland	Abundant	Few		
Vegetation density	High	(109)_	1	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No		<u> </u>
Wetland has high degree of plant community structure and species diversity	Yes	(No)	<u> </u>	
Detritus development is present within this wetland	Yes	No	<u></u>	
Flowering plants used by nectar gatherers present	Yes	No		
Evidence of wildlife use in wetland	(Yes)	No	<u> </u>	
Fish or shellfish develop/occur in wetland	Yes	No	Unknown	<u></u>
Function Present	(Yes)	No		
Degree of Function	High (Mod)	Low		

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments
Topographical gradient in wetland	(FeS)	No	
Potential sediment sources upstream or upslope	Yes	No	
Wetland border >10' adjacent to pond or water	Yes	No	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	No	
Boating activity present	Yes	(No)	
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes-	(No)	
Function Present	(Yes)	No	·
Degree of Function	High I	Mod Low	

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes		
Fishing is available in or from the wetland	Yes	⊚	
Hunting is permitted in wetland	Yes	<u> </u>	<u> </u>
Hiking occurs or has potential to occur in wetland	Yes	NO	-
Wetland is a valuable wildlife habitat	Yes	(No')	

Wetland has high visual/aesthetic quality	Yes	No	
Boating or canoeing feasible in wetland	Yes	No No	
Off-road public parking near wetland available	Yes	No	
Safety Hazards (if present list them)	(Yes)	No	1
Function Present	(Ves)	No	In restricted area.
Degree of Function		Mod Low	

WLH/WILDLIFE HABITAT

Criteria				·
	+ -			Comments
Wetland degradation by human activity	Little or Non	e	Moderate to	
Wetland fragmentation by development	Little or Non	e	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	TVes	-	No	Forest, Laws.
Buffer width	Good to Exc	ellent ,	Fair to Poor	, , , , , , , , , , , , , , , , , , , ,
Connectivity with other wetlands	Yes		No	
Size of landscape block in which wetland is located	Large		Small Small	
Wildlife food sources in wetland	Abundant		Few	
Interspersion of vegetation and open water	High		Low	
Upland islands	Present		Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Low	Charles and and and
Vegetation density	High		Low	Shrub swamp, open water
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)				Shrub, herb
Wetland plant species diversity	High Mod	(low)		5
Vernal pool	Yes	<u> </u>	(No)	
Edge diversity (List types)		 -		Frack Janes
Water regime	Wetter		Drier	Forest, lawn
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant		/Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant		Few	
Flat rocks in/near watercourse (stream salamanders)	Present		Absent	
Sphagnum hummocks next to shallow pools	Present		Absent	
Bare well drained sandy soils near welland (turtle nest site)	Present	1	Absent	
Abundance of invasive exotic flora	None or Low	>	High	
Function Present	Yes		No	
Degree of Function	-	I Mod	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	Yes	No)	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest Lawn
Off-road parking near wetland available	(Yes)	No	
Proximity to schools	(Near	Far	Bowdoin
Wetland contains perennial watercourse	Yes	(No)	
Wetland contains pond/lake	(Yes)	No	
Safety hazards (if present list them)			In restricted area
Site currently used for educational/scientific purposes	Yes	_ (No)	
Function Present	(Yes)	No	
Degree of Function	High Mod	Low)	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes		(N ₂)	·
Wetland locally/regionally significant	Yes.		(M2)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments
Visible from primary viewing locations	Yes	No	
Views absent trash, debris, sign of degradation	Yes	(NO)	
Low noise level	Yes	(No) _	
Visual landuse contrast with wetland	(Yes)	No	<u> </u>
Function Present	(Yes)	No	
Degree of Function	High Mod	L.ow	<u> </u>

ESH/ENDANGERED SPECIES HABITAT

Crîteria	÷		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(%)	
Wetland contains critical habitat for state or federal listed species	Yes	(Ne)	
Area appears in state or national database	Yes	(No)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/NO	No	mod	mod	Low	mod	Mod	mod	Low	No	Mod	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It retates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, beating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 263 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 68 Date: N/A Functional L			
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation: N/A Below a	verage 🗌 Average 🗎	Above Average 🗌	Don't Know ☐ TBD ☐
Wildlife Investigation Method: Cover search 🗵	Dip netting ☐ Auditory	√ 🏻 Scat 🖾	Tracks Minno	w Traps Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n 			
Class	Subclass		_	
POW/ Open water	Vegetated Non-Vegeta	ted		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub	-shrub Robust	Narrow-leaved	Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved Fk	pating leaved	<u> </u>
PFL / Seasonally Flooded Flats	Emergent Shrub			
PEM / Wet Meadow	Ungrazed Grazed	<u>_</u>		<u>-</u>
PSS / Shrub Swamp	Sapling Bushy	Compact Ac	quatic	
PFO / Wooded Swamp	Deciduous Evergreen		<u>-</u>	
Bog	Compact shrub Bushy shrub	Wooded	Emergent	
Water Regimes (Cowardin Modifier):		Seasonally saturated (\ season_but are unsatu	() - soils saturated to sur rated by end of season i	rface, especially early in growing in most years; surface water absent
Permanently flooded (H) - water covers land surfa	ce throughout year in all years		r seepage and overland	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except in years	Temporarity flooded (A season, but water table) - surface water present usually lies well below s	t for brief periods during growing soil surface for most of the season
Semi-permanently flooded (F) - surface water persmost years	sists throughout growing season in		l) - substrate usually exp it detectable seasonal pe	oosed, but surface water is present for priodicity~
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods especially early in most years	Artificially flooded (K) - etc	amount/duration of flood	ling controlled by dikes dams, pumps,
Hydrology:				
Ground water discharges present: Y	es No	Depth to free	water:	
If Present: Slope or Depressional		Depth to sate	uration:	
Surface water depth:	verage - maximum -	Signs of alte	red hydrology?	Yes No
Hydrology indicators: Inundated &	Saturated in upper 12" Water marks	Drift lines Sediment dep	osits - Brainage patt	terns within wetlands Other
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F			ertrophied lenticels ing leaves Float	Stooling Inflated leaves, ing stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly	Poorly Very	Poorly Mapp	ed Hydric Soil
Slope: Nearly level Gentie	Moderate Steep			
Upland Border:	•			
Slope: Nearly level	Gentle Moderate	Steep		
Cover Types: Mature forest	Sapling forest Shrub	hicket <u>Meadow</u>	Mowed lawn	Farm
Vegetation Density(S/M/D): Trees	Saplings	Shrubs (Terbs)	TO D	

Soil-27A - Lamoine silt Loam -

Leaf litter:	Well developed		Moderately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks

Evidence of Erosion:

Yes (Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	<u> </u>	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mo	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledge	- -	
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	(YES)	No.	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Welland size in relation to watershed	Large	(Small)	
Amount of impervious surface in wetland watershed	Large	(\$mail	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	(Yes)	No	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	Gotfcourse
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes	No	Culverted
Wetland vegetation density	High	Low	i moerrea
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	No	
Degree of Function	High	Mod	(Low)

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		. 1	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	-Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed	No _		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	· <u>-</u>	Yes ·	
Function Present	Yes	,	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach		Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent of Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees. shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	 Mostly-intolera	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

+		Comments	
Yes)	No		
	- +		
- \			
		-	· · · · · · · · · · · · · · · · · · ·
Yes			- .
No No			
Diffuse	-	ed .	
			_
- 		· · · · · · · · · · · · · · · · · · ·	_
Yes	 		-
Yes			
(NO)			
		-	_ _
High	Mod Low	- 	•
	No Diffuse Yes Low Yes Yes Yes Yes Yes	Tong Short Yes Low High No Yes Low No Yes Channeliz Yes No (Low High Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes No	tong Short Yes Low High No Yes (aw) No Yes Diffuse Channelized Yes (No) Low High Yes No Yes (No) Yes (No) Yes (No) Yes (No) Yes (No) Yes (No) Yes (No)

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	-
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	(Fes.)	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	tow	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes)	No				
Degree of Function	High		Mod	Low	<u> </u>		
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)							
Criteria			+	-	Comments		
Wildlife food sources in wetland		Abundan	t	(Few)			
Vegetation density		(Figh)		Low		<u></u>	
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes)		No			
Wetland has high degree of plant community structure and species diversity		Yes		(No)			
Detritus development is present within this wetland		(Yes)		No		_	
Flowering plants used by nectar gatherers present		Yes)		No			.
Evidence of wildlife use in wetland		Yes	-	(No)			
Fish or shellfish develop/occur in wetland		Yes		(No)		<u> </u>	
Function Present		Yes		No			
Degree of Function		High	Mod				
S&SS/SEDIMENT/SHORELINE STABILIZATION)			
Criteria		+		•	Comments		
Topographical gradient in wetland	(Ps)		No				
Potential sediment sources upstream or upslope	(Yes)		No		<u> </u>		
Wetland border >10' adjacent to pond or water	Yes		(No)				
Distinct shoreline or bank evident between wetland and water	No		. Yes	<u> </u>	_		
Open water fetch present	Yes		(P)		ļ <u></u>		
Boating activity present	Yes		(O)	<u> </u>		<u>-</u> .	
Floodplain stabilizing trees and shrubs present	Yes		<u>(40)</u>				
Indications of erosion or sittation present	Yes		(NO)				
Function Present	Yes	-	(No)	·-		•	

Degree of Function REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	(A)	
Hunting is permitted in wetland	Yes	(No	
Hiking occurs or has potential to occur in wetland	Yes	(N)	
Wetland is a valuable wildlife habitat	Yes	No)	

Mod

High

Low

Wetland has high visual/aesthetic quality	Yes		
Boating or canceing feasible in wetland	Yes	(Nø	
Off-road public parking near wetland available	Yes	No)	
Safety Hazards (if present list them)	X€S)	No	Next to airfield
Function Present	Yes	No	Wer to carrenadi
Degree of Function	High	Mod Low	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	(Moderate to)	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	High No	Lawn
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	Large	(Small)	
Wildlife food sources in wetland	Abundant	FEM	
Interspersion of vegetation and open water	High	Low -	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Pem
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Herb
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	No)	
Edge diversity (List types)		 	Grassland
Water regime	Wetter	Orier	(1 r 455) <u>a</u> 48
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	EW .	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Ye)	No	
Degree of Function	High Mod	(ow)	

Criteria		+		Comments
Wetland contains listed species	Yes		169	
Wetland provides valuable wildlife habitat	Yes		6	
Wetland class diversity	High		(Ow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	. <u></u>	<u></u>	Grassland
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	Bowdon
Wetland contains perennial watercourse	Yes		(Wo)	
Wetland contains pond/lake	Yes		(v)	
Safety hazards (if present list them)				Next to airfield
Site currently used for educational/scientific purposes	Yes		MO	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments	_	
Wetland contains listed species	Yes		<u>@</u>		<u>-</u> ,	
Wetland identified as exemplary natural community	Yes		₩		<u>. </u>	<u> </u>
Wetland locally/regionally significant	Yes		No.		<u>.</u>	
Function Present	Yes				•	
Degree of Function	High	Mod	Low			

VQA/VISUAL QUALITY/AESTHETICS

Criteria	-	+	-	Comments	 	<u>.</u>	
Visible from primary viewing locations	Yes		Ng)			_ <u>_</u>	
Views absent trash, debris, sign of degradation	Yes		/No)				
Low noise level	Yes	_	(No)		 <u>_</u>		
Visual landuse contrast with wetland	Yes		/No)		 .,		
Function Present	Yes		No)				
Degree of Function	High	Mod	Low				

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No)	· ·
Wetland contains critical habitat for state or federal listed species	Yes	(Mg)	
Area appears in state or national database	Yes	(No)	

Function Present	Yes	·	(No)	
Degree of Function	High	Mod	Low	<u> </u>

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/med	Low	_No _	Low	Low	Low	No.	Low	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a welland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters, it adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the welland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 264 Direction: SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ⊠ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitati Dip netting		Weati ☐ Average ☐ Scat ☑	Above Average	Time Start: N/A ☐ Don't Know ☐ Minnow Traps ☐	Time Stop: N/A TBD ☐ Electro-shocking ☐
Class	Subclass		·	<u> </u>		
POW/ Open water	Vegetated	Non-Vegetated				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-shrub	Robust	Narrow-leave	ed Broad-leav	ed
PAB/ Shallow Marsh	Robust	Narrow-leaved Bre	oad-leaved Fl	oating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed				
PSS / Shrub Swamp	Sapling	Bushy Co	mpactA	quatic	. .	
PFO / Wooded Swamp	Deciduous	Evergreen				· .
Bog Water Regimes (Cowardin Modifier):	Compact shrut	Bushy shrub	Wooded Seasonally saturated (rgent	
Permanently flooded (H) - water covers land surfal intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water personal years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in Hydrology: Ground water discharges present:	throughout the yesists throughout g	nar except in years growing season in Is especially early in	season, but are unsatuexcept for ground water Temporarily flooded (A season, but water table Intermittently flooded (variable periods without Artificially flooded (K) etc	er seepage and over) - surface water pro- e usually lies well be J) - substrate usual at detectable seaso amount/duration o	rland flow resent for brief periods elow soil surface for me lly exposed, but surface	during growing ost of the season a water is present for
If Present: Slope or Depressional			Depth to sat	uration:		
Surface water depth;	iverage -	maximum -	_	red hydrology?	Yes	No
Plant Adaptations to Hydrology: Pneumaistems, or roots Adventitious roots It Soil Drainage classes: Well Moderate Slope: Nearly level Gentle Upland Border:	Rhizospheric oxid ely Well S Moderate Gentle Sapling fo	Polymorphic leaves Buttre lation Shallow root : crnewhat Poorly Steep Moderate Shrub thicket	ssed trees Hyp systems Float	ertrophied lenticels ing leaves Poorly Mowed lawn Grass	e patterns within wetla Stooling Floating stems Mapped Hydric Soil Farm	nds Other Inflated leaves,
20A - Naumburg loar	ng Ane	sand - Hyo	د ا د			

Leaf litter:

Well developed

Moderately well developed

Absent

Cover objects:

Evidence of Erosion:

No

Bark

(Explain)

Boulders

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	[)	Comments	 	
Soils	Sand/gravel outwa	sh	Hardpan, tight fine-grained soils, shallow-ledge		 	
Wetland associated w/ perennial or seasonal watercourse	Yes	ſ	180)		 	
Slope	Gentle	Ť	Moderate or Steep			
Function Present	Yes (No)				 ····	
Degree of Function	High	Mod	Low		 	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	(Yes)	No	
Wetland microrelief	(Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No.	
Function Present	(Yes)	No	
Degree of Function	(High) Mod	Low	\dashv

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Small		
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Stope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	(Yes	No		
Wetland in floodplain of adjacent watercourse	Yes	No -		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(Yes)	No	<u> </u>	Golf course
Watershed has a history of economic loss due to flooding	Yes	No		
Wetland outlet restricted	Yes	(No)		
Wetland vegetation density	(High)	Low		
Wetland microrelief	Well developed	None/Poorly developed		

·		_			
Function Present (Yes	No			
Degree of Function	High (Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	<u>-</u>	Comments
Dominant land use adjacent to Waterbody	Forest, Shrul	o, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	·
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	<u>.</u>	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by iparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	-No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	The state of the s
Substrate embeddedness by sand & silt	Low	High -	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intole	rant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	Hìgh	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No)	
Duration of water retention in wetland	(Long)	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High)	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	(M)	Yes	
Water flow through wetland	Diffuse	Channelized	<u> </u>
Ponded water present	Yes	No	
Wetland basin topographic gradient		High	
Fine grained mineral or organic soils present	Yea	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	
Indicators of erosion or high water velocities are present		Yes	
Function Present	(No)		
Degree of Function	High Mod	No Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	Yes	No 1	
Wetland is saturated most of the season	(PS)	No No	-
Emergent vegetation and/or dense woody stems are dominant	Yes	No No	
Water flow through wetland	(Diffuse)	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	-
Wetland microrelief	Well developed	None, poorly developed	

·				
Function Present	(Yes	No		
Degree of Function	High	Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	4	-	Comments
Wildlife food sources in wetland ,	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	(Yes)	No	<u> </u>
Flowering plants used by nectar gatherers present	(Yes)	No	
Evidence of wildlife use in wetland	(Yes)	. No	Vernal pools
Fish or shellfish develop/occur in wetland	Yes	(10)	*
Function Present	Yes	No	
Degree of Function	(High) Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments
Topographical gradient in wetland	Yes	(No)	
Potential sediment sources upstream or upslope	Yes	No	<u> </u>
Wetland border >10' adjacent to pond or water	Yes	<u> </u>	
Distinct shoreline or bank evident between wetland and water	No	(Yes)	
Open water fetch present	Yes	(No)	
Boating activity present	Yes	(NB)	
Floodplain stabilizing trees and shrubs present	Ves	No	
Indications of erosion or siltation present	Yes	(N)	
Function Present	Yes	Mo ²)	
Degree of Function	High M	fod Low	

REC/RECREATION

Criteria	+		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)		
Fishing is available in or from the wetland	Yes	(No		
Hunting is permitted in wetland	Yes	No)		
Hiking occurs or has potential to occur in wetland	Yes	No	Potential	
Wetland is a valuable wildlife habitat	(Yes)	No		

Wetland has high visual/aesthetic quality	Yes	No			 -
Boating or canoeing feasible in wetland	Yes	(No)	-		· · · · · · · · · · · · · · · · · · ·
Off-road public parking near wetland available	Yes		<u> </u>		···
Safety Hazards (if present list them)	Yes	(No)			
Function Present	Yes	No			
Degree of Function		Mod) Low	Potential		

WLH/WILDLIFE HABITAT

Criteria	+	T -	Comments
Wetland degradation by human activity	Liffle or None	Moderate to	
Wetland fragmentation by development	Liffle or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(fes)	High No	
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	<u> </u>
Size of landscape block in which wetland is located	Large	(Smail)	
Wildlife food sources in wetland	Abundarit	Few	,
Interspersion of vegetation and open water	/High)	Low	
Upland islands	(Present)	Absent	· .
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Shrib swemp
Vegetation density	High	Low	on our room
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Sopling, Shrub, Herb LL
Wetland plant species diversity	High (Mog Low		ociating, shrub, Herb, LL
Vernal pool	(Peg	No —	
Edge diversity (List types)			Forest
Water regime	Wetter	Drier	1 ALEN
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No No	
Degree of Function	High Mod	Low	

Criteria	+	-	Comments
Wetland contains listed species	Yes	No	
Wetland provides valuable wildlife habitat	(Yes)	No	
Wetland class diversity	High	(LOW)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(GW)	Forest
Off-road parking near wetland available	Yes	No')	·
Proximity to schools	Near)	Far	Bowdoin
Wetland contains perennial watercourse	Yes	No	
Wetland contains pond/lake	Yes	(NB)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(Na)	
Function Present	(Yes)	No	
Degree of Function	High Mod	(cow	

U/H/UNIQUENESS/HERITAGE

Criteria	-	F		-	Comments
Wetland contains listed species	Yes		No		
Wetland identified as exemplary natural community	Yes		Ø2		
Wetland locally/regionally significant	Yes		Q		
Function Present	Yes	_	100		
Degree of Function	High	Mod	Low	ı	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	<u>-</u>	Comments	
Visible from primary viewing locations	Yes		(No)		
Views absent trash, debris, sign of degradation	((9)		No		
Low noise level	Yes		(B)		
Visual landuse contrast with wetland	Yes		6		
Function Present	Yes		(Ng)		
Degree of Function	High	Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(Ng	
Wetland contains critical habitat for state or federal listed species	Yes	100	
Area appears in state or national database	Yes	(No)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
No/F-high	Mod	No	mod	Low	brigh	Mod	mod	low	No	No 1	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

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Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo#: 265 Direction: S MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 70 Da	te: N/A Functional Unit	t:	Weath	er: N/A	Time Start:	N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation	on: N/A Below aver	rage 🗌	Average 🗌	Above Average	Don't	Know ☐ TBD ☐
Wildlife Investigation Method: Cover search ⊠	Dip netting]	Scat 🛛	Tracks 🛛	Minnow Traps	s 🗌 Electro-shocking 🗆
Wetland Types(s) Cowardin/Golet Classification	n .	•					
Class	Subclass				·		
POW/ Open water	Vegetated	Non-Vegetated			<u> </u>	<u> </u>	-
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-sh	_	Rebust	Narrow-lea	ved Bi	road-leaved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Flo	ating leaved	_	
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed			<u> </u>		
PSS / Shrub Swamp	Sapling	Bushy	Compact	Ag	uatic	_	
PFO / Wooded Swamp	Deciduous	Evergreen	Miked				
Bog	Compact shrub	Bushy shrub		Wooded		ergent	
Water Regimes (Cowardin Modifier):		<u> </u>	Seasona	ally saturated (Y	') - soils saturate	d to surface, es	specially early in growing
Permanently flooded (H) - water covers land surfa	ce throughout yea	ar in all years			rated by end of si r seepage and ov		years; surface water absent
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the ye	ar except in years	Tempora	arily flooded (A) but water table	- surface water usually lies well	oresent for brie below soil surf	of periods during growing ace for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout g	rowing season in	Intermitt	ently flooded (J		ally exposed, b	out surface water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods most years	s especially early in		•			strolled by dikes dams, pumps,
Hydrology:		· <u>-</u>	•				
Ground water discharges present: • >	res No	0		Depth to free	water:		
If Present: Slope or Depressional		•		Depth to satu	iration:		
	everage -	maximum -		Signs of alter	ed hydrology?	Yes	No
	aturated in upper	☐2" Water marks Dr	rift lines	Sediment dep	osits Draina	ge patterns wit	thin wetlands Other
Plant Adaptations to Hydrology: Pneumat	tophares Po Rhizospheric axida		uttressed tree		rtrophied lenticel ng leaves	s Stoo Floating sten	5
Soil Drainage classes: Well Moderate	eiv Well 🛣	omewhat Poorly	Poorly	Very F	Poorly	Mapped Hyd	ric Soil
Slope: Nearly level) Gentle	Moderate	Steep					
Upland Border:							
	Gentle	Moderate	Steep				
Cover Types: Mature forest	Sapling fo	rest Shrub thic	ket	Meadow	Mowed lawn	Fam	a -
Vegetation Density(S/M/D): Crees		aplings M SI	hrubs	Herbs	Grass		
Soil: 20 A - liams home	Lonnin	fine soul	- U-, d				

eat	ΙП	OT.

Well developed

Moderately well developed

Absent

Cover objects:

Yes

Bark

Boulders

Rocks

Evidence of Erosion;

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	:	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	©	No	
Slope	Genfle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments	 -				
Soils	Hardpan, shallow I	edge	<u> </u>			.		-
Seeps, springs observed?	Yes	No			<u> </u>			
Wetland microrelief	Well developed	Non/Poorly		 _			 -	
Wetland contains an outlet, no inlet	Yes	No			_	·	<u></u>	
Function Present	Yes				<u> </u>			
Degree of Function	High M	lod Low						

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	,
Wetland characterized by variable water level?	YES .	No	· · · · · · · · · · · · · · · · · · ·
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	Golf course
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	Mone/Poorly developed	

Function Present	Yes	No	_	
Degree of Function	High	Mod	(ow)	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		F	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes	Mary Landson	No	<u> </u>
% of pend covered by submerged or emergent vegetation	15-40%		Office	_
Direct stormwater discharge via culvert?	No ,		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High	_	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low _	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach.	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	⋅Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	·
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly into	erant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	(No)	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wettand	Yes	(Low)	
Vegetation density	High ·	NO	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(No.)	Yes	
Water flow through wetland	Oiffuse	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No No	
Watercourse, if present, has visible velocity decreases in welland	Yes	No No	
indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Yes)	No	
Degree of Function	High Mod		-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Smal)	Continents
Potential sources of excess nutrients upstream	Yes		
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse)	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	<u> </u>	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief .	Well developed	None, poorly developed	

Function Present	Ye	es	(No)	
Degree of Function	Hi	gh	Mod	Low
	·			

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	(Sw)	
Nutrients and/or organic matter flushed out of wetland into watercourse	(es)	No	
Wetland has high degree of plant community structure and species diversity	Yes	NO_	
Detritus development is present within this wetland	(es)	No	
Flowering plants used by nectar gatherers present	Yes	(B)	
Evidence of wildlife use in wetland	Yes	No	Vernal pools
Fish or shellfish develop/occur in wetland	Yes	_ (160)	<u></u>
Function Present	Yes)	No	
Degree of Function	High Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	Yes	(No)	
Potential sediment sources upstream or upslope	Yes	(()	
Wetland border >10' adjacent to pond or water	(Yes)	No	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	<u> </u>
Open water fetch present	Yes	(No.2)	
Boating activity present	Yes .	_ NO	
Floodplain stabilizing trees and shrubs present	(*)\$	No	
Indications of erosion or siltation present	Yes	(N)	
Function Present	Yes		
Degree of Function	High	Mod Low	

REC/RECREATION

Criteria	÷	-	Comments	<u>-</u>
Wetland is part of recreation area, park, refuge, etc.	Yes			_ <u>-</u>
Fishing is available in or from the wetland	Yes		·	
Hunting is permitted in wetland	Yes	(6)	·	_
Hiking occurs or has potential to occur in wetland	(Fes)	No		
Wetland is a valuable wildlife habitat	(Yes)	No	Vernal peok	· · · · · · · · · · · · · · · · · · ·

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canceing feasible in wetland	Yes	(i)	
Off-road public parking near wetland available	Yes	No -	
Safety Hazards (if present list them)	Yes	No)	
Function Present	(Yes)	No	
Degree of Function	High	Mod (Low)	

WLH/WILDLIFE HABITAT

Criteria	÷	Τ.	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	6	High No	Forest
Buffer width	Good to Excellent)	Fair to Poor	
Connectivity with other wetlands	(199)	No:	
Size of landscape block in which wetland is located	Large	\$mail)	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent	-
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		Ware fall const
Vegetation density	High	Low	wooden swamp
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, sapting, herk, leaf litter
Wetland plant species diversity	High Mod (-ow)		Tree sapary, nerry 1201- 44er
Vernal pool	(Yes)	No	
Edge diversity (List types)		_	Forest
Water regime	Wetter	Drier	ronst_
Habitat features (S=Snags L=Falten logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few _	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes 7	No No	
Degree of Function	High (Mod)	Low	

Criteria		+	-	Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	(Yes)		No	
Wetland class diversity	High		(Kow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Į.	Forest
Off-road parking near wetland available	Yes		(E)	
Proximity to schools	Near		Far	Bowdoin
Wetland contains perennial watercourse	Yes		(No	
Wetland contains pond/lake	Yes		(NO)	
Safety hazards (if present list them)				·
Site currently used for educational/scientific purposes	Yes	·	No.	
Function Present	(Yes)		No	
Degree of Function	High	Mod	(Low)	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes	·	®	
Wetland identified as exemplary natural community	Yes		P	
Wetland locally/regionally significant	Yes	Yes		
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	÷	-	Comments	
Visible from primary viewing locations	Yes	(NB)		
Views absent trash, debris, sign of degradation	(6)	No		
Low noise level	Yes	√√0 0		
Visual landuse contrast with wetland	Yes	(NO)		
Function Present	(Yes)	No		
Degree of Function	High Mod	(ow)		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	((ह)	
Wetland contains critical habitat for state or federal listed species	Yes	(Ng	
Area appears in state or national database	Yes		Ŋ <u> </u>	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No_	how	No_	Low.	No	Low	لىوما	mod	Low	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 266 Direction: E MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 71 Dat	te: N/A Functional U	init:	Weath	ner: N/A	Time Start: N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Re	ecent Precipitatio	on: N/A Below a	verage 🗌	Average	Above Average	□ Don't Know □] TBD ☐ -
Wildlife Investigation Method: Cover search ⊠	Dip netting	☐ Auditory	⊠	Scat ⊠	Tracks ⊠	Minnow Traps 🔲	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	1		•				
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegetat	eđ .	·			
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-	shrub	Robust	Narrow-leav	ved Broad-leav	red
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Flo	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aq	uatic		·
PFO / Wooded Swamp	Deciduous	Evergreen					
Bog	Compact shrub	Bushy shrub		Wooded	Em	ergent	
Water Regimes (Cowardin Modifier):			Seasona	illy-saturatēči (Ÿ) - soils saturated	d to surface, especially eason in most years; su	early in growing
Permanently flooded (H) - water covers land surface	e throughout year	r in all years	except fo	or ground water	seepage and ov	erland flow	nace water absent
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the yea	ar except in years				present for brief periods below soil surface for m	
Semi-permanently flooded (F) - surface water pers most years	ists throughout gr	owing season in) - substrate usua t detectable seas	ally exposed, but surfac	e water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		especially early in	Artificially etc	y flooded (K) - a	amount/duration	of flooding controlled by	dikes dams, pumps,
Hydrology:							
Ground water discharges present: Y	es No			Depth to free	water:		
If Present: Slope or Depressional				Depth to satu	ration:		
Surface water depth:	verage -	maximum -		Signs of alter	ed hydrology?	Yes	No
Hydrology indicators: Inundated	aturated in upper	12 Water marks	Drift lines	Sediment depo	osits Draina	ge patterns Within wetla	nds Other
Plant Adaptations to Hydrology: Pneumato stems, or roots Adventitious roots R	ophores Po hizospheric oxida	J	Buttressed trees root systems		rtrophied lenticels ng leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes Well Moderate	ly Well So	mewhat Poorty	Poorly	Very F	oorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:				-			
Slope: Nearly level	entle	Moderate	Steep				
Cover Types: Mature forest	Sapling for	est Shrub th	icket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Prees	D &	plings) M	Shrubs	Herbs	Grass		
34c-Tunbridge fine sa	indy loa	લ્ય				-	

Leaf litter:

Well developed

Moderately well developed

Absent

Cover objects:

Bark

Boulders

Rocks

Evidence of Erosion:

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+			Comments
Soils	Hardpan, shallow le	dge	_	
Seeps, springs observed?	Yes	No	_	
Wetland microrelief	Well developed	Non/Po develop		
Wetland contains an outlet, no inlet	Yes	< No)		
Function Present	Yes	(No)		
Degree of Function	High M	od Low		

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-		Comments
Wetland size in relation to watershed	Large	(Small)		
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentie	Moderate	Steep	·
Wetland characterized by variable water level?	Yes .	No		
Wetland in floodplain of adjacent watercourse	Yes	No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		
Watershed has a history of economic loss due to flooding	Yes	No		Unknowell
Wetland outlet restricted	Yes	No	•	
Wetland vegetation density	High	CLOW)		
Wetland microrelief	Well developed	None/Poorly developed	•	

Function Present	Yes	No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	4	•	•	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	, Meadow	Lawn	·
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	S and the state of
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No	Mary Mary Control of the Control of	Yes	
Water transparency	-High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No :		Yes	·
Pond size ≥0.5 acre	Yes	/	No	
Pond experiences dense algal blooms autsance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod .	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding-condition-Not associated with percential stream)

		_	· · · · · · · · · · · · · · · · · · ·
Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes .	
Dominant bottom substrate	Clavei/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	<u> </u>
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	·
Riparian zone	Wide :	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	 Mostly intoler	ant	Mostly tolerant	
Function Present	Yes	-	No	
Degree of Function	 High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria		,	-	Comments
Sources of sediments or toxicants upstream	Yes	•	No	ther known
Duration of water retention in wetland	Long		(Short)	- 4C+ C-MISTERNIE
Evidence of sediment trapping in wetland	Yes		(Low)	
Vegetation density	High		(No)	
Wetland edge broad and intermittently aerobic	Yes		Low	
Drainage ditches in wetland	<u>602</u>		Yes	
Water flow through wetland	Diffuse		Channelized	
Ponded water present	Yes	_	No	
Wetland basin topographic gradient	Low		High	
Fine grained mineral or organic soils present	Yes		No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	_	No	•
Indicators of erosion or high water velocities are present	(No)		Yes	
Function Present	Yes		No)	
Degree of Function	High	Mod	Low	1 .

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	÷	-	Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(Low)	-
Potential for sediment trapping exists	(Yes)	No	1 & 00
Deep or open water habitat is present	Yes	No	1.00
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	(No)	
Degree of Function	High	Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	Yes	(No)	
Detritus development is present within this wetland	(Xes)	No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	Yes	(No)	
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	Yes	Nο	
Degree of Function	High Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wetland	Yes	(No)	
Potential sediment sources upstream or upslope	Yes	No.	Unknown
Wetland border >10' adjacent to pond or water	Yes	(No)	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	(m)	
Boating activity present	Yes	©	
Floodplain stabilizing trees and shrubs present	Ýes	(No)	
Indications of erosion or siltation present	Yes	(No)	
Function Present	Yes	(No)	·
Degree of Function	High I	Mod Low	·

REC/RECREATION

Criteria	+	. - "	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No	
Fishing is available in or from the wetland	Yes	(No	
Hunting is permitted in wetland	Yes	(No)	
Hiking occurs or has potential to occur in wetland	Yes	No	Potential
Wetjand is a valuable wildlife habitat	(Yes)	No	Moderate

Wetland has high visual/aesthetic quality	Yes		/ No			 	
Boating or canoeing feasible in wetland	Yes		No)	-		
Off-road public parking near wetland available	Yes		u No)		 	
Safety Hazards (if present list them)	Yes		Nô	<u> </u>		 	
Function Present	Yes		ไฟอ์	,"		···········	
Degree of Function	High	Mod		Low			

WLH/WILDLIFE HABITAT

Criteria	- + + · · ·	•	Comments
Wetland degradation by human activity	Little or None	Moderate to High	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands		No	
Size of landscape block in which wetland is located	(arge)	Small	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(COM)	rispoded Swamio
Vegetation density	High	Low	<u> </u>
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		-	Tree, Sapling, Herb, LL
Wetland plant species diversity	High Mod Low		
Vernal pool	Yes	(No.)	
Edge diversity (List types)			Forest
Water regime	Wetter	Drier	- Constant
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant .	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent)	
Sphagnum hummocks next to shallow pools	Present	(Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	-
Degree of Function	High Mod	Low	

Criteria		÷	-	Comments
Wetland contains listed species	Yes		(No.)	
Wetland provides valuable wildlife habitat	(Yes)		No	
Wetland class diversity	High		Loy	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		fow)	Forest
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	(Near)		Far	Berndoin
Wetland contains perennial watercourse	Yes		(6M)	consonal
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(N)	
Function Present .	Yes		/No)	, ,
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	+	<u>-</u>	Comments
Wetland contains listed species	Yes	(No)	·
Wetland identified as exemplary natural community	Yes	100	
Wetland locally/regionally significant	Yes	(Vo)	
Function Present	Yes	[No)	
Degree of Function	High Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	<u> </u>	Comments
Visible from primary viewing locations	Yes		(No)	
Views absent trash, debris, sign of degradation	(Yes)) (2) (2) (3)	
Low noise level	Yes	Yes		
Visual landuse contrast with wetland	Yes	Yes		
Function Present	Yes-	Yes:		
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria .		+	-	Comments	
Wetland contains or known to cor habitat	tain federal listed species or	es	(N)		
Wetland contains critical habitat for	or state or federal listed species Ye	es	(M)		
Area appears in state or national	database Ye	es	No		

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	5&S	ESH
mod/No	Low	No	No	No	Low	No	Mod	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 267 Direction: SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS: Wet Id#:	FA 72 Da	ate: N/A Functiona	l Unit:	We	ather: N/A	Time Start: N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Re	ecent Precipitati	ion: N/A Below	v average 🗌	Average 🗌	Above Average	e ☐ Don't Know [☐ TBD ☐
Wildlife Investigation Method: Cover search \boxtimes	Dip netting	g ☐ Audito	ory 🛭	Scat 🛛	Tracks 🛛	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n						
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegel	tated				
PEM/PSS Deep Marsh	Dead Woody	Shrub St	ıb-shrub	Robust	Narrow-leav	ved Broad-lea	ved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	ed	Floating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed		,,, <u>,</u> ,,			_
PSS / Shrub Swamp	Sapling	Bushy	Compact		Aquatic		
PFO / Wooded Swamp	Deciduous	Evergreen	· 				
Bog	Compact shrub	Bushy shru		Woode		ergent	
Water Regimes (Cowardin Modifier):						d to surface, especially eason in most years; se	
Permanently flooded (H) - water covers land surface	_ •	-			ater seepage and ov		
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the yea	ar except in years	Tempor season,	arily flooded but water ta	(A) - surface water p ble usually lies well l	present for brief period: below soil surface for n	s during growing nost of the season
Semi-permanently flooded (F) - surface water personal most years					l (J) – substrate usua out detectable seasc	ally exposed, but surfac	ce water is present fo
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods most years	s especially early in:				of flooding controlled b	y dikes dams, pumps
Hydrology:							
Ground water discharges present: Ye	es No)		Depth to fr	ee water:		
If Present: Slope or Depressional				Depth to s	aturation:		
Surface water depth: av	/erage -	maximum -		Signs of al	tered hydrology?	Yes	No
Hydrology indicators; inundated Sa	aturated in upper	12" Water marks	Drift lines	Sediment d	eposits Drainag	ge patterns within wetla	ands Other
Plant Adaptations to Hydrology: Pneumato stems, or roots Adventitious roots Ri	phores Po hizospheric oxida	olymorphic leaves ation Shallo	Buttressed tree w root systems		pertrophied lenticels ating leaves	Stooling Floating stems	inflated leaves,
Soil Drainage classes Well Moderatel	ly Well So	mewhat Poorly	Poorly	Ver	y Poorly	Mapped Hydric Soil	
Slope: Nearly level centle)	Moderate	Steep					
Upland Border:						•	
Slope: Nearly level G	entle	Moderate	Steep				
Cover Types: Mature forest	Sapling for	rest Shrub	thicket	Meadow	Mowed lawn	Farm	
		plings M	Shrubs	Herbs	Grass		
Soil: WMB - Windsorl	camy sa	ad	•				

Leaf litter:

Well developed

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

No S

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(N)	
Slope	Gentle	Moderate or Steep	
Function Present	Yes (No)		·
Degree of Function	High Mo	d Low	·

GWD/GROUNDWATER DISCHARGE

Crîteria	+		-	Comments
Soils	Hardpan, shallov	v ledge		·
Seeps, springs observed?	Yes		No	
Wetland microrelief	Weil developed		Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	-	(No)	Inundated culvert @ Northern and -inlet
Function Present	Yes		(on	
Degree of Function	High	Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	
Amount of impervious surface in wetland watershed	Large	\$mail \	
Wetland Slope	(Gentle)	Moderate Steep	
Wetland characterized by variable water level?	(Yes)	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(No	
Watershed has a history of economic loss due to flooding	Yes	No	unknow h
Wetland outlet restricted	(Yes)	No	
Wetland vegetation density	(High)	Low	
Wetland microrelief	Weil developed	None/Poorly developed	

	Function Present	(Yes)	No		
- 1	Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,		=	production of the second
Shallow littoral zone with emergent vegetation present?	Yes		, North Reserve	·
Waterbody at least 10' deep	Yes	Market Market Street	No	, .
% of pond covered by submerged or emergent vegetation.	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	. No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	. ~	Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	-	Yes	- was near the contract of the
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high-culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	'High	Low	
Channel alterations (channelization, Islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	The same of the sa
Bank vegetative cover	High (trees, shrubs)	Low .	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide .	Narrow	·
Watershed development	Low	High	
Water quality	Good	Poor	,

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	anit	Mostly tolerant	
Function Present	 -Yes		No	
Degree of Function	 High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	(Yes)	No	Runoff from monts
Duration of water retention in wetland	Long	Short	K
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	(High)	No	
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	No	(Yes)	
Water flow through wetland	(Diffuse)	Channelized	
Ponded water present	(Yes)	No	•
Wetland basin topographic gradient	LÔW)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Yes)	No	
Degree of Function	(High) M	ed Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small)	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season.	(Ye)	No	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse)	Channelized	
Vegetation density	(High)	Low	-
Potential for sediment trapping exists	(Yes)	No	
Deep or open water habitat is present	(Yes)	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)	-	No]
Degree of Function	High	10	Mod)	Lov	,	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	,					J
Criteria				T	Comments	7
Wildlife food sources in wetland		Abundant		Few		1
Vegetation density		High		Low	and agreement	1
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes	المتالين بشبيع والمدورين	~ No		1
Wetland has high degree of plant community structure and species diversit	y	Yes		No	_	1
Detritus development is present within this wetland	And the second second	Yes		No		1
Flowering plants used by nectar gatherers present	***	Yes		No	-	1
Evidence of wildlife use in wetland		Yes	Wild management	No		1
Fish or shellfish develop/occur in wetland	··· ·	Yes		No	The state of the s	1
Function Present		Yes		No	Contract of the second	1
Degree of Function		High	Mod	Low		
S&SS/SEDIMENT/SHORELINE STABILIZATION						
Criteria		+		-	Comments]
Topographical gradient in wetland	Yes		No		·	1
Potential sediment sources upstream or upslope	Yes		No			1
Wetland border >10' adjacent to pond or water	Yes		No			1
Distinct shoreline or bank evident between wetland and water	No		Yes			
Open water fetch present	Yes		No		· -	1
Boating activity present	Yes	•	No			1
Floodplain stabilizing trees and shrubs present	Yes		No			1
Indications of erosion or siltation present	Yes		No		·]
Function Present	Yes		No			1
Degree of Function	High	Mod	L	ow]
REC/RECREATION						
Criteria -		+		-	Comments]
Wetland is part of recreation area, park, refuge, etc.	Yes		(A)			1
Fishing is available in or from the wetland	Yes		(No)			1
Hunting is permitted in wetland	Yes		(810)			1

Wetland has high visual/aesthetic quality	· (Yes)	No	
Boating or canoeing feasible in wetland	Yes	No	
Off-road public parking near wetland available	Yes	(No)	
Safety Hazards (if present list them)	Yes	(No)	
Function Present	(Yes)	No	Potential
Degree of Function	High (M	og) Low	104601100

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	Roadway to north
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	Near Harbswell Pd.
Connectivity with other wetlands	Yes	6	
Size of landscape block in which wetland is located	(Large	Small	
Wildlife food sources in wetland	Abundani	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	weeded swamp
Vegetation density	eHigh)	Low	Ů.
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf-litter)			Tree, Sapling, Shrub
Wetland plant species diversity	High Mod (Low)		
Vernal pool	Yes	No	TRC pool # 42
Edge diversity (List types)		1	
Water regime ·	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	>Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	(None or Low)	Highway	
Function Present	(Yes)	No	
Degree of Function	(Fligh) Mod	Low	1

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	/ Yes	No	
Wetland class diversity	High	Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(Low)	Forest
Off-road parking near wetland available	Yes	(No	-
Proximity to schools	Near	Far	Bowdoin Conlege
Wetland contains perennial watercourse	Yes	(NS)	d d
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	(Fig.)	No	
Degree of Function	High · (Mod)	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	•	+	-	Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes		(6)	
Wetland locally/regionally significant	Yes		(No.)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	Yes	···········	(No)	
Views absent trash, debris, sign of degradation	Yes		(No)	
Low noise level	Yes		(No)	Road raise
Visual landuse contrast with wetland	(Yes)		No	A
Function Present	Yes		No /	
Degree of Function	High	Mod	Low	•]

ESH/ENDANGERED SPECIES HABITAT

Criteria	÷	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	®	
Wetland contains critical habitat for state or federal listed species	Yes	No)	
Area appears in state or national database	Yes	(No	

Function Present	Yes		(No)
Degree of Function	High	Mod	Fom_

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

a little Ala Hard office of a little of the Ala	GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
10 10 1 10 1 10 1 10 1 10 1 10 1 10 1	NONO	High	No	High	Mad	N o	Mod	Hidl.	Med	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

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Sediment/Shoreline/Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

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Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland,

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 268 Direction: NE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 73 Da	ite: N/A Functional	Unit:	Weat	her: N/A	Time Start: N/A	Time Stop: N/A
Site Investigator:Amy Goodstine & Chris Akios R	ecent Precipitati	on: N/A Below	average 🗌	Average 🗌	Above Average	☐ Don't Know ☐	∃ · TBD 🗔
Wildlife Investigation Method: Cover search \boxtimes	Dip netting	Audito	ry 🖾	Scat 🛛	Tracks 🗵	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n						
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegeta	ated				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sul	o-shrub	Robust	Narrow-leav	ed Broad-lea	ved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	e d Flo	oating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling	Bushy	Compact	Αα	quatic		
PFO / Wooded Swamp	Deciduous	Evergreen					
Bog	Compact shrub	Bushy shru	b	Wooded	Em	ergent	
Water Regimes (Cowardin Modifier):	<u> </u>					l to surface, especially	
Permanently flooded (H) - water covers land surface	ce throughout yea	er in all years			rated by end of se r-seepage and ov	ason in most years; so erland flow	irrace water absent
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the yea	ar except in years	•		, ,	resent for brief periods below soil surface for n	~ ~ ~
Semi-permanently flooded (F) - surface water pers most years	sists throughout g	rowing season in	Intermitt	ently flooded (.	•	illy exposed, but surfac	
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		especially early in				of flooding controlled b	y dikes dams, pumps,
Hydrology:				· i			
Ground water discharges present: Y	es No	,		Depth to free	water:		
If Present: Slope or Depressional				Depth to satu	uration:		~
Surface water depth:	verage -	, maximum -		Signs of alter	red hydrology?	Yes	No
Hydrology indicators: Inundated S	atorated in upper	2" Water marks	Drift lines	Sediment dep	osits Drainaç	ge patterns within wett	ands Other
Plant Adaptations to Hydrology: Pneumatostems, or roots Adventitious roots R	ophores Po hizospheric oxida	r Nymorphic leaves ation Shallo	Buttressed tree w root systems		ertrophied lenticels ing leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ly Well So	mewhat Poorly	Poorly	Very I	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:							
Slope: Nearly level	entle	Moderate	Steep			-	
Cover Types: Mature forest	Sapling for	rest Shrub	thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	D 8	plings M	Shrubs	Herbs	Grass		
Soil: DeB- Deerfield logi	me men 1						-

eaf	

Well-developed

Moderately well developed

Absent

Cover objects:

دogs).

Bark

Boulders

Rocks

Evidence of Erosion:

No

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	_	Comments	
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	•	
Wetland associated w/ perennial or seasonal watercourse	V es	No	·	
Slope	Gentle	Moderate or Steep		
Function Present	No No	<u> </u>		
Degree of Function	High Mo	Low		

GWD/GROUNDWATER DISCHARGE

Criteria		+	-	Comments
Soils	Hardpan, sh	allow ledge		
Seeps, springs observed?	Yes		No	
Wetland microrelief	Well develor	ped	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes		(NO)	
Function Present	Yes		(gN)	
Degree of Function	High	Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Şmall)	
Wetland Slope	Gentie	Moderate Steep	
Wetland characterized by variable water level?	(Yes)	No	
Wetland in floodplain of adjacent watercourse	Ses >	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No 3	
Watershed has a history of economic loss due to flooding	Yes	No	Unknower
Wetland outlet restricted	Yes	(Ng)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	(Yes)	No		
Degree of Function	High	Mod	[OW]	

F&SH/FINFISH HABITAT: POND &LAKE Excluding condition: Not associated with pond/lake)

Criteria		t	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shru	b, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes -		No	
Waterbody at least 10' deep	Yes		No	CONTRACT CONTRACT
% of pond covered by submerged or emergent vegetation	15-40%	and the same of th	Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	·
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		NQ_	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No.		Yes	
Function Present	Yes		No	
Degree of Function	High	Mođ	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Ephemeral straam

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	- And the state of
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous -	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, updercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrew	
Watershed development	Low	High	·
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant a	Mostly tolerant	
Function Present	Yes		No	·
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria		-	Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	(High)	No	_
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No.2	Yes ·	
Water flow through wetland	(Diffuse)	Channelized	
Ponded water present	Yes	(ND)	
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	
Indicators of erosion or high water velocities are present	(B)	Yes	
Function Present	(Yes)	No	
Degree of Function	High Mod) Low ·	7

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	şmail)	
Potential sources of excess nutrients upstream	Yes	(NO)	
Wetland is saturated most of the season	Yes	(No)	-
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No .	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(Algh)	Low	
Potential for sediment trapping exists	(Yes)	No.	-
Deep or open water habitat is present	Yes	No)	
Soil type	Organic/high clay content	Sand/gravel	`
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)	No		
Degree of Function	High	Mod	(com)	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	· -	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Fes)	No	
Wetland has high degree of plant community structure and species diversity	(es)	No	
Detritus development is present within this wetland	Ŷes)	No	
Flowering plants used by nectar gatherers present	(es)	No	
Evidence of wildlife use in wetland	Yes	NO NO	
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	(F)	No No	
Degree of Function	High (Mod	Low	· .

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	•	Comments
Topographical gradient in wetland .	(Yes)	No	
Potential sediment sources upstream or upslope	Yes	(No)	
Wetland border >10' adjacent to pond or water	Yes	No .	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	(A)	•
Boating activity present	Yes	(No)	
Floodplain stabilizing trees and shrubs present	(Yes)	No	<u> </u>
Indications of erosion or siltation present	Yes	_ (N)	
Function Present	(Yes/	No	
Degree of Function	High M	od (Loy	

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	No.	<u>.</u>
Hunting is permitted in wetland	Yes	(No)	
Hiking occurs or has potential to occur in wetland	(es)	No	Potential
Wetland is a valuable wildlife habitat	(Yes)	No	

Wetland has high visual/aesthetic quality	Yes	(No)		
Boating or canoeing feasible in wetland	Yes	(No)		
Off-road public parking near wetland available	Yes	(No)	 -	·
Safety Hazards (if present list them)	Yes	(6)		·
Function Present	Yes	No		<u> </u>
Degree of Function	High M	od) Low		

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	d'ittle or None	Moderate to High	
Wetland fragmentation by development	(Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes)	No	
Size of landscape block in which wetland is located	Large)_	Small	
Wildlife food sources in wetland	(Abundant)	Few	· _ ·
Interspersion of vegetation and open water	High	(Ow)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	weeded swamp
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Thee, sopling show herb LL
Wetland plant species diversity	High Mod) Lov	v	JANA CO
Vernal pool	Yes	(No	
Edge diversity (List types)			Forest
Water regime	Wetter	(Drier)	10.64
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Apsent	
Abundance of invasive exotic flora	None or Low	High	
Function Present .	(Ves)	No	
Degree of Function	High Mod	Low	

Criteria	. +	-	Comments
Wetland contains listed species	Yes	No	·
Wetland provides valuable wildlife habitat	(Yes)	No	
Wetland class diversity	High	(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	Yes	(No)	
Proximity to schools	Near	Far	Bowdoin
Wetland contains perennial watercourse	Yes	(No.)	
Wetland contains pond/lake	Yes	(40)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No)	
Function Present	(Yes	No	-
Degree of Function	High Mod	(Low)	·

U/H/UNIQUENESS/HERITAGE

Criteria	+			-	Comments
Wetland contains listed species	Yes		No)		
Wetland identified as exemplary natural community	Yes		(No)		
Wetland locally/regionally significant	Yes		(No)		
Function Present	Yes		(<u>M</u>)		
Degree of Function	High	Mod	Low	1	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments
Visible from primary viewing locations	Yes		(Ng)	
Views absent trash, debris, sign of degradation	(Yes)		No	
Low noise level	(Yes)		No	
Visual landuse contrast with wetland	Yes		(No,)	
Function Present	Yes		No	·
Degree of Function	High	Mod	LOW	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	} -	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	(NO)	
Area appears in state or national database		(No)	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE .	REC	WLH	ED/S	U/H	S&S	ESH
mod/No	Low	No	Mag	Low	Mod	mod	mod	low	No	low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 269 Direction: SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 74 Da	ate: N/A Functional U	nit:	Weath	er: N/A	Time Start: N/A	Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios Re	ecent Precipitat	ion: N/A Below av	erage 🗌 💮 /	Average 🗌	Above Average	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	⊒ твр □
Wildlife Investigation Method: Cover search ⊠	Dip netting	⊋ ☐ Auditory	\boxtimes	Scat 🖾	Tracks 🛛	Minnow Traps 🔲	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n						
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegetate	ed				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	hrub	Robust	Narrow-leav	ed Broad-lea	ıved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leaved	l Flo	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub					
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aqı	ıatic		 .
PFO / Wooded Swamp	Deciduous	Evergreen					
Bog	Compact shrut	Bushy shrub		Wooded		ergent	
Water Regimes (Cowardin Modifier):						to surface, especially	
Permanently flooded (H) - water covers land surface	ce throughout ye	ar in all years			seepage and ov	eason in most years; serland flow	unace water ausent
Intermittently Exposed (Z) -surface water present to of extreme drought	hroughout the ye	ear except in years				resent for brief period below soil surface for i	
Semi-permanently flooded (F) - surface water pers most years	sists throughout g	growing season in	Intermitte variable p	ntly flooded (J) periods without	- substrate usua detectable seasa	nily exposed, but surfa onal periodicity~	ce water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		s especially early in	Artificially etc	flooded (K) - a	mount/duration	of flooding controlled b	oy dikes dams, pumps,
Hydrology:							
Ground water discharges present: Y	es N	o		Depth to free	water:	- 1	
If Present: Slope or Depressional				Depth to satur	ration:		
Surface water depth: a	verage -	maximum -		Signs of altere	ed hydrology?	Yes	No
Hydrology indicators: (nundated 5	aturated in uppe	r 12°) Water marks - (Orift lines	Sediment depo	sits (Draina	ge patterns within wet	ands Other
Plant Adaptations to Hydrology: Pneumatostems, or roots Adventitious roots R	ophores Po Phizospheric oxid		Buttressed trees root systems		trophied lenticels g leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ly Well S	omewhat Poorly	Poorly	Very P	oorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border.							
Slope: Nearly level	entie	Moderate	Steep				
Cover Types: Mature forest	Sapling fo	orest Shrub th	icket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	D §	aplings //	Shrubs :	Herbs	Grass		
Soil: DeB-Deer field	loamy	sand	•				

Leaf litter:	Weil developed	Mode	Absent	
Cover objects:	(Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	(GE)_	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	•

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	(Yes)	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	/No)	
Function Present	(Yes)	No	
Degree of Function	High (Mod)	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-		Comments
Wetland size in relation to watershed	Large	(Small)		
Amount of impervious surface in wetland watershed	Large	(Small)		
Wetland Slope ·	(Gentle)	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No .	· .	
Wetland in floodplain of adjacent watercourse	(Yes)	No	·	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(Yes)	No		Residential
Watershed has a history of economic loss due to flooding	Yes	No		unknown
Wetland outlet restricted	Yes	No		Culverted under Road
Wetland vegetation density	(High)	Low	_	7700
Wetland microrelief	Welf- developed	None/Poorly developed		

Function Present	Yes	No		
1 *	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE Excluding condition: Not associated with pond/lake)

Criteria	+	•	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow		Lawn	and the second s
Shallow littoral zone with emergent vegetation present?	Yes		No	and the second s
Waterbody at least 10' deep	Yes	A Markey And Services	Ño	
% of pond covered by submerged or emergent vegetation.	15-40%	A CALLED TO THE PARTY OF THE PA	Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High	- AND ANNIA - BARNAMET	Low	
Significant nutrient source (fertilizers_waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	Manufacture De Paris De La Company
Function Present	Yes		No	
Degree of Function	High	Mod	Low	·

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Seasonal Stream

Criteria	+	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	-Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intole	ent	Mostly tolerant			
Function Present	Yes	ĺ	No			_
Degree of Function	High	Mod	Low	,	-	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	166	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(LOW)	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present		No -	-
Wetland basin topographic gradient	(ow)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	(Yes)	No	
Indicators of erosion or high water velocities are present	(No)	Yes	
Function Present	(Yes)	No	
Degree of Function	High (Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small)	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	(Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	₹ `	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	-
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes			No			sim inpute	
Degree of Function	High		Mod	od (b)			No inputs	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)					•			
Criteria			+			Comment	s	
Wildlife food sources in wetland	(Abundant	ノ		Few]•		
Vegetation density		tigh)			Low			
Nutrients and/or organic matter flushed out of wetland into watercourse		(Yes)			No			
Wetland has high degree of plant community structure and species diversity		(Yes)			No	-		
Detritus development is present within this wetland		(G)			No			
Flowering plants used by nectar gatherers present		(Yes)			No			
Evidence of wildlife use in wetland		Yes			(NO)			
Fish or shellfish develop/occur in wetland		Yes			NO)			
Function Present		(Yes)			No		•	
Degree of Function		High	Mod		.ow			
S&SS/SEDIMENT/SHORELINE STABILIZATION							•	
Criteria	~	+			•	Comment	s	
Topographical gradient in wetland	Yes	<u></u>		No		<u></u>		
Potential sediment sources upstream or upslope	Yes			<u>(60)</u>		<u> </u>		
Wetland border >10' adjacent to pond or water	(Yes)			No		<u></u>	<u></u>	
Distinct shoreline or bank evident between wetland and water	(No)			Yes				
Open water fetch present	Yes			<u>N9)</u>				
Boating activity present	Yes			(NO)	<u></u>			
Floodplain stabilizing trees and shrubs present	(Ves)		—+	No				
Indications of erosion or siltation present	Yes		(<	(1 <u>0</u> 6)				
Function Present	(e)			No	•	1		
Degree of Function	High	Mo	od	(Lo	<u>w)</u>	<u></u>		
REC/RECREATION						<u>.</u>		
Criteria		+			•	Comment	ds	
Wetland is part of recreation area, park, refuge, etc.	Yes			@				
Fishing is available in or from the wetland	Yes			<u>%</u>		1	· 	
Hunting is permitted in wetland	Yes			Ne				

(es)

Hiking occurs or has potential to occur in wetland

Wetland is a valuable wildlife habitat

No

No

Potential

Wetland has high visual/aesthetic quality	Yes	(No)
Boating or canoeing feasible in wetland	Yes	(No)
Off-road public parking near wetland available	Yes	(No)
Safety Hazards (if present list them)	Yes	(No)
Function Present	Yes	No ·
Degree of Function	High A	Mod Low Potential

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to High	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	(Large)	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(G)	a ·
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Shrub swamp
Vegetation density	(ligh)	Low	<u> </u>
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Tree, soping shrub, herb LL
Wetland plant species diversity	High (Mod) Low		37.00
Vernal pool	Yes	(No)	
Edge diversity (List types)			
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	(Absent)	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	(None or Low	High	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	No	
Wetland provides valuable wildlife habitat	(Yes)	No	
Wetland class diversity	High	(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	Yes	No	
Proximity to schools	(Near)	Far	Bowloin
Wetland contains perennial watercourse	Yes	<u> </u>	
Wetland contains pond/lake	Yes	160	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(Ño)	
Function Present	(Ye)s	No	
Degree of Function	High Mod	LOW)	

U/H/UNIQUENESS/HERITAGE

Criteria	j	+		Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes		(N ₂ /	
Wetland locally/regionally significant	Yes		(Ag)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments	
Visible from primary viewing locations	Yes	(NO)		
Views absent trash, debris, sign of degradation	(Yes)	No		
Low noise level	S	No		
Visual landuse contrast with wetland	(Yes_)	No		
Function Present	(Yes)	No		
Degree of Function	High (Mo	d) Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	. (%)	
Wetland contains critical habitat for state or federal listed species	Yes	Ø	
Area appears in state or national database	Yes	Ng	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/mos	//	No_	mod	low	Mod	Low	High	Low	No	Low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 270 Direction: W MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 75 Date: N/A Fund	ctional Unit:	Weathe	r: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation: N/A	Below average	Average 🔲	Abové Average	☐ Don't Know ☐	TBD □
Wildlife Investigation Method: Cover search 🛛	Dip netting ☐	Auditory 🛛	Scat 🗵	Tracks 🛛	Minnow Traps □	Electro-shocking
Wetland Types(s) Cowardin/Golet Classificatio	n					
Class	Subclass					
POW/ Open water	Vegetated Non-	-Vegetated				
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leave	ed Broad-leav	ed
PAB/ Shallow Marsh	Robust Narrow-leave	ed Broad-leave	ed Float	ting leaved		
PFL / Seasonally Flooded Flats	Emergent Shru	ıb .				
PEM / Wet Meadow	Ungrazed Graz	zed ,		·		
PSS / Shrub Swamp	Sapling Bushy	Compact	Aqua	atic		
PFO / Wooded Swamp	Deciduous Ever	rgreen	-	-		
Bog	Compact shrub Busi	hy shrub	Wooded	Ете	argent"	
Water Regimes (Cowardin Modifier):					to surface, especially	
Permanently flooded (H) - water covers land surface	ce throughout year in all years		but are unsaturat o <u>r g</u> round water s		ason in most years; sui erland flow	tace water absent
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the year except in ye	tempore			resent for brief periods elow soil surface for m	
Semi-permanently flooded (F) - surface water pers	sists throughout growing seasor			•	lly exposed, but surface	
most years		n recarring	periods without d			, water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in		arly in Artificial etc	ly flooded (K) - an	nount/duration o	f flooding controlled by	dikes dams, pumps,
Hydrology:						
Ground water discharges present: Y	es No		Depth to free w	ater:		
If Present: Slope or Depressional			Depth to satura	tion:		
Surface water depth: a	verage - maximu	ım -	Signs of altered	i hydrology?	Yes	No
Hydrology indicators: Inundated	aturated in upper 12" Water n	narks Drift lines	Sediment depos	its Drainag	e patterns within wetta	nds Other
Plant Adaptations to Hydrology: Pneumatistems, or roots Adventitious roots F		ives Buttressed tree Shallow root systems	s Hypertr Floating	ophied lenticels leaves	Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ly Well) Somewhat Poor	ly Poorly	Very Po	orly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:						
Slope: Nearly level G	Sentle (Modera	te) Steep				
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm -	<u>-</u>
Vegetation Density(S/M/D): Trees I	Saplings S	Shrubs 🗲	Herbs	Grass		

Leaf litter:

Well developed

Yes

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

No

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+ '	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No)	
Slope	Gentle	Moderate or Steep	-
Function Present	/Yes No		
Degree of Function	High (Mo)	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	-	Comments
Soils	Hardpan, shallow ledge	_	
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed)	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	(No)	No apparent in let or outlet-isolated
Function Present	(Yes)	No	The second secon
Degree of Function	High (Mod)	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	(Small)	
Amount of impervious surface in wetland watershed	Large	(Small)	
Wetland Slope	Gentle	Moderate Stee	0
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	No	unknown
Wetland outlet restricted	Yes	(No)	Isolated - no outlet
Wetland vegetation density	High	Low	
Wetland microrelief.	Well developed	None/Poorly developed	

Function Present	Yes	No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	-	+	•	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	· · ·	Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	. +	-	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	-Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	LOW	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow ·	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	÷	-	Comments
Sources of sediments or toxicants upstream	Yes	NO	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	LowNo	
Vegetation density	High	NO(200)	
Wetland edge broad and intermittently aerobic	(Yes)	Lew No	
Drainage ditches in wetland	NoT	Yes	
Water flow through wetland	(Diffuse)	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	(Low)	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	NIO - MI OFFICE
Indicators of erosion or high water velocities are present	No	Yes	No watercowse present
Function Present	Yes	No	No sources of sediments under present
Degree of Function	High Mod		No sources of sediments, water present from ground water discharge.

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+	-	Comments
Wetland size in relation to watershed	Large	(Small)	
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	(Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	(No)	· -
Water flow through wetland	Diffuse)	Channelized	
Vegetation density	High	(Low)	-
Potential for sediment trapping exists	Yes)	No	-
Deep or open water habitat is present	(Yes)	No	
Soil type	Organic/high clay content	(Sand/gravel)	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	- ,

function Present	Yes			No			No sources of excess nutrie
Degree of Function	High		Mod		Low		No sources of excess nutrice water present from ground discharge.
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet) No O4079	arent	outl.	et - j	sola	ted wet	land-no	-
riteria			+		-	Comment	s
Vildlife foed sources in wetland		Abunda	nt		Few		- I was a second of the second
/egetation density		Hìgh			Low		
lutrients and/or organic matter flushed out of welland into watercourse		Yes			_No	·	·
Vetland has high degree of plant community structure and species diversity	All Parks and Association of the Parks and As	Yes			No	_	
Detritus development is present within this wetland		Yes	-	-	No		
Flowering plants used by nectar gatherers present		Yes			-No		
vidence of wildlife use in wetland		Yes			No		
ish or shellfish develop/occur-in wetland		Yes	. <u></u>		No		
unction Present		Yes	,		No	ļ	
Degree of Function		High	Mo	od	Low	<u> </u>	
S&SS/SEDIMENT/SHORELINE STABILIZATION							
Criteria		+			<u>.</u>	Comment	s
Fopographical gradient in wetland	Yes			No			
otential sediment sources upstream or upslope	Yes		_	(No)			
Netland border >10' adjacent to pond or water	Yes			No			·
Distinct shoreline or bank evident between wetland and water	(No)	_		Yes		No was	enourse present
Open water fetch present	Yes			(No)			<u> </u>
Boating activity present	Yes			(No)			<u></u>
Floodplain stabilizing trees and shrubs present	Yes			No)	• ***		
ndications of erosion or siltation present	Yes			(No)	-		
Function Present	Yes			No)			ociated w/ waterourse.
Degree of Function	High		Mod	;	Low	Isolat	ed wetland
REC/RECREATION							
Criteria		+			<u> </u>	Comment	is
Wetland is part of recreation area, park, refuge, etc.	Yes			No		No put	lig access
	1			(No)		1. '	1
Fishing is available in or from the wetland	Yes			1119			
Fishing is available in or from the wetland Hunting is permitted in wetland	Yes Yes			No)		· -	

Yes

Wetland is a valuable wildlife habitat

(No)

Wetland has high visual/aesthetic quality	Yes	(No)		
Boating or canoeing feasible in wetland	Yes	(No)		
Off-road public parking near wetland available	Yes	No		
Safety Hazards (if present list them)	Yes	No		
Function Present	(es)	No	No public access	
Degree of Function	High M	od (Low)	Dotential	

WLH/WILDLIFE HABITAT

·		*	
Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wellands	Yes	(No)	4
Size of landscape block in which wetland is located	(Large)	Small	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	(High)	Low	
Upland islands	Present	(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Wooded swamp
Vegetation density	High	(Low)	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Leaf litter herb, sapling, those
Wetland plant species diversity	High Mod (Low)		Leaf litter, herb, sapling, tree Red maple, sphagnum
Vernal pool	Yes	No)	Ret Mapie, Spragnum
Edge diversity (List types)			Forest
Water regime	Wetter	Drier	P81 401
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant)	Few	Costan lage
Cover objects (L=Logs/branches R=Rocks B=Bark)	(Abundant)	Few	Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present	Absent \	Logs / brancoles
Sphagnum hummocks next to shallow pools	Present	Absent	-
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	·
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	Highquality wetland, small size.
Degree of Function	High (Mod)	Low	, ,

Criteria	+	-	Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	(Yes)	No	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(Low)	Forest
Off-road parking near wetland available	Yes	No	No public access
Proximity to schools	(Near)	Far	V Bowdoin College
Wetland contains perennial watercourse	Yes	No	<u> </u>
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	(No)	·
Function Present	(es)	No	No public access
Degree of Function	High Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes	Yes		
Wetland locally/regionally significant	Yes	Yes		
Function Present	Yes	Yes		
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments	
Visible from primary viewing locations	Yes		(No)	No public access	
Views absent trash, debris, sign of degradation	(Yes)		. No		
Low noise level	Yes		(No)	Near Airfield	
Visual landuse contrast with wetland	Yes		No		
Function Present	Yes		(No)	No public access	
Degree of Function	High	Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria		+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes		(N)	
Wetland contains critical habitat for state or federal listed species	Yes	•	No	· · · · · · · · · · · · · · · · · · ·
Area appears in state or national database	Yes		(No)	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	\$&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
mod/mod		No_	low	Low	NO	1/1900	Mod	Low	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

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Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 271 Direction: NW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: /	FA 76 Date: N	VA Functional Unit	:	Weathe	er: N/A	Time Start	: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitation: N	I/A Below aver	age □ A	verage 🗌	Above Average	Doi	o't Know 🗌	TBD ☐ Î
Wildlife Investigation Method: Cover search ⊠	Dip netting 🗌	Auditory 🛛	S	icat 🛛	Tracks 🗵	Minnow Tra	ips 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n						. <u>-</u>	<u>,</u>
Class	Subclass				_		_	
POW/ Open water	Vegetated	Non-Vegetated	_					
PEM/PSS Deep Marsh	Dead Woody Shru	.tbSub-shi	rub	Robust	Narrow-leav	/ed	Broad-leave	<u></u>
PAB/ Shallow Marsh	Robust Narr	row-leaved	Broad-leaved	Floa	ating leaved	<u>-</u> -	<u> </u>	
PFL / Seasonally Flooded Flats	Emergent	Shrub					<u>-</u>	· .
PEM / Wet Meadow	(Ungrazed)	Grazed	<u>.</u>		·	<u>.</u>	. <u>.</u>	
PSS / Shrub Swamp	Sapling Bus	hy	Compact	Aqu	ıatic		· <u>-</u>	
PFO / Wooded Swamp	Deciduous	Evergreen				<u> </u>		
Bog	Compact shrub	Bushy shrub		Wooded		ergent		- of a familiary
Water Regimes (Cowardin Modifier):	-		Season b	y saturated (Y ut are unsatur) - soils saturate ated by end of s	d to surface, eason in mo:	especially e st years; suri	face water absent
Permanently flooded (H) - water covers land surfa-	ce throughout year in a	all years	except for	ground water	seepage and ov	erland flow		
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year ex	cept in years	Temporar season, b	ily flooded (A) ut water table	- surface water _i usually lies well	present for b below soil s	rief periods o urface for mo	during growing ost of the season
Semi-permanently flooded (F) - surface water persmost years	sists throughout growin	ng season in	Intermittei variable p	ntly flooded (J) eriods without) - substrate usu detectable seas	ally exposed conal periodic	, but surface city-	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods esp nmost years	ecially early in	Artificially etc	flooded (K) - a	emount/duration	of flooding o	ontrolled by	dikes dams, pumps
Hydrology:								
	(es) No			Depth to free	water:		•	
If Present: Slope or Depressional			•	Depth to satu	ration:			
•	averag e -	maximum -		Signs of alter	ed hydrology?	Yes	3 -	No
Hydrology indicators: Inundated	Saturated in upper 12"	Water marks Di	rift lines	Sediment depo	osits Draina	age patterns	within wetlar	nds Other
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots I	tophores Polymo Rhizospheric oxidation		uttressed trees oot systems		rtrophied lentice ng leaves	ls St Floating s	ooling tems	Inflated leaves,
Soil Drainage classes: Well Moderate		what Poorly	Poorly	Very F	Poorly	Mapped H	ydric Soil	
Slope: Nearly level Gentle	Moderate	Steep			•			
Upland Border:								
•	Gentle	Moderate	Steep					
Cover Types: Mature forest	Sapling forest	Shrub thic	ket	Meadow	Mowed lawn	F	arm	
Vegetation Density(S/M/D): Trees	D Saplin	gs M S	hrubs 💲	Herbs ⋦	Grass			
Soil: 27A - Lamoine silt la	am							

Leaf litter: Well developed			М	oderately well	developed	4 Absent	
Cover objects:	Cover objects: (Logs)			Bark Boulders			· · · · · · · · · · · · · · · · · · ·
Evidence of Erosion:	[No]	Yes		Explain)	'		Rocks
GWR/GROUNDWATER RECHARGE					nd)		
Criteria	<u> </u>	- +-					Comments
Soils	Sand/e	gravel outv	ash	Hardpa	n, tight fine-gra	ined soils.	
Wetland associated w/ perennial or seasonal watercourse	Yes		_	shallow No	ledge		
Slope	Gentie	7	-			-	
Function Present	(Yes)	No No		Modera	te or Steep		
Degree of Function	High		1112	<u> </u>		 :	
	i iigii		(Mod	} -	Low	<u></u>	
GWD/GROUNDWATER DISCHARGE				1			
Criteria		•	+			_ _	Comments
Soils	Hardpan		shallow ledge				
Seeps, springs observed?					No		
Wetland microrelief	nicrorelief Well deve		eloped		Non/Poorly		· · · · · · · · · · · · · · · · · · ·
Wetland contains an outlet, no inlet		Yes			developed No		
Function Present	- -	Yes)		_	No		
Degree of Function		High	100	lod)	Low		_
	<u> </u>				LOW	<u>-</u>	
FFA/FLOODFLOW ALTERATION (Exc	luding (condition:	Slope V	Vetland)			
Criteria					-	_	
				t	- -		Comments
Wetland size in relation to watershed			Large		Small	_	
Amount of impervious surface in wetland watershed		hed_	Large		(Small)		•
Wetland Slope			Gentle	<u> </u>	Moderate	Steep	
Wetland characterized by variable water level?			Yes		No		
Wetland in floodplain of adjacent watercourse			Yes		No)		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland			Yes\ N		No		Carl Carlona
Watershed has a history of economic loss due to flooding		,	Yes N		No		Golf Course
Wetland outlet restricted			Yes		(No)		unknown
Wetland vegetation density		- -	High)	-	Low		
Wetland microrelief		_	Well	\neg	None/Poorly		
The same in the same is a same in the same is a same in the same i			develor	ed)	developed		

Function Present	Yes	 No	,	
Degree of Function	High	[Mod]	Low	Relatively small size

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Griteria	· .	+		Comments
Dominant land use adjacent to Waterbody	Forest, Shrut	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	_	No	
Waterbody at least 10' deep	Yes	•	No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	The state of the s	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	- Fligh	The Real Property lies and the Personal Property lies and the	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	<u>-</u>	Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No_	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition (Not associated with perennial stream))

Cuiteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas-present	Yes	No.	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, ereding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Function Present Yes No Degree of Function High Mod Low	Pollution tolerance of benthic macro-invertebrate taxa	Mostly intol	erant	Mostly tolerant	
Degree of Function High Mod Low	Function Present	Yes	Yes		
	Degree of Function	High	Mod	Low	•

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		
Sources of sediments or toxicants upstream	(Yes)		Comments
Duration of water retention in wetland	- - 	No	Golfcourse
Evidence of sediment trapping in wetland	Long	Short	
Vegetation density	Yes	Low)	
Wetland edge broad and intermittently aerobic	(High)	No No	
Drainage ditches in wetland	(Yes)	Low	
Water flow through wetland	(No)	Yes	
Ponded water present	Diffuse)	Channelized	
Wetland basin topographic gradient	Yes	No	
Fine grained mineral or organic soils present	- 	High	
Watercourse, if present, has visible velocity decreases in wetland	[Yes]	No	
Indicators of erosion or high water velocities are present	Yes	No No	No watercourse present
Function Present	(No)	Yes	
Degree of Function	(Yes)	No	
N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION	(High)	Mod Low	

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	(Yes)	- 	
Wetland is saturated most of the season		No	Golf course
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	(Yes)	No	
Vegetation density	(Diffuse)	Channelized	
Potential for sediment trapping exists	(Yes)	Low	
Deep or open water habitat is present	Yes	No No	
Soil type	Organic/high clay	†	-
Wetland basin topographic gradient	content	Sand/gravel	
Wetland microrelief	(Low)	High	
AAGNON MICHOLONGIA	Well developed	None, poorly developed	

Function Present	Yes	No	_
Degree of Function	High	Mod	Low

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	(Abundant)	Few	
Vegetation density	(High)	Low	·
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	(Yes)	No	
Detritus development is present within this wetland	(Yes)	No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	Yes	No	
Fish or shellfish develop/occur in wetland	Yes	No	
Function Present	Yes	No	Relatively small wetland area
Degree of Function	High (Mod)	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments
Topographical gradient in wetland	(Yes)	No	
Potential sediment sources upstream or upslope	(Yes)	No	
Wetland border >10' adjacent to pond or water	Yes	No	
Distinct shoreline or bank evident between wetland and water	(No)	Yes	
Open water fetch present	Yes	(No)	
Boating activity present	Yes	NO)	
Floodplain stabilizing trees and shrubs present	Yes	No	Willow Spp.
Indications of erosion or siltation present	Yes	(No)	
Function Present	(Yes)	No	Not directly associated wy watercours stream across dirt rd. from wetland
Degree of Function	High M	od (Low)	stream across dirt 19. from wetland

REC/RECREATION

Criteria	+ _	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	No	Golfcourse
Fishing is available in or from the wetland	Yes	(No)	
Hunting is permitted in wetland	Yes	(No)	
Hiking occurs or has potential to occur in wetland	Yes	(No)	
Wetland is a valuable wildlife habitat	Yes	NO	Relatively small adj. to adjective

Wetland has high visual/aesthetic quality	Yes	No	•	
Boating or canceing feasible in wetland	Yes	No	,	
Off-road public parking near wetland available	(Yes)	No		Golf course parking lot
Safety Hazards (if present list them)	Yes	No	 :	Elge of driving range
Function Present	Yes	No	•	Not a likely area for
Degree of Function	High	Mod	(Low)	recreation in wetland

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	(Moderate to	
Wetland fragmentation by development	Little or None	Moderate to High	Altered by golf course development
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	No No	Forest to north, Howed lawn to south.
Buffer width	Good to Excellent	(Fair to Poor)	Wooded border
Connectivity with other wetlands	Yes	No	Connected under dirt road to stroom system
Size of landscape block in which wetland is located	(Large)	Small	Competes disco 6171 Total to strance year
Wildlife food sources in wetland	Abundan)	Few	·
Interspersion of vegetation and open water	High	Low	<u> </u>
Upland islands	Present	(Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(Low)	wet meadow
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Herbaceous :
Wetland plant species diversity	(High Mod Low	-	
Vernat pool	Yes	(No)	
Edge diversity (List types)		<u> </u>	Lawn & forest
Water regime	(Wetter)	Drier	1701 081
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	(Absent)	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	Relatively small wetland, adjacent to
Degree of Function	High Mod	Low	driving range.

Criteria	+	·	-	Comments
Wetland contains listed species	Yes		(No)	
Wetland provides valuable wildlife habitat	Yes		No	moderate
Wetland class diversity	High		(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest & mowed lawn
Off-road parking near wetland available	(Yes)		No	Golf course parking lot_
Proximity to schools	Near		Far	Bowdoin College
Wetland contains perennial watercourse	Yes		No	Bowdoin College Drains under dirt of into ephemeral ethermi
Wetland contains pond/lake	Yes		No.	
Safety hazards (if present list them)			<u> </u>	Adj. to driving range
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes		No)	<u> </u>
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments	·	
Wetland contains listed species	Yes	_	(NO)		<u>-</u>	
Wetland identified as exemplary natural community	Yes		(No)		<u></u>	
Wetland locally/regionally significant	Yes		(No)		: 	<u> </u>
Function Present	Yes		(No)			
Degree of Function	High	Mod	Low		<u> </u>	<u>.</u>

VQA/VISUAL QUALITY/AESTHETICS

Criteria	1 . 4	ř	<u> </u>	Comments
Visible from primary viewing locations	(Yes)		No	
Views absent trash, debris, sign of degradation	Yes		(No)	Goif balls
Low noise level	Yes		(NO)	Near airfield
Visual landuse contrast with wetland	(Yes)		No	
Function Present	(Yes)		No	
Degree of Function	High	Mod	[wo]	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(M)	<u>_</u> .
Wetland contains critical habitat for state or federal listed species	Yes	(NO)	
Area appears in state or national database	Yes	(No)	

Function Present	Yes		No \	•
Degree of Function	High	Mod	Low	1

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

		· _				, – –				_	
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
rusd/mod	Mod	Mn	Haln	High	Mod.	Low	Wood	No	No	Low	120
SHAMMADY	E EUNCTIONS			4		 -	#4.0V	140			[#V 0

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat; For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, takes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable welfand attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 272 Direction: N/NE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Re	•	N/A Functional Un		W eath Average □	er: N/A Above Average	Time Start:		Time Stop: N/A TBD □
	Dip netting	Auditory [-	Scat 🖾	Tracks 🛛	Minnow Tra	ps 🗌	Electro-shocking
Wildlife Investigation Method: Cover search ⊠	•	Additory	<u></u>					-
Wetland Types(s) Cowardin/Golet Classification	n 						-	<u>-</u>
Class	Subclass	<u> </u>			<u> </u>	.		_
POW/ Open water	Vegetated	Non-Vegetate	d	_	<u>.</u> .	_ .	_	<u>-</u>
PEM/PSS Deep Marsh	Dead Woody Shr	ยb _ Sub-s	dund	Robust	Narrow-leav	red	Broad-leave	ed
PAB/ Shallow Marsh	Robust Nar	row-leaved	Broad-leaved	Fic	ating leaved	<u> </u>	<u>-</u>	
PFL / Seasonally Flooded Flats	Emergent	Shrub		<u> </u>			_	
PEM / Wet Meadow	Ungrazed	Grazed		_		· <u>-</u>	_	
PSS / Shrub Swamp	Sapting Bus	shy	Compact	Aq	uatic			<u> </u>
PFO / Wooded Swamp	Deciduous	Evergreen				· ·		
Bog	Compact shrub	Bushy shrub		Wooded		ergent		arty in growing
Water Regimes (Cowardin Modifier):			Seasonal season t	ly saturated () out are unsatu	() - soils saturated	d to suriace, eason in mo:	especially e st years; sur	face water absent
Permanently flooded (H) - water covers land surfa			except fo	r ground wate	r <u>seepag</u> e and ov	erland flow		
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year e	cept in years	season, l	but water table		below soil su	ırface for me	est of the season,
Semi-permanently flooded (F) - surface water permost years	sists throughout growi	ng season in	variable j	periods withou	t detectable seas	onal periodic	city~	e water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods esp n most years	pecially early in	Artificially etc	y flooded (K) -	amount/duration	of flooding c	ontrolled by	dikes dams, pumps,
Hydrology:								
	res (No)			Depth to free	water:			
if Present: Slope or Depressional				Depth to sat	uration:			
	average -	maximum -		Signs of alte	red hydrology?	Yes	3	No
Hydrology indicators: Inundated	Saturated in upper 12	Water marks	Drift lines	Sediment der	osits Draina	ige patterns	within wetla	nds Other
Plant Adaptations to Hydrology: Pneuma	tophores Polym Rhizospheric oxidation	٠٠,٠٠٠	Buttressed tree root systems		ertrophied lenticel ing _. leaves	ls St Floating st	ooling ems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well) Some	what Poorly	Poorly	Very	Poorly	Mapped H	ydric Soil	
Slope: Nearly level Gentle	(Moderate)	Steep			•			
Upland Border:								
	Gentie	Moderate	Steep	:				
Cover Types: (Mature forest)	Sapling forest	Shrub th	nicket	Meadow	Mowed lawn	Fa	arm.	
Vegetation Density(S/M/D): Trees	M Saplin	igs M	Shrubs 5	Herbs S	Grass			
		ex.						
Soil: 10A - Udorthents-Cro Sandy	a ir sairpi	•			·.		•	

Leaf litter:	Well developed	Moderately well developed	Absent
Cover objects:	Logs	Bark Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)	1100,10

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mod	[Low]	moderately steep stream course

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments			
Soils	Hardpan, shallow ledge					
Seeps, springs observed?	Yes	No				
Wetland microrelief	Well developed	Non/Poorly	<u> </u>			
Wetland contains an outlet, no inlet	Yes	ldeveloped No				
Function Present	Yes	No	Madaratatu Stana si			
Degree of Function	High Mod	Low	Moderately Steep stream course			

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Small		
Amount of impervious surface in wetland watershed	Large	(Small)	<u> </u>	Narrow border along stream
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No	Oleeb	
Wetland in floodplain of adjacent watercourse	Yes	No -		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes 1	No		Gelfcourse
Watershed has a history of economic loss due to flooding	Yes	No		tinknown
Wetland outlet restricted	Yes	(No		(changes)
Wetland vegetation density	High	(Low)		
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	No		
Degree of Function	. High	Mod	Low	moderately steep stream not seasonal flow

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition Not associated with pond/lake)

Criteria		+		Comments
Dominant land-use adjacent to Waterbody	Forest, Shr	ub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No	-	Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	•	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	<u> </u>	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	Culverted downstream
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	(High)	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(Low)	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	(High (trees, shrubs)	Low	Forested
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	(High)	Golf course, cuirfield
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mosfiy intolerant	Mostly tolerant	Unknown
Function Present	Yes	No	Relatively perm. votercouse, but
Degree of Function	High Mod		high flow most likely seasonal & high
S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION	·		precipitation events.

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	_
Duration of water retention in wetland			Airfield
Evidence of sediment trapping in wetland	Long [Yes]	Short)	
Vegetation density		Low	
Wetland edge broad and intermittently aerobic	High	[No]	
Drainage ditches in wetland	Yes	[Low]	Narrow wetland border
Water flow through wetland	(No)	Yes	
Ponded water present	Diffuse	Channelized	Stream course
Wetland basin topographic gradient	(Yes)	No	
Fine grained mineral or organic soils present	[Low]	High	·
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	Yes	[No]	water flow channelized win stream
Function Present	No)	Yes	<u> </u>
Degree of Function	Yes	No	Moderate ability for sediment retention Flow is seasonal 4 during high precipitation events
N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION	High Mod) Low	precipitation events

Criteria	+		
Wetland size in relation to watershed			Comments
Potential sources of excess nutrients upstream	Large	(Small)	
Wetland is saturated most of the season	Yes	No	
	Yes	(No)	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized)	
Vegetation density	High	(Low)	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay	Sand/gravel)	
Wetland basin topographic gradient	(Cow)	High	
Wetland microrelief	Well developed	(None, poorly developed	

Function Present	Yes	No	_	No inputs of excess nutrients. How is seasonal or due to
Degree of Function	High .	Mod	(Low)	high precip events.

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+		Comments
Wildlife food sources in wetland	Abundant	(Few)	
Vegetation density	High	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(Yes)	No	
Wetland has high degree of plant community structure and species diversity	Yes	No	
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	(Yes)	No	Impatiens spp.
Evidence of wildlife use in wetland	Yes	No]	
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	Yes	No _	
Degree of Function	High Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	-	Comments
Topographical gradient in wettand	Yes	No	
Potential sediment sources upstream or upslope	(Yes)	No	
Wetland border >10' adjacent to pond or water	Yes	[No]	Narrow wetland border
Distinct shoreline or bank evident between wetland and water	No	(Yes)	· _ · _
Open water fetch present	Yes	(No)	
Boating activity present	Yes	Nô)	
Floodplain stabilizing trees and shrubs present	(Yes)	No	
Indications of erosion or siltation present	(Yes)	No	
Function Present	Yea	No	
Degree of Function	High ∫{M	od] Low	

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	(No)	
Hunting is permitted in wetland	Yes	(No)	
Hiking occurs or has potential to occur in wetland	Yes	No)	
Wetland is a valuable wildlife habitat	Yes	No	

WLH/WILDLIFE HABITAT	High	Mod	Low	`
Degree of Function			No	No public access.
Function Present	Yes	Von		
Safety Hazards (if present list them)	Yes		Nd	
	Yes	Yes		
Off-road public parking near wetland available			(No) (No)	
Boating or canceing feasible in wetland	Yes			-
Wetland has high visual/aesthetic quality	Yes		(No)	

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to High	
Wetland fragmentation by development	Little or None	Moderate to	Separated from FA76 by dirt road.
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	[FeS]	No No	Forest
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	(Yes)	No.	
Size of landscape block in which wetland is located	(Large)	Small	Downstream & upstream
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_CW=Open water)	High	Low	wooded swamp.
Vegetation density	High	(Low)	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		 	Tree souther book lead the
Wetland plant species diversity	High Mod Low?	- -	Tree, sapling, herb, leaf-litter Red maple, impatient sp., sensitive fern
Vernal pool	Yes	[No]	Red maple, Impatient sp., sensitive fern
Edge diversity (List types)		1	
Water regime	(Wetter)	Drier	Forest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	5- 40-1
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	Fallen logs
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	Logs 4 branches
Sphagnum hummocks next to shallow pools	Present	(Absent)	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
unction Present	(Yes)	No	
Degree of Function	High (Mod)	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	(No) _	
Wetland provides valuable wildlife habitat	Yes	No _	Moderate
Wetland class diversity	High	Low	Forested stream edge
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest
Off-road parking near wetland available	Yes	(No)	
Proximity to schools	Near	Far	Bowdoin College
Wetland contains perennial watercourse	Yes	No	
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	_ (No)	
Function Present	Yes	No	
Degree of Function	High Mod	(Low)	

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes	<u>-</u>	(No)	
Wetland identified as exemplary natural community	Yes		(No)	
Wetland locally/regionally significant	Yes		(No)	
Function Present	Yes ·		No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	·	Comments
Visible from primary viewing locations	Yes	(No)	
Views absent trash, debris, sign of degradation	Yes	No	
Low noise level	Yes	(No)	Near airfield
Visual landuse contrast with wetland	Yes	No	
Function Present	Yes	No	No public access.
Degree of Function	High Mod_	(Low)	<u> </u>

ESH/ENDANGERED SPECIES HABITAT

Criteria	<u> </u>	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes		No)	
Wetland contains critical habitat for state or federal listed species	Yes	<u>_</u>	(No)	
Area appears in state or national database	Yes		(N ₀)	

Function Present	Yes	 :	No	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

CHIDID	-					· – –	<u> </u>				
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Loro/No	Low	Cow	Mod	Low	mod	No	Mod	صما	NB	head	No
SHAMMADY	E ELIMOTIONS					<u>. </u>			100	MO 0	เงอ

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or configuous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 274 Direction: NE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 78 Date: N/A	Functional Unit:	Weather:	N/A Time St	tart: N/A Time Stop: N/A	4
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitation: N/A	Below average	Average 🗌 Above	e Average 🗌	Don't Know ☐ TBD ☐	
Wildlife Investigation Method: Cover search ⊠	Dip netting 🔲	Auditory 🛛	Scat 🗵 Track	s 🛛 Minnow	Traps Electro-shocking	g 🗀
Wetland Types(s) Cowardin/Golet Classification	n				<u>.</u>	
Class	Subclass		_			
POW/ Open water	Vegetated	Non-Vegetated			<u>_</u>	
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust N	аrrow-leaved	Broad-leaved	
PAB/ Shallow Marsh	Robust Narrow	r-leaved Broad-leave	ed Floating le	aved		
PFL / Seasonally Flooded Flats	Emergent	Shrub		<u>.</u>		
PEM / Wet Meadow	Ungrazed	Grazed	,		<u> </u>	
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquatic			
PFO / Wooded Swamp	Deciduous	Evergreen Mixed	forest			
Bag	Compact shrub	Bushy shrub	Wooded	Emergent		
Water Regimes (Cowardin Modifier):		season	ally saturated (Y) - soils but are unsaturated by	saturated to surta end of season in	ace, especially early in growing most years; surface water absent	ıt
Permanently flooded (H) - water covers land surfa		rears except	for ground water seepa			
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year excep		arily flooded (A) - surfa , but water table usually	ce water present for Iles well below so	or brief periods during growing iil surface for most of the season	
Semi-permanently flooded (F) - surface water permost years	sists throughout growing s	season in Intermit variable	tently flooded (J) - subs	strate usually expos able seasonal peri	sed, but surface water is present in its present in	for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods especi n most years	ally early in Artificia	lly flooded (K) - amount	Yduration of flooding	ng controlled by dikes dams, pum	ıps,
Hydrology:						
Ground water discharges present:	res No		Depth to free water:			
If Present: Slope or Depressional			Depth to saturation:	•		
Surface water depth:	average - m	aximum -	Signs of altered hydr	rology?	Yes No	
Hydrology indicators: Inundated	Saturated in upper 12" W	ater marks Drift lines	Sediment deposits	Drainage patter	rns within wetlands Other	
	tophores Polymorph Rhizospheric oxidation	hic leaves Buttressed tre Shallow root systems	es Hypertrophie Floating leav		Stooling Inflated leaves, g stems	
Soil Drainage classes: Well Moderate	ely Well Somewha	t Poorly Poorly	Very Poorly	Mappe	d Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:	 -			•		
Slope: Nearly level	Gentle M	oderate Steep				
Cover Types: Mature forest	. Sapling forest	Shrub thicket		ed lawn	Farm	
Vegetation Density(S/M/D): Trees	Saplings	M Shrubs S	Herbs M Gras	s		
Soil: wmc + wmD - windson	- loany sand				•	

				•	
Leaf litter:	Well developed		Moderately well develope	d Absent	
Cover objects:	(Logs	Bark	Boulders	Rocks	
Evidence of Erosion:	No Yes	(Explai	n)		
GWR/GROUNDWATER RECHARGE	(Excluding condition	n Slope We	etland)		
Criteria	+			Comments	
Soils	Sand/gravel outwa	sh Hard	lpan, tight fine-grained soil: low ledge	5,	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	ow range		
Slope	Gentle	Mod	erate or Steep		<u> </u>
Function Present	-Yes No				To a .
Degree of Function	High	Mod	Low	<u> </u>	
GWD/GROUNDWATER DISCHARGE					
Criteria		+	-	Comments	
Soils	Hardpan, sh	allow ledge		<u> </u>	, <u> </u>
Seeps, springs observed?	Yes	_	No		<u> </u>
Wetland microrelief	Well develop	ed	Non/Poorly developed		

No

No

Low

Mod

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Wetland contains an outlet, no inlet

Function Present

Degree of Function

Yes

Yes

High

Criteria	+			Comments
Wetland size in relation to watershed	Large	Small	 .	
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No	<u> </u>	
Wetland in floodplain of adjacent watercourse	Yes	No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	-	
Watershed has a history of economic loss due to flooding	Yes	No		
Wetland outlet restricted	Yes	Ño	_	
Wetland vegetation density	High	Low		
Wetland microrelief	Well developed	None/Poorly developed		

Seepage wetland adjacent to small stream.

Function Present	Yes	No	<u> </u>	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition Not associated with pond/lake)

Criteria		+	· _	Comments
Dominant land use adjacent to Waterbody	Forest, Shrul	o, Meadow_	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		YES	
Sandbar present at inlet?	No		Yes	
Water transparency	High-	<u>_</u>	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	<u></u>

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	UNKNOWN
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	(High)	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(Low)	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	(High (trees, shrubs)	Low	Trees
Cover objects (fallen logs, boulders, undercut banks)	(Many)	Absent/few	Fallen 1095
Riparian zone	Wide	Narrow	J
Watershed development	Low	High	
Water quality	Good	Poor	Unknown

	Mostly intolerant	Mostly tolerant	Unknown
	Yes	No	
Degree of Function	High Mod	(Low)	1

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	(Long)	Short	Runoff from road potentially
Evidence of sediment trapping in wetland	Yes	- 	<u> </u>
Vegetation density	(High)	Low	
Wetland edge broad and intermittently aerobic		No	
Drainage ditches in wetland	Yes)	Low	<u> </u>
Water flow through wetland	(No)	Yes	
Ponded water present	/Diffuse)	Channelized	
Wetland basin topographic gradient	Yes	(No)	
Fine grained mineral or organic soils present	Tow)	High	·
Watercourse, if present, has visible velocity decreases in wetland	Yes	(No)	
indicators of erosion or high water velocities are present	Yes	No	
Function Present	No .	Yes	
Degree of Function	Yes Vigh	No	
N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION	High Mod	<u> </u>	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		
Wetland size in relation to watershed	Large	/Small	Comments
Potential sources of excess nutrients upstream	Yes	(Small)	
Wetland is saturated most of the season	Yes	No No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse)		
Vegetation density	(High)	Channelized	
Potential for sediment trapping exists	Yes	Low	
Deep or open water habitat is present	Yes	No.	_
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	content		
Wetland microrelief	(Low)	High	
	Well developed	None, poorly developed	

Function Present	Yes	No		No sources of excess
Degree of Function	High	Mod)	Low	nutrents

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	(High)	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes)	No	
Wetland has high degree of plant community structure and species diversity	(Yes)	No _	
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	Yes	No	
Evidence of wildlife use in wetland	(Yes)	No	Birds insects
Fish or shellfish develop/occur in wetland	Yes	(1/0)	·
Function Present	Yes	No	
Degree of Function	(High) Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	_	Comments
Topographical gradient in wetland	(Yes)	No	
Potential sediment sources upstream or upslope	Yes	No	
Wetland border >10' adjacent to pond or water	Yes	No	
Distinct shoreline or bank evident between wetland and water	No	Yes	
Open water fetch present	Yes	No	
Boating activity present	Yes	No)	
Floodplain stabilizing trees and shrubs present	Yes	No	
Indications of erosion or siltation present	Yes	(No	
Function Present	Yes		
Degree of Function	High	od Low	

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	
Fishing is available in or from the wetland	Yes	No	
Hunting is permitted in wetland	Yes	[No)	
Hiking occurs or has potential to occur in welland ,	Yes	(No)	
Wetland is a valuable wildlife habitat	(Yes)	No	

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canoeing feasible in wetland	Yes	No	
Off-road public parking near wetland available	Yes	- 	_
Safety Hazards (if present list them)	Yes	No	
Function Present	Yes	(No)	
Degree of Function	High	Mod · Low	No recreation in area.
WLH/WILDLIFE HABITAT			

Criteria	+	T -	Comments
Wetland degradation by human activity	Little or None	Moderate to	Controlls
Wetland fragmentation by development	Little or None	11.4	Francisco de la seconda de la
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High /	Bordered by Roads/highway Porest
Buffer width	Good to Excellent	Fair to Poor	10164
Connectivity with other wetlands	Yes	No.	
Size of landscape block in which welland is located	Large	Small)	<u> </u>
Wildlife food sources in wetland	Abundant	 	
Interspersion of vegetation and open water	High	Few	
Upland islands	Present \	Low	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Absent Low)	4.9
Vegetation density	(High)	Low	wooded swamp
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)	1,		Tage
Wetland plant species diversity	High Mod Low	- -	Tree, supung, nerb, leaf Offer
Vernal pool	Yes	No)	Tree, sapling, herb, leaf litter Red maple, skunk collage, impations spon
Edge diversity (List types)		[NO]	
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant		
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant)	Few	Fallen logss Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present	Few Absent	Logs/branches
Sphagnum hummocks next to shallow pools	Present	***************************************	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent (Absent)	
Abundance of invasive exotic flora	None or Low		
Function Present	Yes)	High	
Degree of Function	High (Mod)	No	•

Criteria		+	-	Comments
Wetland contains listed species	Yes	· .	(No)	
Wetland provides valuable wildlife habitat	Yes		No	
Wetland class diversity	High		[Low]	wooded swamp
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	_	Lów	Forest
Off-road parking near wettand available	Yes		(No)	
Proximity to schools	(Near)		Far	Bowdon College
Wetland contains perennial watercourse	[Yes]		No	V
Wetland contains pond/lake	Yes		No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes	·	No)	
Function Present	(Yes)		No	No public access
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	_	+	<u>-</u>	Comments
Wetland contains listed species	Yes	. <u> </u>	No	
Wetland identified as exemplary natural community	Yes		No)	
Wetland locally/regionally significant	Yes		No	
Function Present	Yes		[No]	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	Τ_ •	Comments
Visible from primary viewing locations	Yes	<u></u>	(No)	
Views absent trash, debris, sign of degradation	Yes	<u></u>	No	
Low noise level	Yes		(NO)	Near roads tairfield
Visual landuse contrast with wetland	[Yes]		No	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria		+	-	Comments
Wetland contains or known to contain federal listed species or	Yes		No	
habitat Wetland contains critical habitat for state or federal listed species	Yes		(No)	
Area appears in state or national database	Yes		(No)	

Function Present	Yes		No	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA .	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	
No/Hall	No	Low	Mod	Mod	High	No	moé	1	1) 1) 1	Med	ESH
SUMMARY	F FUNCTIONS			7-00	- 00-	1 408	10000	Vocas		10000	_ NO

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, takes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 275 Direction: N/NE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Ro Wildlife Investigation Method: Cover search Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: Dip netting	N/A Functional Unit: N/A Below average Auditory ———————————————————————————————————	Weat ☐ Average ☐ Scat ☑	her: N/A Above Average Tracks ⊠	Time Start: N/A □ Don't Know □ Minnow Traps □ □	Time Stop: N/A TBD Electro-shocking
Class	Subclass			_		
POW/ Open water	Vegetated	Non-Vegetated				
PEM/PSS Deep Marsh	Dead Woody Sh	rub Sub-shrub_	Robust	Narrow-leav	ved Broad-leav	ed
PAB/ Shallow Marsh	Robust Na	arrow-leaved Broa	d-leaved Fi	loating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub	<u></u>			<u>-</u> .
PEM / Wet Meadow)	Ungrazed	Grazed			<u>-</u> .	
PSS / Shrub Swamp	Sapling Bu	ushy Con	npact A	quatic		
PFO / Wooded Swamp	Deciduous	Evergreen			<u> </u>	<u> </u>
Bog Water Regimes (Cowardin Modifier):	Compact shrub	Bushy shrub	Wooded		ergent d to surface, especially	parly in growing
Permanently flooded (H) - water covers land surfal Intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water personst years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in Hydrology:	throughout the year e sists throughout grow extended periods es	n all years except in years ving season in specially early in	except for ground water Temporarily flooded (A season, but water table intermittently flooded (variable periods witho	er seepage and ov A) - surface water point be usually lies well (J) - substrate usual ut detectable seas - amount/duration	present for brief periods below soil surface for m ally exposed, but surfac	during growing nost of the season e water is present for
If Present: Slope or Depressional			Depth to sa	turation:		
Surface water depth:	verage -	maximum -	Signs of alte	ered hydrology?	Yes	No
Hydrology indicators: Inundated	Saturated in upper 12			•	age patterns within wetta	
	tophores Polyn Rhizospheric oxidatio			ertrophied lenticel ting leaves	Is Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate	ely Well Come	ewhat Poorly	Poorly Very	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle Upland Border:	Moderate .	Steep Moderate	Steep			
	Gentle Sapling fores	`	Meadow	Mowed lawn	Farm	
Cover Types: Mature forest Vegetation Density(S/M/D): Trees	Sapility lotes			Grass		

Soil: 27A - Lamoine silt loam

ı	aaf	litter	
- 1	ear	mmer	٠.

Well developed

Yes

Moderately well developed

Absent

Cover objects:

Evidence of Erosion:

Logs

Bark

(Explain)

Boulders

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetfand associated w/ perennial or seasonal watercourse	Yes	(No.	
Slope	(Gentle	Moderate or Steep	
Function Present	(Yes No		
Degree of Function	High N	lod (Low)	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge	·	
Seeps, springs observed?	Yes	No.	
Wetland microrelief	Well developed	Non/Poorly)	
Wetland contains an outlet, no inlet	Yes	(No	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	-Gentle	Moderate Steep	
Wetland characterized by variable water level? (Yes	No Stoop	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	Golf course
Watershed has a history of economic loss due to flooding	Yes	No	unknown
Wetland outlet restricted	Yes	No	00.11-11-11-11-11-11-11-11-11-11-11-11-11-
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	(Xes)	No	
Degree of Function	High	(Mod Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shru	b, Meadow	Lawn	and the same of th
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		-No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No.		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No _	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravei/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few ,	
Riparian zone	Wide	Narrow	
Watershed development	·Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes	-	No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	÷		Comments
Sources of sediments or toxicants upstream	(Yes)	No_	
Duration of water retention in wetland	Long	(Short)	
Evidence of sediment trapping in wetland	Yes	(Low)	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	<u> </u>
Drainage ditches in wetland	(e)	Yes	
Water flow through wetland	(Diffuse)	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	(Low)	- -	
Fine grained mineral or organic soils present	Yes	High No	
Natercourse, if present, has visible velocity decreases in wetland		No No	·
ndicators of erosion or high water velocities are present	Yes		<u> </u>
Function Present	Ves (Yes	
Degree of Function	High Mod	No	-

Criteria	+		
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes		
Wetland is saturated most of the season	(Yes.)	No No	
Emergent vegetation and/or dense woody stems are dominant	1/2	No.	
Water flow through welland	(Yes)	Channelized	
Vegetation density	(High)	Low	<u> </u>
Potential for sediment trapping exists	(Yes.)	No No	
Deep or open water habitat is present	Yes	No)	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	Low	Hìgh	
Wetland microrelief	Well developed	(None, poorly developed)	

Function Present	Yea			10			!
Degree of Function	High		Mod		(ow)		No inputs
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)				_	·	· · · · · ·	
Criteria	_		<u> </u>		-	Comments	
Wildlife food sources in wetland		<u>Ab</u> undant	ノ_		Few	_	
Vegetation density		(High)			Low		
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes		_	(NO)_		<u> </u>
Wetland has high degree of plant community structure and species diversity	(Ye)			No		
Detritus development is present within this wetland		Yes			No	<u> </u>	<u> </u>
Flowering plants used by nectar gatherers present		(Yes)		_	No	 	
Evidence of wildlife use in wetland		Yes			(No)		
Fish or shellfish develop/occur in wetland		Yes			(No)		
Function Present		Yes)			No	_	
Degree of Function	_	High	Mod		(Low)	<u> </u>	
S&SS/SEDIMENT/SHORELINE STABILIZATION					_		
Criteria		+				Comments	
Topographical gradient in wetland	(Yes)		<u> </u>	No		Dearl	y level.
Potential sediment sources upstream or upslope	Yes)		No		}	<u> </u>
Wetland border >10' adjacent to pond or water	(Yes)	<u> </u>		No _	_	<u> </u>	-
Distinct shoreline or bank evident between wetland and water	(No)	:	_	Yes			
Open water fetch present	Yes	<u>-</u>		%			<u> </u>
Boating activity present	Yes		_ }	No)		-	
Floodplain stabilizing trees and shrubs present	Yes			No)		-	
Indications of erosion or siltation present	Yes			No)		<u> </u>	<u> </u>
Function Present	Yes			No)		4	
Degree of Function	High		bod	. []	Low		
REC/RECREATION		_		<u> </u>			
Criteria						Comment	<u> </u>
Wetland is part of recreation area, park, refuge, etc.	Yes			(No)	<u> </u>		<u> </u>
Fishing is available in or from the wetland	Yes			(No.)			
Hunting is permitted in wetland	Yes			(No)		 	
Hiking occurs or has potential to occur in wetland	Yes			(No)		-	<u></u>
Wetland is a valuable wildlife habitat	(Yes	<u> </u>		No	_		<u>-</u>

Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canoeing feasible in wetland	Yes	No	1
Off-road public parking near wetland available	Yes		
Safety Hazards (if present list them)	(Yes)	No No	
Function Present	Yes		Adj. to runway
Degree of Function	 	Mod Low	
BAIL LIBRUR DI FEE LANDEN	trigit	Mod Low	<u> </u>

WLH/WILDLIFE HABITAT

Criteria		+		Comments
Wetland degradation by human activity	Little or No	ne	Moderate to	
Wetland fragmentation by development	Little or No	 ne	Moderate to	<u> </u>
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)		High No	lawn
Buffer width	Good to Ex	cellent	Fair to Poor	
Connectivity with other wetlands	Yes)		No No	
Size of landscape block in which wetland is located	(Targe)	- -	Smail	
Wildlife food sources in wetland	(Abundant)		Few	
Interspersion of vegetation and open water	High		 	
Upland islands	Present	- -	(Low) (Absent)	
Wetland class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	_	Low	
Vegetation density	(High)		Low	> nub swamp
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			LOW	Sapling tra, shrub, Iterb,
Wetland plant species diversity	High Wo	d) Low	 - -	Sapring tree: Shrub Herb.
Vernal pool	Yes		<u></u>	,
Edge diversity (List types)	 	<u> </u>		
Water regime	Wetter		Dries	
fabitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	<u>-</u>	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	 1	Few)	
lat rocks in/near watercourse (stream salamanders)	Present .			
Sphagnum hummocks next to shallow pools	Present .		Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Absent Absent	
bundance of invasive exotic flora	None or Low	5	High	
unction Present	Yes	<u>"</u>		
Degree of Function	High		No	

Criteria	+		Comments
Wetland contains listed species	Yes		
Wetland provides valuable wildlife habitat	Yes	(No)	
Wetland class diversity	High	(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(Ow)	Forest lawn
Off-road parking near wetland available	Yes	(No.)	
Proximity to schools	Near	Far	Bowdoin
Wetland contains perennial watercourse	Yes	No.	
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			Near airfiell
Site currently used for educational/scientific purposes	yes	(No/	
Function Present	Yes	(No)	
Degree of Function	High Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	_	+		Comments
Wetland contains listed species	Yes		(NO)	
Wetland identified as exemplary natural community	Yes			
Wetland locally/regionally significant	Yes		@	
Function Present .	Yes		®	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments
Visible from primary viewing locations	Yes		NO	
Views absent trash, debris, sign of degradation	Yes		(8)	
Low noise level	Yes	_	(No)	
Visual landuse contrast with wetland	Yes		(No)	
Function Present	Yes		(NO)	
Degree of Function	Hìgh	Mod	Low	·

ESH/ENDANGERED SPECIES HABITAT

Criteria		+		Comments		-	-	
Wetland contains or known to contain federal listed species or habitat	Yes	 -	(No)				<u>_</u>	
Wetland contains critical habitat for state or federal listed species	Yes	·	(No)		· <u> </u>		_	
Area appears in state or national database	Yes	_	No					

Function Present	Yes	<u> </u>	(No)	·
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

1 _				· ·		- -						
16	WR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	888	ESH
1	1	HA			-					<u> </u>	303	Egu
L	AN NO	Mod	No	Mod	(our	000	No	Low	No		6/4	
S	IIMMARV O	E ELINOTIONIC	-		-					1 0 _	100	L NQ

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo#: 276 Direction: E MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: It Site investigator: Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitati		rage 🗌	Weath Average ☐ Scat ☑	er: N/A Above Average Tracks ⊠	Time Start: Don't Minnow Traps		Time Stop: N/A TBD Electro-shocking
Class	Subclass				<u> </u>		<u>-</u>	<u>-</u>
POW/ Open water	Vegetated	Non-Vegetated	_		<u>.</u>	_ -		<u> </u>
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-sh	rub	Robust	Narrow-leav	red Br	oad-leave	ed
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Fic	eating leaved			<u> </u>
PFL / Seasonally Flooded Flats	Emergent	Shrub			<u> </u>	<u>-</u>	.	<u> </u>
PEM / Wei Meadow	Ungrazed	Grazed						
PSS / Shrub Swamp	Sapling	Bushy	Compact	Ad	uatic	<u> </u>		<u> </u>
PFO / Wooded Swamp	Deciduous	Evergreen	<u> </u>			.		<u> </u>
Bog	Compact shru	b Bushy shrub		Wooded	Em Y) - soils saturate	ergent	enecially e	early in growing
If Present: Slope or Depressional Surface water depth: Hydrology indicators: Inundated Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots Soil Drainage classes: Well Moderate Slope: Nearly level Gentle Upland Border:	throughout the yesists throughout or extended period of most years Yes the extended period of most years Yes the extended period of the extended period of the extended period of the extended the ext	ear except in years growing season in ds especially early in No maximum - er 12") Water marks E Polymorphic leaves E idation Shallow i	except in Tempor season, intermit variable. Artificial etc. Orift lines. Buttressed tree root systems. Poorly	or ground water arily flooded (A but water table tently flooded (A periods without liy flooded (K) - Depth to free Depth to sat Signs of alter Sediment depth ses Hyp Float Very	r seepage and ou) - surface water e usually lies well I) - substrate usu it detectable seas amount/duration e water uration: ered hydrology?	present for brie below soil surf ally exposed, t conal periodicity of flooding cor Yes	of periods ace for me aut surface fraction atrolled by atrolled by atrolled by atrolled by atrolled by atrolled by atrolled by	ost of the season water is present for dikes dams, pumps No

Soil: 29 A - Haplaquents - Scantic complex

Leaf litter:	Well developed		Moderately well developed	Absent
Course ship store			Standard Committee of the Company of	Vnaciit
Cover objects:	(Logs)	Bark	Boulders	Rocke

Evidence of Erosion: No.

Yes (Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comment	
Soils	Hardpan, shallow ledge	 	Comments	_ _
Seeps, springs observed?	Yes	No		
Wetland microrelief	Well developed	Non/Poorly		
Wetland contains an outlet, no inlet	Yes	developed No	<u> </u>	·
Function Present	Yes	No -		
Degree of Function	High Mod	Low	-	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Smail	<u> </u>	Comments
Amount of impervious surface in wetland watershed	Large	Small		· · · · · · · · · · · · · · · · · · ·
Wetland Slope	Gentle)	Moderate	Steep	
Wetland characterized by variable water level?	(Ves)	No	Sieep	
Wetland in floodplain of adjacent watercourse	Yes	(No)		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		· · · · · · · · · · · · · · · · · · ·
Watershed has a history of economic loss due to flooding	Yes	No	_	
Wetland outlet restricted	Yes	(No)	_	
Wetland vegetation density	High	Low		
Wetland microrelief	Well developed	None/Poorty developed		

Function Present	Yes /	No)		·
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments
Dominant land use adjacent to Waterbody	Forest, Shruk	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No ·		Yes_	<u> </u>
Water transparency	High	The Contract of the Contract o	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes	_	No	The same of the sa
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u> </u>	Yes	
Function Present	Yes	<u> </u>	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition): Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	S CONTRACTOR OF THE STATE OF TH
Dominant bottom substrate	Gravel/cobbles	_Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	-Numerous	
Bank stability	Stable	Unstable,	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good .	Poor	<u> </u>

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No -	Comments
Duration of water retention in wetland	(Long)		
Evidence of sediment trapping in wetland	Yes	Short	<u> </u>
Vegetation density	- 	No	
Wetland edge broad and intermittently aerobic	Yes	- 	
Drainage ditches in wetland	No No	Low	
Water flow through welland	Diffuse	Yes	
Ponded water present	Yes	Channelized)	
Wetland basin topographic gradient	- 	(No)	
Fine grained mineral or organic soils present	Low, Yes	High	
Watercourse, if present, has visible velocity decreases in wetland		No	
Indicators of erosion or high water velocities are present	Yes	No	,
Function Present	No.	Yes	
Degree of Function	Yes High (Mod	No Law	
N&RR/NITRIENT PENOVAL PETENTION TO A STATE OF THE STATE O		Low	<u> </u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Large	Comments
- - 	(Small)
- 	Mo /
- 	No.
	No Standard
	(Channelized)
	Low No.
	
Organic/high clay	South
content	Sand/gravel
	None, poorly developed
·	

Criteria	+	- Comments
Wildlife food sources in wetland	Abundant	(Few)
Vegetation density	High	Low
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	(No)
Wetland has high degree of plant community structure and species diversity	Yes	(No)
Detritus development is present within this wetland	Yes	No
Flowering plants used by nectar gatherers present	(Yes)	No
Evidence of wildlife use in wetland	Yes	No.
Fish or shellfish develop/occur in welland	Yes	(No)
Function Present	Yes	(No)
Degree of Function	High Mod	Low

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+			Comments
Topographical gradient in wetland	Yes	No		
Potential sediment sources upstream or upslope	Yes	No		
Wetland border >10' adjacent to pond or water	Yes	No		
Distinct shoreline or bank evident between wetland and water	No	Yes	<u>. </u>	·
Open water fetch present	Yes	No	<u> </u>	
Boating activity present	Yes	No		
Floodplain stabilizing trees and shrubs present	Yes	No		·
indications of erosion or siltation present	Yes	No		
Function Present	Yes	(No)	
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(No.)	
Fishing is available in or from the wetland	Yes	No.)	
Hunting is permitted in wetland	Yes	(No ₂)	
Hiking occurs or has potential to occur in wetland	Yes	(No	
Wetland is a valuable wildlife habitat	Yes	(No)	

Wetland has high visual/aesthetic quality	Yes	(Ng.)	
Boating or canoeing feasible in wetland	Yes		
Off-road public parking near wetland available	Yes		<u></u>
Safety Hazards (if present list them)	Yes	No. A	
Function Present	Yes	- No.	ext to airfield
Degree of Function		Mod Low	

WLH/WILDLIFE HABITAT

Criteria		+		Çomments
Wetland degradation by human activity	Little or No		Moderate to	<u></u>
Wetland fragmentation by development	Little or No	one /	High Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes		_High	/
Buffer width	Good to Ex	rceilent	Fair to Poor	
Connectivity with other wetlands	Yes		No.	
Size of landscape block in which wetland is located	Large		Small	
Wildlife food sources in wetland	Abundant		Few-	
Interspersion of vegetation and open water	High		Low	
Upland Islands	Present		Absent	
Wetland class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	-	/LOW)	PEM
Vegetation density	High		(Low)	4. (2.10)
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			(1011)	Herb
Wetfand plant species diversity	High Mo	d (ow)	<u> </u>	HEV D
Vernal pool	Yes		No	·
Edge diversity (List types)				
Water regime	Wetter		Drier	Forest, grassland curffeld
labitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant		(Few)	·
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant		(Few)	
lat rocks in/near watercourse (stream salamanders)	Present		Absent	
Sphagnum hummocks next to shallow pools	Present	- -	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Absent)	·
Abundance of invasive exotic flora	None or Lov	<u> </u>	High)	
unction Present	Yes.		(NO)	
Degree of Function	High	Mod	Low .	
&SV/FDUCATIONAL/SCIENTIFIC VALUE	8.1	14100	*LOW	

Criteria	+		Comments
Wetland contains listed species	Yes	(No)	
Wetland provides valuable wildlife habitat	Yes	No.	
Wetland class diversity	High	Lov	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	Forest grassland
Off-road parking near wetland available	Yes	(No)	/ 0
Proximity to schools	4 Near	Far	
Wetland contains perennial watercourse	Yes	(No)	
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			Next to airfield
Site currently used for educational/scientific purposes	Yes	(No.)	
Function Present	Yes	(No)	
Degree of Function	High Mo	d Low	

U/H/UNIQUENESS/HERITAGE

Criteria	1	+		Comments
Wetland contains listed species	Yes		<u> </u>	
Wetland identified as exemplary natural community	Yes		(Ng	·
Wetland locally/regionally significant	Yes		(No)	_
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	·

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	•	Comments
Visible from primary viewing locations	Yes		(No)	
Views absent trash, debris, sign of degradation	Yes		(No)	
Low noise level	Yes	_;	(No)	
Visual landuse contrast with wetland	Yes		NO	
Function Present	Yes		(M)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No	
Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	Ño	

Yes
High Mod Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
low/NO	No_	No	Mod	No	No	No	No	1/0	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Refention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo#: 277 Direction: NE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 81 Date	: N/A Functional Unit:	We	ather: N/A T	ime Start: N/A Time Stop: N/A
Site investigator:Amy Goodstine & Chris Akios R	ecent Precipitation	n: N/A Below averag	je 🗌 💢 Average 🗖	Above Average	☐ Don't Know ☐ TBD ☐
Wildlife Investigation Method: Cover search ⊠	Dip netting		Scat 🗵	Tracks 🛛 💮 N	// Ainnow Traps ☐ Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classification	n			-	
Class	Subclass	-			<u> </u>
POW/ Open water	Vegetated	Non-Vegetated			<u> </u>
PEM/PSS Deep Marsh	Dead Woody S	Shrub Sub-shru	b Robust	Narrow-leaved	d Broad-leaved
PAB/ Shallow Marsh	Robust N	Narrow-leaved B	road-leaved	Floating leaved	
PFL / Seasonally Flooded Flats	Emergent	Shrub	<u></u>		
PEM / Wet Meadow	Ungrazed	Grazed		<u> </u>	
PSS / Shrub Swamp	Sapling E	Bushy C	Compact	Aquatic	
PFO / Wooded Swamp	Deciduous	Evergreen			<u> </u>
Bog	Compact shrub	Bushy shrub	Wooder		
Water Regimes (Cowardin Modifier):	<u> </u>		Seasonally saturated	d (Y) - soils saturated t aturated by end of sea	to surface, especially early in growing son in most years; surface water absent
Permanently flooded (H) - water covers land surfa-	ace throughout year	in all years	except for ground wa	ater seepage and over	land flow
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year	except in years	Temporarily flooded season, but water ta	(A) - surface water pro ble usually lies well be	esent for brief periods during growing plow soil surface for most of the season
Semi-permanently flooded (F) - surface water per most years	sists throughout gro	owing season in	Intermittently floode		ly exposed, but surface water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season is	r extended periods e n most years	especially early in			flooding controlled by dikes dams, pumps,
Hydrology:				•	•
	Yes No		Depth to f	ree water:	
If Present: Slope or Depressional			Depth to s	saturation:	
Surface water depth:	average	maximum -	Signs of a	itered hydrology?	Yes. No
Hydrology indicators: Inundated	Saturated in upper	12" Water marks Drift	lines Sediment	deposits Drainage	e patterns within wetlands Other
Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots	tophores Poly Rhizospheric oxidati	,		ypertrophied lenticels pating leaves	Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderat	ely Weil Son	newhat Poorly	Pooriy Ve	ry Poorly	Mapped Hydric Soil -
Slope: Nearly level Gentle	Moderate	Steep			
Upland Border:	•				-
•	Gentle	Moderate	Steep		
Cover Types: Mature forest	Sapling fore	est Shrub thicke	et Meadow	Mowed lawn	Farm
Vegetation Density(S/M/D):	M S	plings / Shr	ubs Herbs	Grass	

Soil: Sn-Scantic Siltloam

Leaf litter:	Well developed

Moderately well developed

Absent

Cover objects:

Evidence of Erosion:

(100s) (100s) Bark

(Explain)

Boulders

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes) No	<u> </u>	
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	<u>-</u>	Comments	···-
Soils	Hardpan, shallow !	edge		<u> </u>
Seeps, springs observed?	Yes	No		-
Wetland microrelief	Well developed	Non/Poorly		
Wetland contains an outlet, no inlet	Yes	developed		
Function Present	Yes	(ND)		
Degree of Function	High N	fod Low		

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	- Commence
Amount of impervious surface in wetland watershed	Large /	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	No No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	<u> </u>
Watershed has a history of economic loss due to flooding	Yes	No	Unknown
Wetland outlet restricted	Yes	(No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	"None/Poorly developed	

	_			, -
Function Present	Yes	No		
Degree of Function	High	Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments				
Dominant land use adjacent to Waterbody	Forest, Shrub, Mea	edow L	awn					_
Shallow littoral zone with emergent vegetation present?	Yes	-N	lö					
Waterbody at least 10' deep	Yes	N N	lo	<u> </u>				<u> </u>
% of pond covered by submerged or emergent vegetation	15-40%	C	Other	_		<u>-</u>		
Direct stormwater discharge via culvert?	No	<u> </u>	'es	ļ			<u> </u>	
Sandbar present at inlet?	No	7	(es		<u>_</u>			<u></u>
Water transparency	High	- L	.ow			<u>.</u>	<u>-</u>	<u>_</u>
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	_ Y	'es					
Pond size ≥0.5 acre	Yes		4o				·	<u>_</u>
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	Y	/es			_		
Function Present	Yes		40					
Degree of Function	High Mo	od _	Low	<u> </u>	<u> </u>			

F&SH/FINFISH HABITAT: STREAMS/RIVERS Excluding condition: Not associated with perennial stream

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts)-present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	-High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	-
Bank vegetative cover	High (trees, shrubs)	Low	<u> </u>
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolera	ent	Mostly tolerant	
	Xes	_	No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

+		Comments
Yes	No.	- Controlled
Long		
		
 		
	- 	
		
	The state of the s	<u> </u>
		<u> </u>
	-	
		
		
High Mod		-
	Yes Long Yes High Yes No Diffuse Yes Low Yes Yes Yes Yes	Yes No Long Short Yes Low High No Yes Low No Yes Diffuse Channelized Yes No High Yes No Yes No Yes No Yes No

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small	Comments
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	Yes	No	
Emergent vegetation and/or dense woody stems are dominant	(Yes.)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes -	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	-
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Wetland has high visual/aesthetic quality	Yes	(No)	<u> </u>
Boating or canceing feasible in wetland	Yes	180	
Off-road public parking near wetland available	Yes	No -	
Safety Hazards (if present list them)	Yes	No	
Function Present	(Tes)	(Nor	
Degree of Function		Acd Low	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	Culveted from under road
Wetland fragmentation by development	Little or None	Moderate to	THE THOU WAS TOOL
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(6)	No	Forest
Buffer width	(Good to Excellent	Fair to Poor	1770,35
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	Large	&mall)	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	(High)	Low	
Upland islands	Present	Absent	<u> </u>
Wetland class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	Low	1.2 manded Suza us h
Vegetation density	High	(Kow)	TO COME SECONO
Vegetation strata (T=Tree_S=Sapling-SH=Shrub_V=Vine_H≃Herb LL=Leaf litter)			Tree, Sapring, herb, LL
Wetland plant species diversity	High Mod Low	, 	Tree sorra, ners, co
Vernal pool	Yes		<u> </u>
Edge diversity (List types)			Corest
Water regime	Wetter)	Drier	1-67-651
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant)	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	<u> </u>
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
unction Present	(Yes)	No No	
Degree of Function	High (Mod)	Low	

Criteria		+	-	Comments
Wetland contains listed species	Yes			
Wetland provides valuable wildlife habitat			No	moderate
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High			Forest
Off-road parking near wetland available	Yes		(NO)	
Proximity to schools	(Near		Far	Boudoin
Wetland contains perennial watercourse	Yes		No.	· ·
Wetland contains pond/lake	Yes		_ 🐠	
Safety hazards (if present list them)				·
Site currently used for educational/scientific purposes	Yes			<u> </u>
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	}	+		Comments
Wetland contains listed species	Yes	_	New	
Wetland identified as exemptary natural community	Yes		₩	
Wetland locally/regionally significant	Yes		160	
Function Present	Yes		19	
Degree of Function	High	Mod	Low	<u></u>

VQA/VISUAL QUALITY/AESTHETICS

Criteria	_	- -	-	Comments			<u></u>
Visible from primary viewing locations	Yes		NB)			_	
Views absent trash, debris, sign of degradation	(65)	_	No				
Low noise level	Yes		(M)				
Visual landuse contrast with wetland	√ √98		No		<u></u>		
Function Present	Yes		No				
Degree of Function	High	Mod	Low	<u> </u>	<u> </u>		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	100	
Wetland contains critical habitat for state or federal listed species	Yes	<u> </u> @	
Area appears in state or national database	Yes	(No)	

Degree of Function High Mod Lou	Function Present	Yes		(No)	
	Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

01410/0	T	T								·	
GWR/D	FFA -	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Mod/No	Mod	No	Low	しのし	No	No	Med	Low	No	No	8)5
CHRISTANA	TE ELIMATIONS			- -			<u> </u>		1 4 4		

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 278 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 9 2 D	ate: N/A Functional U	nit:	Weath	er: N/A	Time Start: N	/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	ecent Precipitat	ion: N/A Below av	erage 🗌	Average 🗌 .	Above Average	☐ Don't Kno	w 🗌 TBD 🔲
Wildlife Investigation Method: Cover search ⊠	Dip netting	Auditory	×	Scat 🛛	Tracks 🛛	Minnow Traps ☐	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n .					·	
Class	Subclass						
POW/ Open water	Vegetated	Non-Vegetate	-d				<u>.</u>
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	shrub	Robust	Narrow-lea	ved Broad	-leaved
PAB/ Shailow Marsh	Robust	Narrow-leaved	_Broad-leave	d Flo	ating leaved		<u>. </u>
PFL / Seasonally Flooded Flats	Emergent_	Shrub		_		<u> </u>	
PEM / Wet Meadow	Ungrazed	Grazed	 .				
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aqı	uatic		<u>_</u>
PFO / Wooded Swamp	Deciduous	Evergreen			<u> </u>		
Bog	Compact shru	b Bushy shrub		Wooded		ergent	the de to growing
Water Regimes (Cowardin Modifier):		•	/ season.	but are unsatur	ated by end of s	eason in most year:	ially early in growing s; surface water absent
Permanently flooded (H) - water covers land surfa			except for	or ground water	seepage and ov	erland flow	
intermittently Exposed (Z) -surface water present of extreme drought	throughout the ye	ear except in years	season,	but water table	usually lies well	below soil surface i	iods during growing for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout (growing season in	Intermitt <i>variabl</i> e	ently flooded (J periods without) - substrate usu detectable seas	ally exposed, but su conal periodicity—	ırface water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period most years	ls especially early in	Artificiall efc	ly flooded (K) - a	amount/duration	of flooding controlle	ed by dikes dams, pumps,
Hydrology:				-			·
Ground water discharges present:	Yes N	lo		Depth to free	water:		
If Present: Slope or Depressional				Depth to satu	ration:	-	
Surface water depth:	average -	maximum -		Signs of alter	ed hydrology?	Yes	No
Hydrology indicators: Inundated	Saturated in uppe	er 12" Water marks	Drift lines	Sediment dep		ige patterns within	
	tophores F Rhizospheric oxid		Buttressed tree root systems		rtrophied lentice ng leaves	s Stooling Floating stems	inflated leaves,
Soil Drainage classes: Well Moderate	eiy Well S	Somewhat Poorly	Poorly	Very F	Poorfy	Mapped Hydric S	ioil
Slope: Nearly level Gentle	Moderate	e Steep			•		
Upland Border:							
Slope: Nearly level	Gentle	Moderate	Steep				
Cover Types: Mature forest	Sapling f	orest Shrub th	nicket	Meadow	Mowed lawn	, Farm	
Vegetation Density(S/M/D): Trees	m (aplings S	Shrubs	Herbs	Grass		
Soll: DeB - Decrifeld 1	oamy so	rd					

Leaf litter:

Well developed

Moderately well developed

Absent Rocks

Cover objects:

Bark

Boulders

Evidence of Erosion:

Evidence of Erosion: Yes (Explain) GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	NO	
Slope	Gentie	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	d (ow)	

GWD/GROUNDWATER DISCHARGE

Criteria	+	_	Comments
Soils	Hardpan, shallow le	ige	
Seeps, springs observed?	Yes	NO -	
Welland microrelief	Well developed	Non/Poorly	
Wetland contains an outlet, no inlet	Yes	developed	
Function Present	Yes	No)	
Degree of Function	High M		-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	:	Comments
Wetland size in relation to watershed	Large	(Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	(No)	
Wetland in floodplain of adjacent watercourse	Yes		<u> </u>
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	6	
Watershed has a history of economic loss due to flooding	Yes	No.	
Wetland outlet restricted	Yes	No	Isolated wetland
Wetland vegetation density	High	(Low)	The second was regular
Wetland microrelief	Well developed	None/Poorly) (developed	

. [Function Present	Yes (ر ملا		
İ	Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes	_	No	
Waterbody at least 10' deep	Yes '		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No	_	Yes	<u> </u>
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes	·	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No_	
Barriers to anadromous fish (dams/high culverts) present in stream reach	Ng	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Law	High ·	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly Intoler	ant	Mostly tolerant	
Function Present	Yes	_	No	
Degree of Function	High	Mod ·	Low	•

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria		+		Comments
Sources of sediments or toxicants upstream	Yes		(No)	Somments
Duration of water retention in wetland	Long		(Short)	
Evidence of sediment trapping in wetland	Yes	_	Low	
Vegetation density	High	_ _	(NO)	
Wetland edge broad and intermittently aerobic	Yes	- :	Low)	
Drainage ditches in wetland	No	<u> </u>	Yes	
Water flow through wetland	Diffuse		Channelized	<u> </u>
Ponded water present	Yes	· <u></u> -	No	
Wetland basin topographic gradient	(Low)	_	High	
Fine grained mineral or organic soils present	Yes	_	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes		No.	
Indicators of erosion or high water velocities are present	No		Yes	
Function Present	Yes		No)	<u> </u>
Degree of Function	- High	Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	<u></u>	
Wetland is saturated most of the season	Yes	No.	-
Emergent vegetation and/or dense woody stems are dominant	Yes	No -	
Water flow through wetland	,Diffuse)	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No -	
Deep or open water habitat is present	Yes	No)	-
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

	Yes	_	7	No)		
Function Present	High		(<u> </u> Mod		Low	
Degree of Function	Lugu	INIOG LC		1 201		
PE/PRODUCTION EXPORT Excluding Condition: No Outlet)					· ,	
Criteria			+		-	Comments
Wildlife food sources in wetland		Abundant			Few	
Vegetation density		/High			Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	/	Yes	_	_	No	
Wetland has high degree of plant community structure and species diversity	۷	Yes			No	
Detritus development is present within this wetland		Yes			No	
Flowering plants used by nectar gatherers present		Yes			No	
Evidence of wildlife use in wetland		Yes			No	
Fish or shellfish develop/occur in wetland		Yes			No	· · · · · · · · · · · · · · · · · · ·
Function Present	· _	Yes		_	No	
Degree of Function		High	Mod	1	Low	
S&SS/SEDIMENT/SHORELINE STABILIZATION						<u> </u>
Criteria		+				Comments
Topographical gradient in wetland	Yes			No		<u> </u>
Potential sediment sources upstream or upslope	Yes			No		
Wetland border >10' adjacent to pond or water	Yes			NO	·	
Distinct shoreline or bank evident between wetland and water	No	><		Yes		
Open water fetch present	Yes			No		
Boating activity present	Yes		[No		
Floodplain stabilizing trees and shrubs present	Yes			No_		
Indications of erosion or siltation present	Yes	<u>.</u>	ļ	No		
Function Present	Yes	· .		(6)	_	
Degree of Function	High	M	od		Low	
REC/RECREATION		<u></u>	· · <u> </u>			
Criteria	_	+			<u>-</u>	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes			(No.		
Fishing is available in or from the wetland	Yes			@		<u> </u>
Hunting is permitted in wetland	Yes	<u>-</u>		160		-
Hiking occurs or has potential to occur in wetland	Yes			No.		<u> </u>
Wetland is a valuable wildlife habitat	Yes			1 /4 1 -	,	1

Wetland has high visual/aesthetic quality	Yes	No	
Boating or canoeing feasible in wetland	Yes	No -	
Off-road public parking near wetland available	Yes	No	
Safety Hazards (if present list them)	Yes	No.	<u> </u>
Function Present	Yes		
Degree of Function		Mod Low	_

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	Comments
Wetland fragmentation by development	Little or None	Moderate to	Parish and the second of the s
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	Possible comedian w/FA 73+74 before
Buffer width	Good to Excellent	Fair to Poor	10000
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	(mall)	
Wildlife food sources in wetland	Abundant	(Few)	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High		112000000000000000000000000000000000000
Vegetation density	High	(ww)	o coale swamp
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			Wooded Swamp Tree, herb, U
Wetland plant species diversity	High Mod (ow)		ree nevo, w
Vernal pool	Yes	No)	
Edge diversity (List types)	<u> </u>		15
Water regime	Wetter	ا ا	Covest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Eew	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Eew)	
lat rocks in/near watercourse (stream salamanders)		Absent	
Sphagnum hummocks next to shallow pools	Present	Absept	
Bare well drained sandy soils near wetland (turtle nest site)	 	Absent	
About a company of the company of th	None or Low	High	
	(Yes)	No	
legree of Europian	High Mod	/Low)	

Criteria		+		Comments
Wetland contains listed species	Yes		(Ng	
Wetland provides valuable wildlife habitat	Yes		No _	
Wetland class diversity	High		1000	<u> </u>
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	Near		Far	Bowdoin
Wetland contains perennial watercourse	Yes	· · ·	N ₂	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes		NO)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	1 -	+		Comments
Wetland contains listed species	Yes			
Wetland identified as exemplary natural community	Yes		(No)	
Wetland locally/regionally significant	Yes		(6N	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+ .		Comments		<u> </u>	
Visible from primary viewing locations	Yes		(No)·	,			
Views absent trash, debris, sign of degradation	Yes	•-	160			<u> </u>	
Low noise level	Yes		(6)				
Visual landuse contrast with wetland	Yes		®	_			· <u> </u>
Function Present	Yes	-	(A)		· ·		
Degree of Function	High	Mod	Low				

ESH/ENDANGERED SPECIES HABITAT

Criteria	+]~[_	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No.)	
Wetland contains critical habitat for state or federal listed species	Yes	(Ne	<u> </u>
Area appears in state or national database	Yes	Ng	

Function Prese		Yes		(No
ree of Fund	1	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X-present, P-Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Cow/No	No.	No	No	NO	No	No	low	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo: 279 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 83 Da	ate: N/A Functional Un	it:	Weath	er: N/A	Time Start:	N/A Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitati	ion: N/A Below ave	erage 🗌	Average 🗌	Above Average	☐ Don't	Know TBD
Wildlife Investigation Method: Cover search ⊠	Dip netting	j	⊠.	Scat 🛛	Tracks 🛛	Minnow Traps	s 🗌 Etectro-shocking 🛭
Wetland Types(s) Cowardin/Golet Classification	n	·		·	<u> </u>	<u> </u>	
Class	Subclass	<u>.</u>		<u> </u>	. <u>.</u> .		
POW/ Open water	Vegetated	Non-Vegetate	<u></u>				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	hrub .	Robust	Na <u>rrow-leav</u>	ed B	road-leaved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	ed Flo	ating leaved	<u>. </u>	
PFL / Seasonally Flooded Flats	Emergent_	_ Shrub		<u>.</u>			<u> </u>
PEM / Wet Meadow	Ungrazed	Grazed			_		
PSS / Shrub Swamp	Sapling .	Bushy	Compact	Aq	uatic		
PFO / Wooded Swamp	Deciduous	Evergreen			<u> </u>	<u> </u>	
Bog	Compact shrub	Bushy shrub		Wooded		ergent	specially early in growing
Water Regimes (Cowardin Modifier):			season.	but are unsatul	rated by end of se	eason in most j	years; surface water absent
Permanently flooded (H) - water covers land surfa			•	-	r seepage and ov		
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the ye	ear except in years	season,	but water table	usually lies well	below soil surf	of periods during growing face for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout g	growing season in	Intermitt <i>variable</i>	tently flooded (J periods withou) - substrate usua t detectable seas	ally exposed, b onal periodicity	out surface water is present fo y~
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period most years	is especially early in	Artificial etc	ly flooded (K) -	amount/duration	of flooding cor	ntrolled by dikes dams, pumps
Hydrology:							
Ground water discharges present:	es N	lo		Depth to free	water:		•
If Present: Slope or Depressional				Depth to satu	ıration:		
Surface water depth:	everage -	maximum -		. •	red hydrology?	Yes	No
Hydrology indicators: Inundated	aturated in uppe	er 12" Water marks I	Drift lines	Sediment dep		ge patterns wi	
	tophores P Rhizospheric oxid	O.),,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Buttressed tree root systems	es Hype Floati	ertrophied lenticel ing leaves	s Stoo Floating ster	
Soil Drainage classes: Well) Moderate	ely Well S	Somewhat Poorly	Poorly	Very	Poorly	Mapped Hyo	Iric Soil
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:							
Slope: Nearly level	Gentle	Moderate	Steep				
Cover Types: Mature forest	Sapling for	orest Shrub th	icket	Meadow	Mowed lawn	Farr	n .
Vegetation Density(S/M/D): Trees	D §	aplings M	Shrubs	Herbs	Grass		
Soil : WmB · Windsor	loamy !	sand					

٠	-	****
-	eat	litter

Well developed

Moderately well developed

Absent

Cover objects:

Logs Yes

Bark

Boulders

Rocks

Evidence of Erosion:

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(No	
Slope	Gentle	Moderate or Steep	
Function Present	(G) No		
Degree of Function	High (Mos	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge	e	Comments
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	Well developed	/ Non/Poorly	
Wetland contains an outlet, no inlet	Yes	No leveloped	Isolated
Function Present	Yes	(No)	_ 1230 CATE
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition; Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Small)	Comments
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Centle)	Moderate Steep	
Wetland characterized by variable water level?	Yes	No No	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	(Yes)	No	T-00/01/01
Wetland vegetation density	High	Low	Isolated
Wetland microrelief	Welf developed	None/Poorly (developed	

ĺ	Function Present	Yes (No		
	Degree of Function	High	Mod	Low_	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shrul	o, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes	, was a second	No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes	· .	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (failen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant	Mostly tolerant	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

- S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	
Duration of water retention in wetland	(Long)	Short	Road runoff
Evidence of sediment trapping in wetland	Yes		·
Vegetation density	High	(Low)	
Wetland edge broad and intermittently aerobic	Yes	Low	<u> </u>
Drainage ditches in wetland	No)	Yes	
Water flow through wetland	Diffuse	 	<u> </u>
Ponded water present	(Yes)	Channelized	
Wetland basin topographic gradient	Low	No No	
Fine grained mineral or organic soils present	Yes	High	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	·
Indicators of erosion or high water velocities are present	(No)	No	
Function Present	(Nes)	Yes	<u> </u>
Degree of Function	High (Mod	No	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		
Wetland size in relation to watershed	Large		Comments
Potential sources of excess nutrients upstream	Yes	\$mall	
Wetland is saturated most of the season			·
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No No	
Water flow through wetland	(Yes) (Diffuse)	No	
Vegetation density	High	Channelized	
Potential for sediment trapping exists	Xes)	<u>(Low</u>)	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	Content	High	
Wetland microrelief	Well developed	None, poorly developed	-

		_	<u>_</u>	
Function Present	(Yes)	No		•
Degree of Function	High	Mod	(Low)	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria		+		Comments
Wildlife food sources in wetland	Abundani		Few	- Stickman.
Vegetation density	High		Low	
Nutrients and/or organic matter flushed out of wetland-into watercourse	Yes	Marine Ma	No	
Wetland has high degree of plant community structure and species diversity	PYes-	total distriction in the last of the last	No	
Detritus development is present within this wetland	Yes		No-	
Flowering plants used by nectar gatherers present	Yes	. <u> </u>	No	
Evidence of wildlife use in welland	Yes	<u>_</u>	No	
Fish or shellfish develop/occur in wetland	Yes	. <u> </u>	No	
Function Present	Yes		No _]
Degree of Function	High	Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	- <u>-</u>	Comments
Topographical gradient in wetland	Yes	No	
Potential sediment sources upstream or upslope	Yes	Normal	
Wetland border >10' adjacent to pond or water	Yes	No	
Distinct shoreline or bank evident between wetland and water	No	Yes	·
Open water fetch present	Yes	No	
Boating activity present	Yes	No	
Floodplain stabilizing trees and shrubs present	Yes	No	<u> </u>
Indications of erosion or siltation present	Yes	No	
Function Present	Yes	(No ²)	
Degree of Function	High	Mod Low-	

REC/RECREATION

Criteria	÷		Comments	
Wetland is part of recreation area, park, refuge, etc.	_Yes	(N ₀)		·
Fishing is available in or from the wetland	Yes	(<u>No</u>)		
Hunting is permitted in wettand	Yes	(Nice)		<u></u> _
Hiking occurs or has potential to occur in wetland	(Yes)	No.	Potential	<u> </u>
Wetland is a valuable wildlife habitat	Yes	(No)		

Wetland has high visual/aesthetic quality	Yes		- 1		
Boating or canoeing feasible in wetland	Yes	Ale	- -		
Off-road public parking near wetland available	Yes	- No			
Safety Hazards (if present list them)	Yes	No			
Function Present	Yes	(No		<u> </u>	
Degree of Function	High	Mod	Low		

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	Roadway cut it off from FA 72
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)	High No	Forest
Buffer width	Good to Excellent	Eair to Poor	10.02
Connectivity with other wetlands	Yes	(No)	
Size of landscape block in which wetland is located	Large	Small)	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(ow)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	Low	Wooded swamp
Vegetation density	High	(ow)	00 00000
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		<u></u>	Treasuration of I for
Wetland plant species diversity	High (Mod) Low	 	Tree, sapling, shrub, herb, U
Vernal pool	Yes	(No)	
Edge diversity (List types)	_	 	<u> </u>
Water regime	Wetter	Drier	Forest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	<u> </u>
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absept	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
unction Present	(FeS)	No	
Degree of Function	High Mod	4600)	

Criteria	+	<u> </u>	Comments
Wetland contains listed species	Yes	Ñò	
Wetland provides valuable wildlife habitat	Yes	6	
Wetland class diversity	High	Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapiing/shrub thicket A=Agriculture)	High		Forest
Off-road parking near wetland available	Yes	(No)	<u> </u>
Proximity to schools	Near	Far	Bowdoin
Wetland contains perennial watercourse	Yes	<u>®</u>	
Wetland contains pond/lake	Yes	@	
Safety hazards (if present list them)			<u></u>
Site currently used for educational/scientific purposes	Yes	(No)_	
Function Present	Yes	(No)	
Degree of Function	High Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria	Ţ	+		Comments	. <u>-</u>	<u></u>
Wetland contains listed species	Yes		Ng		<u></u>	
Wetland identified as exemplary natural community	Yes	· 	(@M)			
Wetland locally/regionally significant	Yes	· -	<u> 1</u> 19	<u></u>	· - ··	<u> </u>
Function Present	Yes		No _			
Degree of Function	High	Mod	Low			_

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments	· <u>-</u>	
Visible from primary viewing locations	Yes		(Ng)			<u> </u>
Views absent trash, debris, sign of degradation	Yes		(No)		<u></u>	<u> </u>
Low noise level	Yes		(ÑO)			<u>.</u>
Visual landuse contrast with wetland	(Yes)		No			<u>_</u>
Function Present	Yes		(No)			
Degree of Function	High	Mod	Low			

ESH/ENDANGERED SPECIES HABITAT

Criteria	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(NO)	
Wetland contains critical habitat for state or federal listed species	Yes	®	
Area appears in state or national database	Yes	(Ng)	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	<u> </u>

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/\$	U/H	S&S	ESH
Mod/NO	No	NO_	mod	Low	No	No	Low	No.	No	No	NO

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceling, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 280 Direction: NE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 84 Da	ate: N/A Functional Unit:	, W	eather: N/A 7	ime Start: N/A Time Stop: N	∛A
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitati	ion: N/A Below average	e ☐ Average ☐	Above Average [] Don't Know ☐ TBD ☐	
Wildlife Investigation Method: Cover search ⊠	Dip netting	₃ ☐ Auditory 🛛	Scat 🗵	Tracks 🔯 💮 🛚	linnow Traps ☐ Electro-shock	ing 🗆
Wetland Types(s) Cowardin/Golet Classification	1					
Class	Subclass		<u></u>			
POW/ Open water	Vegetated	Non-Vegetated	,	<u></u>		
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-shrub	Robus	t Narrow-leave	d Broad-leaved	
PAB/ Shallow Marsh	Robust	Narrow-leaved Br	oad-leaved	Floating leaved	<u>-</u>	
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed			<u> </u>	
PSS / Shrub Swamp	Sapting	Bushy Co	ompact	Aquatic		
(PFO / Wooded Swamp)	Deciduous	Evergreen			<u> </u>	
Bog	Compact shrui	b Bushy shrub	Woode		gent to surface, especially early in growing	
Water Regimes (Cowardin Modifier):			season, but are un	saturated by end of sea	son in most years; surface water abs	ent
Permanently flooded (H) - water covers land surfa-			• -	vater seepage and ove		
Intermittently Exposed (Z) -surface water present to of extreme drought	throughout the ye	ear except in years	Temporarily flooder season, but water it	d (A) - surface water pr lable usually lies well be	esent for brief periods during growing elow soil surface for most of the seaso	on
Semi-permanently flooded (F) - surface water personal years	sists throughout g	growing season in	Intermittently flood	ed (J) - substrate usual thout detectable seaso	ly exposed, but surface water is prese nal periodicity~	nt for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period most years	ls especially early in	Artificially flooded (K) - amount/duration o	flooding controlled by dikes dams, po	ımps,
Hydrology:						
· · · · · · · · · · · · · · · · · · ·	res N	lo	Depth to	free water:		
If Present: Slope or Depressional			Depth to	saturation:		
•	verage -	maximum -	Signs of	altered hydrology?	Yes No	
Hydrology indicators: Inundated S	Saturated in uppe	er 12" Water marks Drift	lines Sediment	deposits Drainag	e patterns within wetlands Othe	
Plant Adaptations to Hydrology: Pneumasterns, or roots Adventitious roots	tophores F Rhizospheric oxid		•	Hypertrophied lenticels Toating leaves	Stooling Inflated leave Floating stems	∍s,
Soil Drainage classes Well Moderate	ely Weil S	Somewhat Poorly	Poorly \	ery Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	e Steep				
Upland Border:	•		-			
Slope: Nearly level	Gentle	Moderate	Steep	ı		
Cover Types: Mature forest	Sapling f	orest Shrub thicke		Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	D	Saplings S Shru	ibs Herbs	Grass		
Soil: WMB-Windson la	pamy San	لط				

Leaf litter:

Well developed

Moderately well developed

Absent

Cover objects:

Evidence of Erosion:

NO Yes

Bark

(Explain)

Boulders-

Rocks

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments	
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge		
Wetland associated w/ perennial or seasonal watercourse	Yes	(1)		
Slope	Gentie	Moderate or Steep		
Function Present	(Yes) No			
Degree of Function	High Mo	d (Low)		

GWD/GROUNDWATER DISCHARGE

Criteria	÷		Comments	<u> </u>
Soils	Hardpan, shallow ledge			· · · · · · · · · · · · · · · · · · ·
Seeps, springs observed?	Yes	No		
Wetland microrelief	Well developed	Non/Poorly		
Wetland contains an outlet, no inlet	Yes	developed		·
Function Present	Yes	No	- 	
Degree of Function	High Mod	Low	- ·	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Stee	n
Wetland characterized by variable water level?	Yes	No	<u> </u>
Wetland in floodplain of adjacent watercourse	Yes	6	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	(No)	
Watershed has a history of economic loss due to flooding	Yes	(No)	
Wetland outlet restricted	Yes	No	Tsolated
Wetland vegetation density	High	/Low)	150 Cated
Wetland microrelief	Weil (developed	None/Poorly developed	

Function Present	Yes	(No) _	-	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/jake)

Criteria		+	<u>-</u>	- Comments	
Dominant land use adjacent to Waterbody	Forest, Shrul	, Meadow	Lawn		
Shallow littoral zone with emergent vegetation present?	Yes		No		
Waterbody at least 10' deep	Yes		-No		·
% of pond covered by submerged or emergent vegetation	15-40%		Other		
Direct stormwater discharge via culvert?	No		Yes		
Sandbar present at inlet?	No		Yes		
Water transparency	High		Low		
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No ·		Yes		
Pond size ≥0.5 acre	Yes	<u> </u>	· No		
Pond experiences dense aigal blooms, nuisance aquatic vegetation or duckweed?	No		Yes		
Function Present	Yes	<u> </u>	No		
Degree of Function	High	Mod	Low		

F&SH/FINFISH HABITAT: STREAMS/RIVERS.(Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No .	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Yes Ong Yes High Yes Oiffuse (es)	No Short Low Yes Channelized	Comments
Yes High Yes Vo	Short Low Low Yes Channelized	
Yes High Yes No	Low Yes Channelized	
High Yes Vo	Low Yes Channelized	
Yes No Diffuse	Low Yes Channelized	
No Diffuse	Yes Channelized	
Diffuse	Channelized	
		
	No Life b	
res	High No	<u> </u>
-	- ` -	<u> </u>
		<u> </u>
		
	Yes No Yes Fligh Mod	No Yes No

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small)	Continents
Potential sources of excess nutrients upstream	Yes	(No)	
Wetland is saturated most of the season	(PGS)	No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	 	
Potential for sediment trapping exists	(es)	No No	
Deep or open water habitat is present	Yes	(%)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

					
Function Present	Yes	No			
Degree of Function	High	Mod)	Low		
PE/PRODUCTION EXPORT (Excluding Condition	: No Outlet)				<u>.</u>
Criteria		+	- Com	ments	·

Criteria		±		Comments
Wildlife food sources in wetland	Abundant		Few	
Vegetation density	High		Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWI	No	
Wetland has high degree of plant community structure and species diversity	Yes		No	
Detritus development is present within this wetland	Yes		No	
Flowering plants used by nectar gatherers present	Yes		No	
Evidence of wildlife use in wetland	Yes	_	No	
Fish or shellfish develop/occur in wetland	Yes		No	·
Function Present	Yes		No	
Degree of Function	High	Mod	Low	<u> </u>

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	4		Comments	<u>.</u>
Topographical gradient in wetland	Yes	No		<u> </u>
Potential sediment sources upstream or upslope	Yes	No		
Wetland border >10' adjacent to pond or water	Yes	No		
Distinct shoreline or bank evident between wetland and water	No	Yes		
Open water fetch present	Yes	No		<u> </u>
Boating activity present	Yes	No		<u> </u>
Floodplain stabilizing trees and shrubs present	Yes	No		
Indications of erosion or siltation present	Yes	No	<u>.</u>	<u> </u>
Function Present	Yes	No		
Degree of Function	High	Mod Lov	v	

REC/RECREATION

Criteria	+	- Comments	· <u> </u>
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)	_
Fishing is available in or from the wetland	Yes		
Hunting is permitted in wetland	Yes		
Hiking occurs or has potential to occur in wetland	Yes)	No Potential	
Wetland is a valuable wildlife habitat	y es)	No	

Yes	No		
Yes		 	
Yes			
Yes			
			
		Potential	
	Yes Yes Yes	Yes (No) Yes (No) Yes (No) Yes (No)	Yes (No) Yes (No) Yes (No) Yes (No) Yes (No) Yes (No) Yes (No) Yes (No) Yes (No)

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	Forest
Buffer width	Good to Excellent	Eair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	·
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	COW	wooded emany
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		 	True complie le d 11
Wetland plant species diversity	High Mod Low	 	The supung verb cc
Vernal pool		No l	Tree, sapling herb, LL
Edge diversity (List types)		1.	11a PODI - 11A - VP
Water regime	(Wetter)	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant)	Few	· · · · · · · · · · · · · · · · · · ·
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present)	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
unction Present	(Ves	No	
Degree of Function	High (Mod)	Low	

Criteria	+	-	Comments
Wetland contains listed species	Yes		·
Wetland provides valuable wildlife habitat	(Year)	No	
Wetland class diversity	High		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	(row)	Forest
Off-road parking near wetland available	Yes	MO	<u> </u>
Proximity to schools	Near	Far	Bowdorn
Wetland contains perennial watercourse	Yes	1	
Wetland contains pond/lake	Yes	<u></u>	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	_ <u>√</u> 6)	
Function Present	Yes	Mer	
Degree of Function	High !	Mod Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments		
Wetland contains listed species	Yes	<u>-</u>	(Se)			
Wetland identified as exemplary natural community	Yes	· <u>-</u>				
Wetland locally/regionally significant	Yes		(J)			
Function Present	Yes		(No)			
Degree of Function	High	Mod	Low		_	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments	·		<u> </u>	
Visible from primary viewing locations	Yes	/NO)				<u> </u>	
Views absent trash, debris, sign of degradation	₹ēş	No			<u></u>	<u></u>	
Low noise level	Yes	(No)			<u>-</u> .		
Visual landuse contrast with wetland	X G	No		·			
Function Present	(Yes)	No					
Degree of Function	High Mod	(Loy)				_	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(No	
Wetland contains critical habitat for state or federal listed species	Yes	(No)	
Area appears in state or national database	Yes	(No)	

			_ ~
Function Present	Yes		(No)
Degree of Function	High	Mod	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

	_		1		· –							
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	5&\$	ESH	
LOW/LOW	NO	No	Mod	mod	No	Low	mod	No	()-	No	No	
· SUMMADV /	TELEVIORIONIO					<u> </u>			<u> 100</u>	,	<u> </u>	

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either,

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable welland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 281 Direction: S MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search ⊠ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/A Dip netting ☐	A Functional Unit: A Below average Auditory ⊠	_	eather: N/A ☐ Above Average Tracks ☑	Time Start: N/A ☐ Don't Know ☐ Minnow Traps ☐	Time Stop: N/A TBD ☐ Electro-shocking ☐
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated			·	<u> </u>
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub_	_Robus	t Narrow-leav	ed <u>Broad-leave</u>	ed
PAB/ Shallow Marsh	Robust Narrov	v-leaved Bro	ead-leaved	Floating leaved	<u>-</u>	<u></u>
PFL / Seasonally Flooded Flats	Emergent	Shrub		<u> </u>	<u> </u>	<u> </u>
PEM / Wet Meadow	Ungrazed	Grazed			<u>-</u>	· <u>-</u>
PSS / Shrub Swamp	Sapling Bushy	Co	mpact	Aquatic		
PFO / Wooded Swamp	Deciduous	Evergreen	<u> </u>			<u></u> .
Bog	Compact shrub	Bushy shrub	Wood		ergent d to surface, especially e	orly in growing
Cidano nato diconalges present	throughout the year excensists throughout growing extended periods espec	pt in years season in	except for ground of Temporarily floode season, but water intermittently flood variable periods with Artificially flooded etc.	valer seepage and ov d (A) - surface water p table usually lies well ed (J) - substrate usua thout detectable seas	oresent for brief periods below soil surface for m ally exposed, but surface	during growing ost of the season water is present for
If Present: Slope or Depressional	worden III	naximum -		altered hydrology?	Yes	No .
		Vater marks Drift li	-		ge patterns within wetla	nds Other
Plant Adaptations to Hydrology: Pneumal	tophores Polymorp Rhizospheric oxidation	ohic leaves Buttre Shallow roof s	essed frees Systems F	Hypertrophied lenticel loating leaves /ery Poorly		Inflated leaves,
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:	Gentle A Sapling forest Saplings	Moderate Shrub thicket	Steep Meadow S S Herbs	Mowed lawn Grass	Farm	

Soil: 34c Tunbridge fine sandy loam

Leaf litter:	Well developed	Moder	rately well developed	Absent
Cover objects:	(Togs	Bark	Boulders	Rocks
Evidence of Erosion:	✓No⊃ Yes	(Explain)		

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	(Yes No		
Degree of Function	High Mo	d (Low)	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge	-	
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	Yes	No	
Function Present	Yes	No	
Degree of Function	High (Mod	Low	<u> </u>

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	(Ve)	No	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	No	anknowh
Wetland outlet restricted	Yes	No	
Wetland vegetation density	High)	Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	No		
Degree of Function	High	(Mod.)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	<u>-</u>	Comments
Dominant land use adjacent to Waterbody	Forest, Shr	ub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%	•	Other	
Direct stormwater discharge via culvert?	-No.		Yes	
Sandbar present at inlet?	No	-	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	_	No	
Degree of Function	High	Mod _	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	<u> </u>	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Serid/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone .	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Poltution tolerance of benthic macro-invertebrate taxa	Mostly-intoler	ant	Mostly tolerant	
Function Present	 Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	Comments
Duration of water retention in wetland	Long	Short	-
Evidence of sediment trapping in wetland	Yes	(low)	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	No	
Wetland basin topographic gradient	1000	High	,
Fine grained mineral or organic soils present	Yes	No No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocifies are present	No	Yes	
Function Present	Yes	No No	
Degree of Function	High Mod		-
Menautricus	1,1131		<u></u>

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	· +		Comments
Wetland size in relation to watershed	Large	Small	Constitution
Potential sources of excess nutrients upstream	Yes	No?	· · · · · · · · · · · · · · · · · · ·
Wetland is saturated most of the season	Yes		
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No No	
Water flow through wetland	Diffuse	Channelized	·
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

	1600	-		No	<u> </u>		
Function Present	(Yes				Low	<u>~</u>	
Degree of Function	High	Mod		LOW			
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)				<u>.</u>			•
Criteria			+		-	Comments	
Wildlife food sources in wetland		Abunda	ant)		Few		
Vegetation density		High	} 		Low	<u> </u>	
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes			(No)		
Wetland has high degree of plant community structure and species diversity		العج			No		
Detritus development is present within this wetland		Yes			No		
Flowering plants used by nectar gatherers present		(Yes)			No		
Evidence of wildlife use in wetland		(Yes)			No	Vernal pools	
Fish or shellfish develop/occur in wetland		Yes		_	<u>@</u>		
Function Present		(e)			No		
Degree of Function		High	P	Viod	(ow)		
S&SS/SEDIMENT/SHORELINE STABILIZATION							
Criteria		+			<u> </u>	Comments	
Topographical gradient in wetland	Yes			/ No/			
Potential sediment sources upstream or upslope	Yes	_		No			
Wetland border >10' adjacent to pond or water	Yes) 		No	_		
Distinct shoreline or bank evident between wetland and water	(No)	· 	_	Yes		· <u>-</u> -	
Open water fetch present	Yes			(GM)			
Boating activity present	Yes			(No) <u> </u>		
Floodplain stabilizing trees and shrubs present	Yes	<u> </u>	_	No_	<u> </u>		
Indications of erosion or siltation present	Yes	_		(No	<u> </u>		
Function Present	Yes			(Neg/			
Degree of Function	High		Mod		Low		
REC/RECREATION						<u> </u>	
Criteria		+				Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes			100			
Fishing is available in or from the wetland	Yes			Ø			
Hunting is permitted in wetland	Yes			(N)	_	 	
Hiking occurs or has potential to occur in wetland	(Ye)	_		No	<u> </u>	Potential	
Wetland is a valuable wildlife habitat	Yes			No	<u></u>		

Wetland has high visual/aesthetic quality	Yes	No		
Boating or canoeing feasible in wetland	Yes	Ne Ne		
Off-road public parking near wetland available	Yes	No No		
Safety Hazards (if present list them)	Yes	No No		
Function Present	(Yes)	No		
Degree of Function		Mod) (Low)	- Potential.	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Welland degradation by human activity	Little or None	Moderate to	- Continuence
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	Forest
Buffer width	Good to Excellent	Fair to Poor	7 0 7 0 8
Connectivity with other wetlands	PYes	No.	
Size of landscape block in which wetland is located	Large	/ Small/	·
Wildlife food sources in wetland	Abundant	Few	· · · · · · · · · · · · · · · · · · ·
Interspersion of vegetation and open water	High)	Low	
Upland islands	Present	(Absent)	· · · · · · · · · · · · · · · · · · ·
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(OW)	Wooded swamp
Vegetation density	HIGH)	Low	overes see and
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		-	Tree Sadius Charlet and at
Wetland plant species diversity	High Mod Low	 	Tree, supering, Shido, Nerb, LL
Vernal pool	Yes	No	TRC- Sig Vernal Pools-19+20
Edge diversity (List types)		 	Fo - 10 Vernou P3015 - 19 + 20
Water regime	Wetter)	Drier	Forest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundarit	Few	·
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant)	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes 2	No	
Degree of Function	high Mod	Low	

Criteria	+	<u> </u>	Comments
Wetland contains listed species	Yes	No.	
Wetland provides valuable wildlife habitat	(Yès)	No.	·
Wetland class diversity	Hịgh	(Gyy)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	_ (ow)	Forest
Off-road parking near wetland available	Yes	(NO) _	
Proximity to schools	Near	Far	Boudoin
Wetland contains perennial watercourse	Yes	(No)	
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			·
Site currently used for educational/scientific purposes	Yes		
Function Present	Yes	No	Potential
Degree of Function	High Mod	LÓW	104 Civil Ch

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes	<u></u>	M3)	
Wetland identified as exemplary natural community	Yes		16	
Wetland locally/regionally significant	Yes		№	
Function Present	Yes		(N6)	<u>_</u>
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+			Comments			
Visible from primary viewing locations	Yes		(No)				. <u>-</u> .
Views absent trash, debris, sign of degradation	Yes		No		·		·
Low noise level	Yes		(N)			<u>_</u>	
Visual landuse contrast with wetland	(Yes)		No				<u> </u>
Function Present	19		No				
Degree of Function	High	Mod)	Low			<u> </u>	

ESH/ENDANGERED SPECIES HABITAT

Criteria		+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	· -	100	
Wetland contains critical habitat for state or federal listed species	Yes		(NO)	
Area appears in state or national database	Yes	-	(o)	

CONCLUSION: SUMMARY TABLE (X-present, P-Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Lowland	Mod	No	low	1-000	Low	low	Wigh	Low	No	No	NO

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for protonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 282 Direction: NE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: F Site investigator:Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	cent Precipitati Dip netting		erage 🗌	Weath Average □ Scat ☑	Above Average	Time Start: N/A ☐ Don't Know ☐ Minnow Traps ☐	Time Stop: N/A TBD Electro-shocking
Class	Subclass	<u> </u>				_ .	<u> </u>
POW/ Open water	Vegetated	Non-Vegetate	<u>d</u>	_			_
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	hrub	Robust	Narrow-leav	ed Broad-leav	red ·
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Fid	ating leaved	-	
PFL / Seasonally Flooded Flats	Emergent	Shrub		<u>-</u>			<u>-</u>
PEM / Wet Meadow	Ungrazed	Grazed		· <u>-</u>			<u> </u>
PSS / Shrub Swamp	Sapling	Bushy	Compact	Ac	quatic		
PFO / Wooded Swamp)	Deciduous	Evergreen		<u> </u>	_	<u> </u>	
Bog	Compact shrul	b Bushy shrub		Wooded		ergent I to sudace, especially	early in growing
Permanently flooded (H) - water covers land surface Intermittently Exposed (Z) -surface water present to of extreme drought Semi-permanently flooded (F) - surface water personal years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in Hydrology:	hroughout the yesists throughout g	ear except in years growing season in	Tempor season, Intermiti variable	arily flooded (A but water table tently flooded (a periods withou	e usually lies well i J) - substrate usua It detectable seas	oresent for brief periods below soil surface for n ally exposed, but surfac	nost of the season se water is present for
·	es N	ło		Depth to free	e water:		
if Present: Slope or Depressional				Depth to sat	uration:		
Surface water depth: a	verage -	maximum -		Signs of aite	red hydrology?	Yes	No
Hydrology indicators: Inundated S	aturated in uppe	er 12" Water marks	Drift lines	Sediment de	posits Draina	ige patterns within wetl	
Plant Adaptations to Hydrology: Pneumat	ophores F Rhizospheric oxid		Buttressed tree root systems	Floai	ertrophied lenticel fing leaves	Floating stems	Inflated leaves,
Soil Drainage classes: Well Moderate Slope: Rearly level Gentle	ely Well S Moderate	Somewhat Poorly Steep	. Poorly) Very	Poorly	Mapped Hydric Soll	
Upland Border:	Sentle	Moderate	Steep				
	Sapling !		•	Meadow	Mowed lawn	Farm	
Cover Types: Mature forest Vegetation Density(S/M/D): Trees		Seolines M	Shrubs	Herbs	Grass		

Soil: Sn-Scanfic

	Leaf litter:	Well developed	Mode	rately well developed	Absent
-	Cover objects:	0gs	Bark	Boulders	Rocks
	Evidence of Erosion:	₩Ø Yes	(Explain)		1100,00

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+		Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Crîteria	+		Comments
Soils	Hardpan, shallow ledge		Commercia
Seeps, springs observed?	Yes	(No.)	
Wetland microrelief	Well developed	Non/Poorty	
Wetland contains an outlet, no inlet	Yes	developed No	·
Function Present,	Yes	No	
Degree of Function	. High Mod	iow	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	- Comments
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle)	Moderate Steep	
Wetland characterized by variable water level?	(Yes)	No No	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(Fes)	No	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	Yes	, No)	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	(Yes)	No	
Degree of Function	High	Mod	(Low)

F&SH/FINFISH HABITAT: POND &LAKE-Excluding condition: Not associated with pond/lake)

Criteria	+	·		Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes	- ·	No	>
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No .		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, puisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	_	+		Comments	_
Channel shaded by riparian trees and/onshrubs	_	Yes	No _		
Gravel spawning areas present		Yes	No		
Barriers to anadromous fish (dams/high culverts) pr	resent in stream reach	No	Yes		
Dominant bottom substrate		Gravei/cobbles	Sand/slit		
Substrate embeddedness by sand & silt		Low	High	·	
Instream habitat diversity (riffle, run, pool, shallow,	deep)	High	Low		
Channel alterations (channelization, islands or poin		Absent or Few	Numerous.	<u> </u>	
Bank stability		Stable	Unstable, eroding		_
Bank vegetative cover		High (trees, shrubs)	Low		
Cover objects (fallen logs, boulders, undercut bank	s)	Many	Absent/few ·		
Riparian zone	-	Wide	Narrow		
Watershed development		Low	High		_
Water quality	<u>-</u>	Good	Роог	<u> </u>	<u></u>

Pollution tolerance of benthic macro-invertebrate taxa Mostly intolerant Mostly tolerant Function Present Yes No Degree of Function High Mod Low				· marketine	· · ·
Degree of Function	Pollution tolerance of benthic macro-invertebrate taxa	Mostly in	tolerant	Mostly tolerant	
Degree of Function High Mod Low	Function Present	Yes		No	
	Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	y Yes	No -	- Comments
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No	Yes	
Water flow through wetland	Diffuse	Channelized	<u> </u>
Ponded water present	Yes	No	
Wetland basin topographic gradient	e Low	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	
Indicators of erosion or high water velocities are present	(No)	Yes	<u> </u>
Function Present	Yes)	No	
Degree of Function	- (- / - - - - - - - - - 	lod (Low)	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria .	+		Comments
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	700	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse)	Channelized	-
Vegetation density	High	Low	-
Potential for sediment trapping exists	Yes	(No)	-
Deep or open water habitat is present	Yes	No.	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low)	High	
Wetland microrelief	Well developed	Nene, poorly developed	

	_			
Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+ .	-	Comments
Wildlife food sources in wetland	Abundan	Few	
Vegetation density		Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	(Ng)	
Wetland has high degree of plant community structure and species diversity	Yes	(No)	
Detritus development is present within this wetland	(Pe)	No	
Flowering plants used by nectar gatherers present	(Yes	No	
Evidence of wildlife use in wetland	Yes	(No)	
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	(Yes)	No	
Degree of Function	High Mod	(Low)_	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		-	Comments
Topographical gradient in wetland	(Yes)	 	No _	
Potential sediment sources upstream or upstope	(Yes)		No	·
Wetland border >10' adjacent to pond or water	. Yes		No)	
Distinct shoreline or bank evident between wetland and water	. No		Yes	
Open water fetch present	Yes		No)	
Boating activity present	Yes		<u></u>	
Floodplain stabilizing trees and shrubs present	(Feg		No	<u> </u>
Indications of erosion or siltation present	Yes	(<u> </u>	
Function Present	Yes	k	N₀)	
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	+		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	No)		
Fishing is available in or from the wetland	Yes	M		<u>.</u>
Hunting is permitted in wetland	Yes	(Nô)		<u>-</u> -
Hiking occurs or has potential to occur in wetland	Yes	(No)		
Wetland is a valuable wildlife habitat	Yes	(NO)		

Wetland has high visual/aesthetic quality	Yes	(N)	
Boating or canoeing feasible in wetland	Yes	(No)	 -
Off-road public parking near wetland available	Yes	<u> </u>	
Safety Hazards (if present list them)	Yes	No	
Function Present	Yes		
Degree of Function	High	Mod Low	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	>Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	(High No	Forest
Buffer width	Good to Excellent	Fair-to Poor	10,0
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	(Small)	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	[FOW]	
Upland islands	Present	Absent	<u> </u>
Wetland class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	Low	
Vegetation density	(High)	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb Lt=Leaf litter)			Too Sending Hood 11
Wetland plant species diversity	High (Mod Low		Tree, Saping, Herb, LL
Vernal pool	Yes	(No)	
Edge diversity (List types)	<u> </u>		
Water regime	Weller	(Drier)	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	· · · · · · · · · · · · · · · · · · ·
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absept	<u> </u>
Abundance of invasive exotic flora	Mone or Low	High	
unction Present	(Yes)	No No	
Degree of Function	High Mod	1000	•

Criteria		ŧ.		Comments
Wetland contains listed species	Yes			
Wetland provides valuable wildlife habitat	Yes		Two	
Wetland class diversity	High		(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		(w)	Forest
Off-road parking near wetland available	Yes		(N ₀)	
Proximity to schools	Near		Far	Bowdoin
Wetland contains perennial watercourse	Yes			
Wetland contains pond/lake	Yes		(e)	
Safety hazards (if present list them)		·	·	<u> </u>
Site currently used for educational/scientific purposes	Yes		<u>(%)</u>	
Function Present	Yes		No.	
Degree of Function	High	Mod	FOM	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments	· <u>-</u> .		
Wetland contains listed species	Yes		(No) _		<u> </u>		
Wetland identified as exemplary natural community	Yes	_	(P)				
Wetland locally/regionally significant	Yes		№		_		
Function Present	Yes		No)				
Degree of Function	High	Mod	Low			_	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	1	+	-	Comments
Visible from primary viewing locations	Yes	<u>-</u>	(No)	·
Views absent trash, debris, sign of degradation	Yes		No	
Low noise level	Yes	_	(No)	
Visual landuse contrast with wetland	Yes		/No)	
Function Present	Yes		(e)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria		+	-		Comments
Wetland contains or known to contain federal listed species or habitat	Yes			"Ng	
Wetland contains critical habitat for state or federal listed species	Yes			<u>~</u>	
Area appears in state or national database	Yes	_		(Ng	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low .	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE ·	REC	WLH	ED/S	U/H	S&S.	ESH	
Modlow	low	No	tow	No	Low	No	Low	No	No	No	No	

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 283 Direction: S MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 87 D	ate: N/A Function	nal Unit:	Weath	ner: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios F		ion: N/A Bel	ow average 🖸	Average 🔲	Above Average	e ☐ Don't Know ☐	☐ TBD ☐
Wildlife Investigation Method: Cover search ⊠	Dip netting		ditory 🛛	Scat 🛛	Tracks 🗵	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	on						
Class	Subclass				<u>_</u>		
POW/ Open water	Vegetated	Non-Ve	getated				<u> </u>
PEM/PSS Deep Marsh	Dead Woody	Shrub	Sub-shrub	Robust	Narrow-leav	ved Broad-lea	ved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leav	ed Flo	oating leaved_		
PFL / Seasonally Flooded Flats	Emergent	Shrub	<u>_</u>			· <u>-</u> -	
PEM / Wet Meadow	Ungrazed	Grazed	<u></u>			<u> </u>	
PSS / Shrub Swamp	Sapling	Bushy	Compact	Ac	quatic		_ _
PFO / Wooded Swamp	Deciduous	Evergre	een	· <u>-</u>			-
Bog	Compact shru	b Bushy s	shrub	Wooded		nergent ed to surface, especially	onely in growing
Permanently flooded (H) - water covers land surfa- intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water per most years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season	throughout the yearsists throughout	ear except in year growing season in	except S Tempo seaso Interm variable	for ground water rarily flooded (A n, but water table littently flooded (a le periods withou	er seepage and ov .) - surface water _i e usually lies well J) - substrate usu it detectable seas	present for brief period below soil surface for r ally exposed, but surfa	is during growing most of the season ce water is present for
Hydrology:		No		Depth to free	uration:		
Surface water depth:	average -	maximum	-	_	ered hydrology?	Yes	No
stems, or roots Adventitious roots	Rhizospheric oxi	Polymorphic leave dation Si Somewhat Poorly e . Si	es Buttressed tr hallow root systems Poor	Float y Very	posits Draina ertrophied lentice, ting leaves Poorly	age patterns within wet Is Stooling Floating stems Mapped Hydric Soil	lands Other Inflated leaves,
Slope: Nearly level	Gentle	Moderate			سنندا فسند	Form	
Cover Types: Mature forest	Sapling f		hrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	0	Saplings un	Shrubs	Herbs	Gras8		
Soil: 29A-Haplagnen	ts-Scant	ic Compl.	er				

Leaf litter:	Well developed	Mod	derately well developed	Absent
Cover objects:	(Coger	Bark	Boulders	Rocks
Evidence of Erosion	Yes	(Explain)		

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge	 _	Comments
Seeps, springs observed?	Yes	(No)	
Wetland microrelief	Well developed	Non/Poorly	
Wetland contains an outlet, no inlet	Yes	(developed No	-
Function Present	Yes	(No)	
Degree of Function	High Mod	Low.	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	<u> </u>	Comments
Wetland size in relation to watershed	Large	Small	Collinents
Amount of impervious surface in wetland watershed	Large	Small)	
Wetland Slope	Gentie	Moderate Steep	
Wetland characterized by variable water level?	Yes	No.	
Wetland in floodplain of adjacent watercourse	(es)	No No	
Valuable properties, structures, or resources located in or near floodplain downstream from welland		No	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	Yes	(No	
Wetland vegetation density	(High)	Low	
Wetland microrelief	-Well developed	/None/Poorly developed	

				
Function Present (Yes	No		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments	_	
Dominant land use adjacent to-Waterbody	Forest, Shr	ub, Meadow	Lawn			
Shallow littoral zone with emergent vegetation present?	Yes		No		. <u> </u>	<u> </u>
Waterbody at least 10' deep	Yes		No			<u>-</u> .
% of pond covered by submerged or emergent vegetation	15-40%		Other			
Direct stormwater discharge via culvert?	No	- Committee of the Comm	Yes			
Sandbar present at inlet?	No	**************************************	Yes			<u> </u>
Water transparency	High		Low			
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes			
Pond size ≥0.5 acre	Yes		No			
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u>.</u>	Yes			_
Function Present	Yes		No			
Degree of Function	High	Mod	Low			

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+_		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High _	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	<u> </u>
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable; eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Роог	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant	Mostly tolerant	
Function Present Degree of Function	Yes	No	
Degree of Function	High Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

	Comments
No	
	Airfield runoff
Short	
LOW	
No	
(Low)	
Yes	
Channelized	
No	
High	
No	
No	
·	
_	
	Yes No Low

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

+		
 	(611)	Comments
 		
 -	- 	
	- 	
- 1 Jan 1997		
		-
 		
	+	
Organic/high clay		
content		
		
		Large Small Yes No No No Yes No No Piffuse Channelized Low Yes No Organic/high clay content Low High High

				_			 	
ļ	Function Present	 	(Yes)		No			
	Degree of Function	 · ·	High	M	ođ	T(0M)	 	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	- Comments .
Wildlife food sources in wetland	Ábundant	Few
Vegetation density	High	Low
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No
Wetland has high degree of plant community structure and species diversity	/Yes	No .
Detritus development is present within this wetland	Yes	No
Flowering plants used by nectar gatherers present	Yes	No
Evidence of wildlife use in wetland	(es)	No Significant vernal pool
Fish or shellfish develop/occur in wetland	Yes	
Function Present	(es)	No No
Degree of Function	High Mod	Low

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments	<u> </u>
Topographical gradient in wetland	Yes	No		<u></u>
Potential sediment sources upstream or upslope	Yes	No		<u>_</u>
Wetland border >10' adjacent to pond or water	Yes			·
Distinct shoreline or bank evident between wetland and water	No	Yes		<u></u>
Open water fetch present	Yes	(N <u>Q</u>		
Boating activity present	Yes	(No)	<u> </u>	
Floodplain stabilizing trees and shrubs present	Yes	No		<u>_</u>
indications of erosion or siltation present	Yes	(%)		<u></u>
Function Present	Yes	MOD		
Degree of Function	High N	Aod Low		<u>_</u>

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	109	
Fishing is available in or from the wetland	Yes	<u> </u>	
Hunting is permitted in wetland	Yes		
Hiking occurs or has potential to occur in wetland		No	Potential
Wetland is a valuable wildlife habitat	(Yes)	No	

Wetland has high visual/aesthetic quality	Yes	NO		
Boating or canoeing feasible in wetland	Yes	7		
Off-road public parking near wetland available	Yes	No -		<u></u>
Safety Hazards (if present list them)	Yes	No		
Function Present	(Yes	No		_ ·
Degree of Function		Mod Low	— Potential	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to High	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	High No	Forest
Buffer width	Good to Excellent	Fair to Poor	€ <u>5</u>
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(oy)	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	£0%)	wooded swamp
Vegetation density	High	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			
Wetland plant species diversity	High Mod Lo	w	<u> </u>
Vernal pool	Yes)	No	Sig Vernal Pool#8 (TRC)
Edge diversity (List types)		_ _	TOO THE CIRC
Water regime	Wetter	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	_
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	<u> </u>
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

Criteria		+	-	Comments	<u>-</u> ·	
Wetland contains listed species	Yes		160 _		_	
Wetland provides valuable wildlife habitat	(Yes)		No		<u></u>	
Wetland class diversity	High	_	(Low)_			
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	. <u>.</u>	Law	Forest		·
Off-road parking near wetland available	Yeş,					
Proximity to schools	Near		Far	Bowdoin		
Wetland contains perennial watercourse	Yes			<u></u>	<u> </u>	- .
Wetland contains pond/lake	Yes		(No)		<u> </u>	
Safety hazards (if present list them)						
Site currently used for educational/scientific purposes	Yes		(No)			
Function Present	Yes		No	Potential		
Degree of Function	High	Mod	I(OW)		<u>-</u>	<u> </u>

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments	<u></u>	<u></u>	
Wetland contains listed species	Yes	_	N6)		_ ·		
Wetland identified as exemplary natural community	Yes		(QS)				
Wetland locally/regionally significant	Yes		(No)				
Function Present	Yes		№	_			
Degree of Function	High	Mod	Low				

VQA/VISUAL QUALITY/AESTHETICS

Criteria	_	+		Comments
Visible from primary viewing locations	Yes		(No)	
Views absent trash, debris, sign of degradation	(vi)		No	
Low noise level	Yes		(No)	
Visual landuse contrast with wetland	Yes		№	
Function Present	Yes		(NG)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria		+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes		(N)	
Wetland contains critical habitat for state or federal listed species	Yes		No.	
Area appears in state or national database	Yes		(NO)_	

			<i>/</i> *~		•
Function Present	Yes		(No')		
Dograd of Function]	-
Degree of Function	High	Mod .	Low		
	_			<u> </u>	!

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

CIMPID		I									
GWR/D	FFA	F&SH	S&TR	NR&R	PE.	REC	WLH	ED/S	U/H	5&\$	ESH
Wog/NO	Mod	No	Mod	Low	Mod	Low	High	Cow	No	Na	010
SHMMARY	E FUNCTIONS					<u> </u>			<u> </u>	, , • 0	

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 284 Direction : N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/A Below aver Dip netting ☐ Auditory ☑	age 🗌 Average 🔲 Above Averag	Time Start: N/A Time Stop: N/A e
Class	Subclass		<u> </u>
POW/ Open water	Vegetated Non-Vegetated	<u> </u>	
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shi	ub Robust Narrow-tea	aved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved Floating leaved	<u>. </u>
PFL / Seasonally Flooded Fiats	Emergent Shrub	<u> </u>	
PEM / Wet Meadow	Ungrazed Grazed		
PSS / Shrub Swamp)	Sapling Bushy	Compact Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen		
Bog	Compact shrub Bushy shrub		mergent ed to surface, especially early in growing
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surface Intermittently Exposed (Z) -surface water present to of extreme drought Semi-permanently flooded (F) - surface water personst years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in Hydrology:	throughout the year except in years sists throughout growing season in extended periods especially early in most years	Temporarily flooded (A) - surface water season, but water table usually lies we intermittently flooded (J) - substrate us variable periods without detectable season.	r present for brief periods during growing Il below soil surface for most of the season ually exposed, but surface water is present fo
Ground Mater distribution pro-	es No	Depth to saturation:	
If Present: Slope or Depressional	average - maximum -	Signs of altered hydrology?	Yes No
•	.vo/.ugo	•	nage patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumal	tophores Polymorphic leaves Bi Rhizospheric oxidation Shallow ro	uttressed trees Hypertrophied lentice Floating leaves Poorly Very Poorly	
Slope: Nearly level Gentle	Moderate Steep		
Upland Border: Slope: Nearly level (Cover Types: Mature forest Vegetation Density(S/M/D): Trees	Gentle Moderate Sapling forest <u>Strub thi</u> c Saplings Ş	Steep ket Neadow Mowed lawn hrups M. Herbs D. Grass D.	Farm

Soil: 29A - Haplaquents - Scartic Complex

Leaf litter:	Well developed		Moderately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Packs

Evidence of Erosion:

Rocks

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(Ne)	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High N	fod Łow	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow I	edge	Comments
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	/Non/Poorty	
Wetland contains an outlet, no inlet	Yes	developed (
Function Present	Yes	(N)	
Degree of Function	High N	Mod Low	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Small -		Comments
Amount of impervious surface in wetland watershed	(arge	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	(Yes)	No	Оссор	
Wetland in floodplain of adjacent watercourse	Yes	(No)		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		Airfield
Watershed has a history of economic loss due to flooding	Yes	No	-	
Wetland outlet restricted	Yes	No		
Wetland vegetation density	(Aigh)	Low		
Wetland microrelief	Well developed	None/Poorly developed	_	

Function Present	Yes	No	
Degree of Function	High	Mod	·

F&SH/FINFISH HABITAT: POND &LAKE(Excluding condition: Not associated with pond/lake)

Criteria	+	_	<u> </u>	Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, M	eadow L	.awn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		<u>Vo</u>	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No	\	Yes	
Water transparency	High	l l	_ow	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	,	Yes	
Pond size ≥0.5 acre	Yes	_ \	No .	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS Excluding condition: Not associated with perennial stream)

Criteria	+	- Comments
Channel shaded by riparian trees and/or shrubs	Yes	No No
Gravel spawning areas present	Yes	No
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	res
Dominant bottom substrate	Gravel/cobbles	Sand/silt
Substrate embeddedness by sand & silt	Low	High
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous
Bank stability	Stable	Unstable, eroding
Bank vegetative cover	High (trees, shrubs)	Low
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few
Riparian zone	Wide	Narrow
Watershed development	Low	High
Water quality	Good	Poor

Pollution tolerance of benthic macro-invertebrate taxa	 Mostly intolera	ent	Mostly tolerant	
Function Present	 Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No .	
Duration of water retention in wetland	(Long)	Short	priviled nevolt
Evidence of sediment trapping in wetland	Yes		
Vegetation density	(High)	(Low) No	<u> </u>
Wetland edge broad and intermittently aerobic	(Yes)		<u> </u>
Drainage ditches in wetland	(Nô) _	Low	
Water flow through wetland	Diffuse	Yes	<u> </u>
Ponded water present	- `	Channelized	
Wetland basin topographic gradient		No	·
Fine grained mineral or organic soils present	Yes	High	t
Watercourse, if present, has visible velocity decreases in wetland		No	
Indicators of erosion or high water velocities are present	Yes	No	
Function Present	Ne -	Yes	
Degree of Function	(Yes) (High) Mod	Low	_

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	(Smajl)	Comments
Potential sources of excess nutrients upstream	Yes		
Wetland is saturated most of the season	(Tès		
Emergent vegetation and/or dense woody stems are dominant	(es)	No	<u> </u>
Water flow through wetland	Diffuse	Channelized	
Vegetation density		Low	
Potential for sediment trapping exists	(es)	No -	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	content	High	
Wetland microrelief	Well developed)	None, poorly developed	

	_	_	
Function Present	(es)	No	No in outs
Degree of Function	High	Mod Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	÷	-	Comments
Wildlife food sources in wetland	Abundant	Few	
Vegetation density	(High)	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	No	
Wetland has high degree of plant community structure and species diversity	Y®	No	
Detritus development is present within this wetland	Yes	No	
Flowering plants used by nectar gatherers present	(Yes)	No	
Evidence of wildlife use in wetland	(es)	No	Birds
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	(es)	No	
Degree of Function	High (Mod) Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		-	Comments		
Topographical gradient in wetland	(Yes)	N	0		•	
Potential sediment sources upstream or upslope	(Yes)	- N	o			
Wetland border >10' adjacent to pond or water	Yes	N	0		_	
Distinct shoreline or bank evident between wetland and water	No	Y	es			
Open water fetch present	Yes		<u> </u>			
Boating activity present	Yes		<u>)</u>			
Floodplain stabilizing trees and shrubs present	(es)		lo			
Indications of erosion or siltation present	Yes					
Function Present	Yes		<u>6</u>			
Degree of Function	High	Mod	Low_		<u>-</u>	

REC/RECREATION

Criteria	+		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	(ND)	
Fishing is available in or from the wetland	Yes	<u> </u>	
Hunting is permitted in wetland	Yes	(No)	·
Hiking occurs or has potential to occur in wetland	Yes	(No.)	
Wetland is a valuable wildlife habitat	Yes		

Wetland has high visual/aesthetic quality	Yes	(NO)	
Boating or canoeing feasible in wetland	Yes		
Off-road public parking near wetland available	Yes	6	
Safety Hazards (if present list them)	Yes	No	Ada to a Contract
Function Present	Yes	(No)	tdi to airfield
Degree of Function	High	Mod Low	

WLH/WILDLIFE HABITAT

Criteria		<u>-</u>	=	Comments
Wetland degradation by human activity	Little or No	ne	Moderate to	
Wetland fragmentation by development	Little or No	ne .	Moderate to)	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)		High No	Shrubs, grassland
Buffer width	Good to Ex	cellent	Fair to Poor	200 xos, Crassiana
Connectivity with other wetlands	(Ves)		No No	
Size of landscape block in which wetland is located	Large		(Small)	
Wildlife food sources in wetland	Abundant	<u> </u>	Few	
interspersion of vegetation and open water	High	-	Low	
Upland islands	Present	_	Absent	
Wetland class diversity (W=Wooded swamp_SS≃Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	- -	 	Slandasumun
Vegetation density	High	<u>_</u>	Low	- Atten attention
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb Li.=Leaf litter)		<u> </u>	2000	Shrub, Herb, LL
Wetland plant species diversity	High (Mod	Low	<u> </u>	Burus, Herb, W
Vernal pool	Yes		(No)	
dge diversity (List types)			 	0 /
Water regime	Wetter	· ·	(Drier)	Shrubs grassland
labitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant		(Eew)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	<u>-</u>	(Few)	
lat rocks in/near watercourse (stream salamanders)	Present		(Absent)	
Sphagnum hummocks next to shallow pools	Present	<u> </u>	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Absent	
bundance of invasive exotic flora	None or Low	<u> </u>	High	
unction Present	(Yes)		No -	
Degree of Function	High	Mod	Low	

Criteria		+		Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		№)	
Wetland class diversity	High		[√ow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		(Coy	Shrubs, grassland_
Off-road parking near wetland available	Yes		₹	
Proximity to schools	Near		Far	Bowdain
Wetland contains perennial watercourse	Yes		₩.	
Wetland contains pond/lake	Yes		®	
Safety hazards (if present list them)		· 		Adj. to airfield
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	Yes			
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(B)	
Wetland identified as exemplary natural community	Yes		│⑩	
Wetland locally/regionally significant	Yes	·	1	
Function Present	Yes		₩	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	· ·	+		Comments		_	
Visible from primary viewing locations	Yes		(No)				
Views absent trash, debris, sign of degradation	Yes	· <u> </u>	(a)			_	
Low noise level	Yes		(N)o		<u>-</u>		
Visual landuse contrast with wetland	Yes	Yes			<u>_</u>		
Function Present	Yes	Yes					
Degree of Function	High	Mod	Low				<u> </u>

ESH/ENDANGERED SPECIES HABITAT

Criteria	÷	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	No.	
Welland contains critical habitat for state or federal listed species	Yes		
Area appears in state or national database	Yes	(No)	

Function Present	Yes		No	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X-present, P-Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH.
No/No	Cow	No_	High	Low	Woq	No	(ou)	No	No	NO	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization); This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

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Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 285 Direction: N MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	Dip netting ☐ Auditory ☑	Weather: N/A ge □ Average □ Above Average Scat 図 Tracks ⊠	Time Start: N/A Time Stop: N/A ☐ Don't Know ☐ TBD ☐ Minnow Traps ☐ Electro-shocking ☐
Class	Subclass		
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shru	b Robust Narrow-leav	ved Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved E	road-leaved Floating leaved	<u> </u>
PFL / Seasonally Flooded Flats	Emergent Shrub		·
PEM / Wet Meadow	Ungrazed Grazed	·	<u> </u>
PSS / Shrub Swamp	Sapling Bushy C	Compact Aquatic	<u></u>
PFO / Wooded Swamp	Deciduous Evergreen		
Bog	Compact shrub Bushy shrub	Wooded Em Seasonally saturated (Y) solls saturated	ergent
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surfa Intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water personst years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in Hydrology: Ground water discharges present:	throughout the year except in years sists throughout growing season in r extended periods especially early in	season, but are unsaturated by end of se except for ground water seepage and ov Temporarily flooded (A) - surface water p season, but water table usually lies well Intermittently flooded (J) - substrate usua variable periods without detectable season	eason in most years; surface water absent erland flow present for brief periods during growing below soil surface for most of the season ally exposed, but surface water is present for
If Present: Slope or Depressional	110	Depth to saturation:	
•	average - maximum -	Signs of altered hydrology?	Yes No
		parameter 1	ge patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumatistems, or roots Adventitious roots F Soil Drainage classes: Well Moderate Slope: Nearly level Gentle	tophores Polymorphic leaves Buti Rhizospheric oxidation Shallow roo	ressed trees Hypertrophied lenticels	
Upland Border: Slope: Nearly level (Gentle Moderate	Steep	
Cover Types: Mature forest Vegetation Density(S/M/D): Trees	Sapling forest Strub thicker Saplings Shr	Meadow Mowed lawn	Farm .

Soil: 29A - Haplaquents - Scantic complex

Leaf litter:	Well developed	el/loderately well developed	Absent
Cover objects:	Logs	Bark Boulders	Rocks
Evidence of Frosion:	źÑn Yes	(Evnlain)	

Evidence of Erosion: (NU Tes (Explain) GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+.			-		Comments
Soits	Sand/gravel outwas	sh	Hardpan, tig shallow ledg	ht fine grai	ned soils,	
Wetland associated w/ perennial or seasonal watercourse	Yes		No			
Slope	Gentie		Moderate or	Steep		
Function Present	Yes No		_			
Degree of Function	High	Mod	<u> </u>	Low	1	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly developed	
Wetland contains an outlet, no inlet	(Yes)	No No	
Function Present	Mes -	No	
Degree of Function	High (Mod)	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments	· · · · · · · · · · · · · · · · · · ·
Wetland size in relation to watershed	Large	Small	_		.
Amount of impervious surface in wetland watershed	Large	Small	 -		
Wetland Slope	Gentle	Moderate	Steep		<u>·</u>
Wetland characterized by variable water level?	(Yes)	No No	1		<u> </u>
Wetland in floodplain of adjacent watercourse	Yes	No -			<u> </u>
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(Pes)	No	_	Airfield	<u> </u>
Watershed has a history of economic loss due to flooding	Yes	No			
Wetland outlet restricted	Yes	(No)			<u> </u>
Wetland vegetation density	High	Low			
Wetland microrelief	Well developed	None/Poorly developed			

Function Present	(F)	No		
Degree of Function	High	Mog	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	NO		Yes	
Sandbar present at inlet?	NO		Yes	
Water transparency	High	·	Low	<u> </u>
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	·
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u>-</u>	Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes.	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low ·	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly inteler	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+	-	Comments
Sources of sediments or toxicants upstream	Yes	No No	
Duration of water retention in wetland	(Long)	Short	
Evidence of sediment trapping in wetland	Yes	Low	
Vegetation density	High	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No.	Ye	
Water flow through wetland	Diffuse	Channelized	
Ponded water present	Yes	/No.	
Wetland basin topographic gradient	Low	High	
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	No)	Yes	<u>'</u>
Function Present	Kes	No.	
Degree of Function	High Mod		

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	÷		Comments
Wetland size in relation to watershed	Large	Small	
Potential sources of excess nutrients upstream	Yes	M8)	
Wetland is saturated most of the season	(Yes)	No	
Emergent vegetation and/or dense woody stems are dominant	(Yes)_	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	(Yes)	No.	
Deep or open water habitat is present	Yes	100	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	(1.0w)	High	
Wetland microrelief	Well developed	None, poorly developed	

		· · · · · · · · · · · · · · · · · · ·	
Function Present	Yes	No	
Degree of Function	High	Mod (ow)	·

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	-	Comments
Wildlife food sources in wetland	Abundant	Few	· · · · · · · · · · · · · · · · · · ·
Vegetation density	righ)	Low	
Nutrients and/or organic matter flushed out of wetland into watercourse	(es)	· No	
Wetland has high degree of plant community structure and species diversity	(es)	No	
Detritus development is present within this wetland	(es)	No _	
Flowering plants used by nectar gatherers present	©	No	
Evidence of wildlife use in wetland	/Yes)	. <u>No</u>	Bords
Fish or shellfish develop/occur in wetland	Yes	(No)	
Function Present	Yes	No	
Degree of Function	High Mod	Low	

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+			Comments
Topographical gradient in wetland	Yes	No		
Potential sediment sources upstream or upslope	Xes)	No		
Wetland border >10' adjacent to pond or water	Yes	8)	
Distinct shoreline or bank evident between wetland and water	No	Yes	.	
Open water fetch present	Yes			
Boating activity present	Yes			
Floodplain stabilizing trees and shrubs present	Yes	(No) _	
Indications of erosion or siltation present	Yes	(No.)	
Function Present	Yes	(No		
Degree of Function	High	Mod	Low	

REC/RECREATION

Criteria	+	-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	6	
Fishing is available in or from the wetland	Yes	No	
Hunting is permitted in wetland	Yes	₩	
Hiking occurs or has potential to occur in wetland	Yes	Ne	
Wetland is a valuable wildlife habitat	Yes	(No)	

Wetland has high visual/aesthetic quality	Yes	N.	3)	
Boating or canoeing feasible in wetland	Yes		<u></u>	· · · · · · · · · · · · · · · · · · ·
Off-road public parking near wetland available	Yes		``	
Safety Hazards (if present list them)	Yes	N		Adi to oirfreed
Function Present	Yes	(No	<u> </u>	Haj. 10 arri eta
Degree of Function	High	Mod	Low	-

WLH/WILDLIFE HABITAT

Criteria	+		<u> </u>	Comments
Wetland degradation by human activity	Little or None	• (Moderate to High	- Communication of the Communi
Wetland fragmentation by development	Little or None		Moderate to)	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(eg)		High No	grassland, Shrub
Buffer width	Good to Exce	=lent	Fair to Poor	<u> </u>
Connectivity with other wetlands	Yes		No	
Size of landscape block in which wetland is located	Large		(Small)	
Wildlife food sources in wetland	Abundant		Few	
Interspersion of vegetation and open water	High		Low	
Upland islands	Present	. —	Absent)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High			PEM
Vegetation density	High	_	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		_		Shrub, herb
Wetland plant species diversity	High Mod	Low		apt four from the
Vernal pool	Yes		NO)	
Edge diversity (List types)		_	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Water regime	Wetter		Drier)	
Habitat features (S=Snags L=Fatlen logs SE=seep/spring)	Abundant	<u>_</u>	(Few)	<u> </u>
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant		Few2	
Flat rocks in/near watercourse (stream salamanders)	Present	- 	Absent	
Sphagnum hummocks next to shallow pools	Present	- 	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present		Absent	
Abundance of invasive exotic flora	None or Low		High	
Function Present	∕ Ý9̂s		No .	
Degree of Function				

Criteria		+	-	Comments
Wetland contains listed species	Yes		(B)	
Wetland provides valuable wildlife habitat	(Pe)		No	
Wetland class diversity	High		Low	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	<u>.</u>	Łow	Grassland, Shrub
Off-road parking near wetland available	Yes		(No)	
Proximity to schools	. (Near)		Far	Bowdoin
Wetland contains perennial watercourse	Yes		®	
Wetland contains pond/lake	Yes		<u>(N</u>)	
Safety hazards (if present list them)		_		
Site currently used for educational/scientific purposes	Yes		(N)	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	·

U/H/UNIQUENESS/HERITAGE

Criteria		+	_	Comments
Wetland contains listed species	Yes		®	
Wetland identified as exemplary natural community	Yes		₩	
Wetland locally/regionally significant	Yes		(N)0	
Function Present	Yes	_	(N)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	<u> - </u>	Comments
Visible from primary viewing locations	Yes	<u>-</u>	60	
Views absent trash, debris, sign of degradation	Yes	· <u>-</u> ·	N	
Low noise level	Yes		\µð	
Visual landuse contrast with wetland	Yes	<u></u>	(v)	
Function Present	Yes		169	·
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(B)	
Wetland contains critical habitat for state or federal listed species	Yes	(N)	
Area appears in state or national database	Yes	/Ng	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	ΡE	REC	WLH	ED/S	U/H	S&S	ESH
No/Mod	Mod	No	Low	روس	Mod	No	فنع	No ·	No	No	No

SUMMARY OF FUNCTIONS

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Photo #:286 Direction: SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 90 D	ate: N/A Functional U	nit:	Weath	er: N/A	Time Start:	N/A Time Stop: N/A
Site Investigator: Amy Goodstine & Chris Akios Re	ecent Precipitat	ion: N/A Below av	erage 🗌	Average 🗌	Above Average	☐ Don't Kno	ow 🗌 TBD 🔲
Wildlife Investigation Method: Cover search 🛛	Dip netting	g 🗌 Auditory	X	Scat 🔯	Tracks 🛚	Minnow Traps 🗌	Electro-shocking ☐
Wetland Types(s) Cowardin/Golet Classification	n	<u> </u>					
Class	Subclass			_	_		
POW/ Open water	Vegetated	Non-Vegetate	d				
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	shrub	Robust _	Narrow-leav	ed Broad	d-leaved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Flo	ating leaved		· .
PFL / Seasonally Flooded Flats	Emergent	Shrub	- <u></u> -	_	<u> </u>		-
PEM / Wet Meadow	Ungrazed	Grazed		<u>-</u> .			
PSS / Shrub Swamp	Sapling	Bushy	Compact	<u>A</u> q	uatic		<u>-</u>
(PFC / Wooded Swamp)	Deciduous	Evergreen	_				
Bog	Compact shrul	b Bushy shrub		Wooded		ergent	1.0
Water Regimes (Cowardin Modifier):			Seasona	ılly saturated (Y <i>but are unsatu</i> r	') - soils saturated rated by end of se	i to surface, esper Lason in most vea	cially early in growing rs; surface water absent
Permanently flooded (H) - water covers land surfa			except fo	or ground water	seepage and over	erland flow	<u> </u>
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the ye	ear except in years	Tempora season,	arily flooded (A) but water table	- surface water p usually lies well l	present for brief pe below soil surface	eriods during growing for most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout (growing season in	Intermitt variable	ently flooded (J periods without) - substrate usua t detectable seasc	nily exposed, but s onal periodicity~	surface water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period most years	ts especially early in	Artificiali etc	y flooded (K) -	amount/duration o	of flooding control	led by dikes dams, pumps,
Hydrology:	•	•					
Ground water discharges present:	′es N	lo		Depth to free	water:		
If Present: Slope or Depressional				Depth to satu	ıration:		
Surface water depth:	verage -	maximum -		Signs of alter	ed hydrology?	Yes	No
Hydrology indicators: inundated (8	aturated in uppe	er 12" Water marks	Drift lines	Sediment dep	osits Draina	ge patterns within	wetlands Other
Plant Adaptations to Hydrology: Pneumal stems, or roots Adventitious roots I	ophores F Rhizospheric oxid		Buttressed tree root systems		rtrophied lenticels ng leaves	s Stooling Floating st ems	Inflated leaves,
Soil Drainage classes Well Moderate	ely Well S	Somewhat Poorly	Poorly	Very I	Poorly	Mapped Hydric	Soîl
Slope: Nearly level Gentle	Moderate	e Steep					
Upland Border:							
Slope: Nearly level	Gentle	Moderate	Steep				
Cover Types: Mature forest	Sapling f	orest Shrub th	icket	Meadow	Mowed lawn	Farm	•
Vegetation Density(S/M/D): (Trees	M s	Saplings M	Shrubs	Herbs	Grass		
Soil: 34B - Tunbridge	fine sa	ndy loam					

∃ eaf litte	

Well developed

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

Νo

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments	
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge		
Wetland associated w/ perennial or seasonal watercourse	Yes	(E)		
Slope	Gentle	Moderate or Steep		
Function Present	(Yes) No			
Degree of Function	High Mo	d (Low)		

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly	<u> </u>
Wetland contains an outlet, no inlet	Yes	No Y	
Function Present	Yes	No.	
Degree of Function	High Mod	Low	- -

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	
Amount of impervious surface in wetland watershed	Large	Small	<u>·</u>
Wetland Slope	Gentie	Moderate Steep	
Wetland characterized by variable water level?	(Yes)	No	
Wetland in floodplain of adjacent watercourse	Yes		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	(Yes)	No	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	Yes	(6N)	
Wetland vegetation density	High	(LOW)	
Wetland microrelief	Well developed	None/Poorly Cdeveloped	

Function Present	Yes	(No)	_	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	•	Comments		<u>-</u>
Dominant land use adjacent to Waterbody	Forest, Shrui	, Meadow	Lawn		·	
Shallow littoral zone with emergent vegetation present?	Yes		No		•	
Waterbody at least 10' deep	Yes		-No	_	_	
% of pond covered by submerged or emergent vegetation	15-40%		Other			
Direct stormwater discharge via culvert?	No		Yes		· ·	<u> </u>
Sandbar present at inlet?	No		Yes			
Water transparency	High		Low		<u>. </u>	<u> </u>
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes			
Pond size ≥0.5 acre	Yes		No		<u></u>	<u> </u>
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes			
Function Present	Yes		No			
Degree of Function	High	Mod	Low			

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silf	
Substrate embeddedness by sand & silt	Low	High	
instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	<u> </u>
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few \	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	<u></u>

Pollution tolerance of benthic macro-invertebrate taxa	 Mostly intoler	ant	Mostly tolerant	
Function Present	 Yes	·	Nó	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	(Yes)	No	
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(low)	
Vegetation density	High	(No)	
Wetland edge broad and intermittently aerobic	(es)	Low	
Drainage ditches in wetland	(10)	Yes	
Water flow through wetland	(Diffuse)	Channelized	
Ponded water present	Yes	1	
Wetland basin topographic gradient	Low	High	-
Fine grained mineral or organic soils present	Yes	No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	(No) -	Yes	
Function Present	(es)	No	
Degree of Function	High Mod	_ ' ' ,	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		Comments
Wetland size in relation to watershed	Large	\$mall)	Continents
Potential sources of excess nutrients upstream	Yes	N6)	
Wetland is saturated most of the season	Yes	No No	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through welland	(Diffuse)	Channelized	
Vegetation density	High	(Low)	
Potential for sediment trapping exists	Yes	No No	-
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

·				-,-
Function Present	Yes	No	<u> </u>	
Degree of Function	High	Mod	(ow)	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria	+	Comments
Wildlife food sources in wetland	Abundant	Eew
Vegetation density	High	(Low)
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes	(No)
Wetland has high degree of plant community structure and species diversity	Yes	No
Detritus development is present within this wetland	(Yes	No _
Flowering plants used by nectar gatherers present	(Yes)	No
Evidence of wildlife use in wetland	Yes	(%)
Fish or shellfish develop/occur in wetland	Yes	<u></u>
Function Present	Yes	No
Degree of Function	High Mod	(Low)

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+		Comments	<u></u>
Topographical gradient in wetland	Yes	No		
Potential sediment sources upstream or upslope	(Pes)	No		<u>_</u>
Wetland border >10' adjacent to pond or water	(Yes)	No		<u>_</u>
Distinct shoreline or bank evident between wetland and water	No	Yes		
Open water fetch present	Yes	<u>(No)</u> _		<u> </u>
Boating activity present	Yes	<u> </u>		<u>-</u>
Floodplain stabilizing trees and shrubs present	Yes	No		<u> </u>
Indications of erosion or siltation present	Yes	(No)		<u>_</u>
Function Present	Yes	(No)	<u>·</u>	
Degree of Function	High	Mod Low		<u>-</u>

REC/RECREATION

Criteria	+		Comments	
Wetland is part of recreation area, park, refuge, etc.	Yes	(No)		
Fishing is available in or from the wetland	Yes	(10)		<u>-</u>
Hunting is permitted in wetland	Yes	No		
Hiking occurs or has potential to occur in wetland	(Yes)	No		
Wetland is a valuable wildlife habitat	Yes	(No)		<u> </u>

Wetland has high visual/aesthetic quality	Yes	No	
Boating or canoeing feasible in wetland	Yes	8	
Off-road public parking near wetland available	Yes	(No.)	
Safety Hazards (if present list them)	(Fes)	No	Adi to picket
Function Present	Yes	(No)	- Adj. to antick
Degree of Function	High	Mod Low	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	-Little or None	Moderate to	
Wetland fragmentation by development	Leitile or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)	High No	
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	No	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	(Eew)	· · · · · · · · · · · · · · · · · · ·
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absent)	<u></u>
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	LOW	wooded
Vegetation density	High	(Oyy)	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		 	T, S, Sh, H, LL
Wetland plant species diversity	High Mod (Low)		
Vernal pool	Yes	(No)	
Edge diversity (List types)			Forest
Water regime	Wetter	(Drier)	1 0121
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soits near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(V)	No	
Degree of Function	High Mod	Low	1

Criteria		+	-	Comments	
Wetland contains listed species	Yes		Nø.		
Wetland provides valuable wildlife habitat	Yes		₩.		
Wetland class diversity	High '		(w)		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		£50%	forest	
Off-road parking near wetland available	Yes		<u>6</u>		
Proximity to schools	Near		Far	Boudoin	
Wetland contains perennial watercourse	Yes		160		
Wetland contains pond/lake	Yes		<u>6</u>		
Safety hazards (if present list them)					
Site currently used for educational/scientific purposes	Yes				
Function Present	Yes		<u> 1</u> 60 _		
Degree of Function	High	Mod	Low		

U/H/UNIQUENESS/HERITAGE

Criteria		+ .		Comments
Wetland contains listed species	Yes		No	
Wetland identified as exemplary natural community	Yes	•	NO	
Wetland locally/regionally significant	Yes			
Function Present	Yes		69	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments	<u>-</u>
Visible from primary viewing locations	Yes		(No)		_ <u>-</u>
Views absent trash, debris, sign of degradation	Yes		6		
Low noise level	Yes		(NO)		<u>-</u>
Visual landuse contrast with wetland	Yes		®		<u></u>
Function Present	Yes		Νĝ		
Degree of Function	High	Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(Ng)	
Wetland contains critical habitat for state or federal listed species	Yes	N ₂	
Area appears in state or national database	Yes	(Ng	

Function Present	Yes		No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
low/No	Po	No	Mod	Low	Lew	No	Low	No	No	Wo	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 287 Direction: SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classificatio	Recent Precipitation: N/A Below average Dip netting □ Auditory ☑	Weather: N/A ☐ Average ☐ Above Average Scat ☑ Tracks ☑	Time Start: N/A Time Stop: N/A ☐ Don't Know ☐ TBD ☐ Minnow Traps ☐ Electro-shocking ☐
Class	Subclass		
POW/ Open water	Vegetated Non-Vegetated	·	<u> </u>
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leav	ed Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Bro	ad-leaved Floating leaved	<u> </u>
PFL / Seasonally Flooded Flats	Emergent Shrub	<u> </u>	<u> </u>
PEM / Wet Meadow	Ungrazed Grazed	<u>-</u> .	
PSS / Shrub Swamp	Sapling Bushy Co	mpact Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen	_	<u>. </u>
Bog	Compact shrub Bushy shrub	Wooded Em Seasonally saturated (Y) - soils saturated	ergent
Water Regimes (Cowardin Modifier): Permanently flooded (H) - water covers land surfate Intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water permost years Seasonally flooded (C) - surface water present for	throughout the year except in years	except for ground water seepage and over Temporarily flooded (A) - surface water processes, but water table usually lies well intermittently flooded (J) - substrate usual variable periods without detectable seasons.	present for brief periods during growing below soil surface for most of the season ally exposed, but surface water is present for
growing season, but is absent by end of season it	in most years	etc	
Hydrology: Ground water discharges present: If Present: Slope or Depressional	Yes No	Depth to free water: Depth to saturation:	
Surface water depth:	average maximum -	Signs of altered hydrology?	Yes No
Hydrology indicators: Inundated	Saturated in upper 13" Water marks Drift li	nes Sediment deposits Draina	ge patterns within wetlands Other
Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots	atophores Polymorphic leaves Buttre Rhizospheric oxidation Shallow root s	ssed trees Hypertrophied lenticel ystems Floating leaves	s Stooling Inflated leaves, Floating stems
Soil Drainage classes: Well Moderat	tely Well Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep		
Upland Border:	-		•
Slope: Nearly level Cover Types: Mature forest Vegetation Density(S/M/D): Trees	Gentle Moderate Sapling forest Shrub thicket Moderate Shrub thicket	Steep Meadow Mowed lawn Herbs Grass	Farm

Soil: Sz-Swanton fine Sandy loam

	litte	

Well developed

Yes

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

(N)

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	•	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	(No	
Slope	Gentie	Moderate or Steep	
Function Present	€ No		
Degree of Function	Hìgh Mo	d Cow	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow t	edge	
Seeps, springs observed?	Yes	No	
Wetland microretief	Well developed	Non/Poorty	
Wetland contains an outlet, no inlet	Yes	(Nd)	
Function Present	Yes	(No)	
Degree of Function	High N	Mod Low	- -

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-		Comments
Wetland size in relation to watershed	Large	Small		
Amount of impervious surface in wetland watershed	(Large)	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	(Yes)	No	<u> </u>	
Wetland in floodplain of adjacent watercourse	Yes	,X(6)		·
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No No		
Watershed has a history of economic loss due to flooding	Yes	No		
Wetland outlet restricted	(Yes)	No		
Wetland vegetation density	High	Low		
Wetland microrelief	Well developed	None/Poorly developed	>	

			
Function Present	(Yes)	No	
Degree of Function	High_	Mod (Low)	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	·	÷		Comments
Dominant land use adjacent to Waterbody	Forest, Shri	ub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes	<u></u>	No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No	<u>-</u>	Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u> </u>	Yes	
Function Present	Yes		No :	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	· No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent on Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few_	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	. Poor .	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly-int	olerant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	(es	No -	Comments
Duration of water retention in wetland	(Long)	Short	
Evidence of sediment trapping in wetland	Yes		
Vegetation density	(figh)	No	
Wetland edge broad and intermittently aerobic	Yes	- - -	
Drainage ditches in wetland	(NB)	Low	<u> </u>
Water flow through wetland	Diffuse	Yes	
Ponded water present	Yes	Channelized	
Wetland basin topographic gradient	Low	No)	
Fine grained mineral or organic soils present	Yes	High	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No	
Indicators of erosion or high water velocities are present	No	No -	
Function Present	(Yes)	Yes	
Degree of Function	High Mod)	No	_

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		
Wetland size in relation to watershed	Large		Comments
Potential sources of excess nutrients upstream	Yes	(Small)	<u>-</u>
Wetland is saturated most of the season	- 	1 1 1 1 1 1 1 1 1 1	
Emergent vegetation and/or dense woody stems are dominant	Yes Yes	No No	
Water flow through wetland	Diffuse	No	
Vegetation density	High	Channelized	
Potential for sediment trapping exists	Ves Ves	No	
Deep or open water habitat is present	Yes	<u> </u>	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	content		
Wetland microrelief	Weil developed	High None, poorly developed	

Function Present	Yes		- (No			
Degree of Function	High	_	Mod		Low		
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	- · · ·	· <u> </u>					
Criteria			+		-	Comments	
Wildlife food sources in wetland		Abundan	t		Few		
Vegelation density		High			Low		<u> </u>
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes		المتنسخ فتتمست عديد	No _		
Wetland has high degree of plant community structure and species diversity	ماريخ	Yes			No		
Detritus development is present within this wetland	***************************************	Yes	·		No		
Flowering plants used by nectar gatherers present		Yes	************	_	No _		
Evidence of wildlife use in wetland		Yes		Canada and	No	<u> </u>	_ _
Fish or shellfish develop/occur in wetland	<u></u>	Yes	_		No	<u> </u>	
Function Present		Yes		_	No		
Degree of Function	<u></u>	High	Mo	d	Low	<u> </u>	
sass/sediment/shoreline stabilization Isolofed			_				<u> </u>
Criteria		+	_			Comments	<u> </u>
Topographical gradient in welland	Yes	_		No			
Potential sediment sources upstream or upslope	Yes			_No	<u> </u>		
Wetland border >10' adjacent to pond or water	Yes			No	<u>-</u> .	<u> </u>	
Distinct shoreline or bank evident between wetland and water	-No-			Yes	· - ··	<u> </u>	<u> </u>
Open water fetch present	Yes	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TRANSPORT NAMED IN COLUMN TRANS	diameter.	No			
Boating activity present	Yes			No	<u> </u>		<u>. </u>
Floodplain stabilizing trees and shrubs present	Yes	_	_	No			
Indications of erosion or siltation present	Yes	· <u> </u>		No	_	 	
Function Present	Yes		_			4	
Degree of Function	High	[Mod	ļ	Low	<u> </u>	
REC/RECREATION		_		_,			
Criteria		_ +			<u> </u>	Comment	<u></u>
Wetland is part of recreation area, park, refuge, etc.	Yes			(6)			
Fishing is available in or from the welland	Yes			<u> </u> 69		· -	
Hunting is permitted in wetland	Yes			1/00		ļ	
Hiking occurs or has potential to occur in wetland	Yes						
Wetland is a valuable wildlife habitat	Yes			(Ño))	_	

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Wetland has high visual/aesthetic quality	Yes	(No)	
Boating or canoeing feasible in wetland	Yes	6	
Off-road public parking near wetland available	Yes		
Safety Hazards (if present list them)	Yes	(No)	
Function Present	Yes	(No)	
Degree of Function	High	Mod Low	-

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	Ostanionis
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	ves)	High	Edge of road
Buffer width	Good to Excellent	(Fair to Poor)	
Connectivity with offier wetlands	Yes	(No)	
Size of landscape block in which wetland is located	Large	(Small)	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	(Low)	
Upland islands	Present	Absen	
Wetland class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	 	1 elomand C 10 1110
Vegetation density	High	Low	SOCIET SUBGRICO
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		-	Tree, Shrub, nerb, LL
Wetland plant species diversity	High Mod (Low)		Thee, surab, nev b, cc
Vernal pool	Yes	No	
Edge diversity (List types)		(***)	
Water regime	(Wetter)	Drier	
labitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	/Fevy	
lat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	/Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	`-	
unction Present	(Yes)	High No.	
Degree of Function	High Mod	(ow)	

Criteria		+ ·	-	Comments			
Wetland contains listed species	Yes		(No)			. <u></u>	_
Wetland provides valuable wildlife habitat	Yes		(No)		·	_	
Wetland class diversity	High		-		<u></u>		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		(Low)	Forest	······································		
Off-road parking near wetland available	Yes		(No.)			<u> </u>	_
Proximity to schools	Near		Far	Bowdoin			
Wetland contains perennial watercourse	Yes		(No)				
Wetland contains pond/lake	Yes		(No)		<u> </u>		.
Safety hazards (if present list them)	_	_	<u> </u>				_
Site currently used for educational/scientific purposes	Yes	· <u> </u>	(No)				
Function Present	Yes		N6)				
Degree of Function	High	Mod	Low	. <u>_</u>			_

U/H/UNIQUENESS/HERITAGE

Criteria		+	<u>-</u>	Comments			-	<u> </u>
Wetland contains listed species	Yes	_	(No)			_		
Wetland identified as exemplary natural community	Yes		6			_		
Wetland locally/regionally significant	Yes	<u></u>	No _		_		_	<u> </u>
Function Present	Yes		(Na)					
Degree of Function	High	Mod	Low				_	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		÷	-	Comments	<u>_</u>			
Visible from primary viewing locations	/Yes		(NO)		<u>_</u>	_	·	_
Views absent trash, debris, sign of degradation	Yes		(6)					
Low noise level	Yes		(No)		<u> </u>			
Visual landuse contrast with wetland	Yes		(Nd)	<u> </u>		<u></u>		
Function Present	Yes		ddb.					
Degree of Function	High	Mod	Low		<u> </u>		<u> </u>	<u></u>

ESH/ENDANGERED SPECIES HABITAT

Criteria	<u> </u>	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes		(M)	
Wetland contains critical habitat for state or federal listed species	Yes		(No)	
Area appears in state or national database	Yes		(Ng) _	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D		T					 -	r———			
GWICD	FFA	F&SH	S&TR	NR&R	₽€	REC	WLH	ED/S	U/H	5&5	ESH
low/No!	6000	No	mod	Low	No	2/2	1 .00-42	11.0			
SUMMEA DV O	F FUNCTIONS		7,000	1 0		100	1000	400_	No	_1\ <i>0</i> o	6M

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat; For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canceing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 288 Direction: NW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: F Site investigator: Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search Wetland Types(s) Cowardin/Golet Classification	cent Precipitation: N/A Below average ☐ Dip netting ☐ Auditory ☒	Average ☐ Above Average ☐	ne Start: N/A Time Stop: N/A Don't Know
Class	Subclass		<u></u>
POW/ Open water	Vegetated Non-Vegetated	<u> </u>	
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leaved	Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Broad-lea	ved Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub	_ _	
PEM / Wet Meadow	Ungrazed Grazed		
PSS / Shrub Swamp	Sapling Bushy Compact	Aquatic	<u>-</u>
PFO / Wooded Swamp	Deciduous Evergreen	<u> </u>	
Bog Water Regimes (Cowardin Modifier):	Compact shrub Bushy shrub	Wooded Emerge nally saturated (Y) - soils saturated to	ent
Permanently flooded (H) - water covers land surface Intermittently Exposed (Z) -surface water present to of extreme drought Semi-permanently flooded (F) - surface water personst years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in Hydrology:	throughout year in all years except hroughout the year except in years ists throughout growing season in extended periods especially early in except in years Temp season Interm variate Artific	t-for-ground water seepage and overlab orarily flooded (A) - surface water pres n, but water table usually lies well belo attently flooded (J) - substrate usually the periods without detectable seasonal ally flooded (K) - amount/duration of fi	eent for brief periods during growing ow soil surface for most of the season exposed, but surface water is present for
Ground water discharges present: Y	es No	Depth to free water:	
If Present: Slope or Depressional		Depth to saturation:	Yes No
Caraco nator copiiii	verage - maximum -	Signs of altered hydrology?	patterns within wetlands Other
Plant Adaptations to Hydrology: Pneumati	aturated in upper 12" Water marks Drift lines ophores Polymorphic leaves Buttressed to Rhizospheric oxidation Shallow root systems	ees Hypertrophied lenticels	Stooling Inflated leaves, loating stems
Soil Drainage classes: Well Moderate	ely Well Somewhat Poorly Poor	ly Very Poorly M	lapped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep	·	
Upland Border:	Name Of the Other	nn	
Slope: Nearly level <u>c</u> c Cover Types: Mature forest Vegetation Density(S/M/D): Trees	Sapling forest Shrub thicket	Meadow) Mowed lawn	Farm

Soil: Sz-swanton fine Saridy loam

 .eat	111	

Well developed

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Evidence of Erosion:

(No)	

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	_	-	Comments
Soils	Sand/gravel outwa	sh	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes		No	
Slope	Gentle	- .	Moderate or Steep	·
Function Present	Yes (No)	_	 	
Degree of Function	High	Mod	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		
Seeps, springs observed?		(No)	
Wetland microretief	Well developed	/Non/Poorly \	
Wetland contains an outlet, no inlet	Yes	(No)	
Function Present	Yes	1007	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large	Small	- South and Sout
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentie	Moderate Stee	0
Wetland characterized by variable water level?	(Yes)	No	r
Wetland in floodplain of adjacent watercourse	Yes	(Nô)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	N _O O _N	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	(Yes)	No.	
Wetland vegetation density	(High)	Low	
Wetland microrelief	Well developed	None/Poorty déveloped	

	\sim		
Function Present	(Yes)	No	<u> </u>
Degree of Function	High	Mod	(ow)

F&SH/FINFISH HABITAT: POND &LAKE Excluding condition: Not associated with pond/lake)

Criteria	+			Comments
Dominant land use adjacent to Waterbody	Forest, Shrub,	Meadow	Lawn	· · · · · · · · · · · · · · · · · · ·
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via cuivert?	*N9		Yes	
Sandbar present at inlet?	No	<u>_</u>	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No _	
Pond experiences dense algai blooms, huisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	<u>-</u>	No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	<u> </u>	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	230
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate faxa	Mostly intolera	nt	Mostly tolerant	
Function Present Degree of Function	Yes		No .	
	High	Mod .	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

No Stort (CO)	Comments
Stort	
1 21-	
No (Low)	
	
Yes	
Channelized	
High	
No No	<u> </u>
No	
 	
	_
-	Yes No

Criteria	+		
Wetland size in relation to watershed		<u> </u>	Comments
Potential sources of excess nutrients upstream	Large	Sma)I	·
Wetland is saturated most of the season	Yes	No.	
Emergent vegetation and/or dense woody stems are dominant	Mes -	(No)	
Water flow through wetland	Diffuse)	No	
Vegetation density	(High)	Channelized	
Potential for sediment trapping exists	Yes)	Low	
Deep or open water habitat is present	Yes	No No	
Soil type	Organic/high clay	 /	
Wetland basin topographic gradient	content	Sand/gravel	
Wetland microrelief	(Low)	High	
	Well developed	None, poorly developed	

	Yes (No)					
Function Present		Mod		Low		
Degree of Function	High		Wild			
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	<u>. </u>					
iteria		+		_	-	Comments
life food sources in wetland		Abundant			Few	
egetation density		High			-ŁōW	
Nutrients and/or organic matter flushed out of wetland into watercourse		Yes			No	
Wetland has high degree of plant community structure and species diversity		Yes		No		
Detritus development is present within this wetland		Yes		No		
lowering plants used by nectar gatherers present		Yes		No No	·	
Evidence of wildlife use in wetland	<u></u>		Yes		NO	
Fish or shellfish develop/occur in wetland	·	Yes	Yes		No	
Function Present		Yes	Yes		No	·
Degree of Function	_	High	Mo	ed	Low	
S&SS/SEDIMENT/SHORELINE STABILIZATION TSOLATER						
Criteria		+				Comments
Topographical gradient in wetland	Yes	Yes		No		
Potential sediment sources upstream or upslope	Yes		SHALLEN AND A	No		
Wetland border >10' adjacent to pond or water	¥es		No			
Distinct shoreline or bank evident between wetland and water	No				<u> </u>	
Open water fetch present	Yes			No		
Boating activity present	Yes	Yes		No		
Floodplain stabilizing trees and shrubs present	Yes	Yes		No		
Indications of erosion or siltation present	Yes	Yes		No		<u> </u>
Function Present	Yes			No		_
Degree of Function	High	·	Mod		Low	
REC/RECREATION			_	٠.	<u>-</u> .	
Criteria		+		· -		Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	Yes		<u> </u>		
Fishing is available in or from the wetland	Yes	Yes		8		
Hunting is permitted in wetland	Yes	Yes				
Hiking occurs or has potential to occur in wetland	Yes	Yes		(Ne.		<u> </u>
Wetland is a valuable wildlife habitat	Yes			(No)		

Wetland has high visual/aesthetic quality	Yes	No)	
Boating or canoeing feasible in wetland	Yes	NO.	<u> </u>
Off-road public parking near wetland available	Yes	/\omega	
Safety Hazards (if present list them)	Yes	- No.	
Function Present	Yes	,NO	
Degree of Function	High	Vlod Low	
Mil Fraktir Dr. 1855 111 Dr. 1855			

WLH/WILDLIFE HABITAT

Criteria	+		Comments		
Wetland degradation by human activity	Little or None	Moderate to)		
Wetland fragmentation by development	Little or None	Moderate to	Road adi to welland		
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	High No	grassland		
Buffer width	Good to Excellent	Fair to Poor			
Connectivity with other wetlands	Yes	(10)			
Size of landscape block in which wetland is located	Large	Small			
Wildlife food sources in wetland	Abundant	Few			
Interspersion of vegetation and open water	High	Low			
Upland islands	Present	Absent			
Wetfand class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	Low	(4)		
Vegetation density	High	Low Low	Shrub swamp		
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		2000	OL: 1/		
Wetland plant species diversity	High (Mod) Lov	- 	Ski,H,		
Vernal pool	Yes	No)			
Edge diversity (List types)					
Water regime	Wetter	Drier	<u> </u>		
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Fey)			
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	FeV			
Flat rocks in/near watercourse (stream salamanders)	Present	Absent			
Sphagnum hummocks next to shallow pools	Present	Absent			
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	<u>-</u>		
Abundance of invasive exotic flora	None or Low	High			
unction Present	Yes	(Vg)			
Degree of Function	High Mod	Low			

Criteria	-	+	_	Comments
Wetland contains listed species	Yes		(No)	<u> </u>
Wetland provides valuable wildlife habitat	Yes		(m)	
Wetland class diversity	High		(Kow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	•••	(Cow)	Grassland
Off-road parking near wetland available	Yes		(NO)	
Preximity to schools	Near		Far	Boudein
Wetland contains perennial watercourse	Yes		<u>(No)</u>	·
Wetland contains pond/lake	Yes		<u>(Ñō)</u>	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(A)	
Function Present	Yes		₩	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		No)	
Wetland identified as exemplary natural community	Yes		<u> </u>	
Wetland locally/regionally significant	Yes	Yes		
Function Present	Yes		[W]	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments
Visible from primary viewing locations	Yes	_	(No)	
Views absent trash, debris, sign of degradation	Yes		(Ng	
Low noise level	Yes		(NO)	
Visual landuse contrast with wetland	Yes	·	(No)	
Function Present	Yes		®	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	 	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes		(Ng)	
Wetland contains critical habitat for state or federal listed species	Yes		(No)	
Area appears in state or national database	Yes		(M)	

Function Present	Yes		No)
			N /
Degree of Function	Hịgh	Mod	1. —
	1 11911	19100	Low

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
No/No	400	No	Low	No	Na	No	No	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boaling, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 289 Direction: W MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Arny Goodstine & Chris Akios R Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitation: N/A Below average ☐ Dip netting ☐ Auditory ☒	Average Above Average	Time Start: N/A Time Stop: N/A ☐ Don't Know ☐ TBD ☐ Minnow Traps ☐ Electro-shocking ☐
Class	Subclass		
POW/ Open water	Vegetated Non-Vegetated		
PEM/PSS Deep Marsh	Dead Woody Shrub Sub-shrub	Robust Narrow-leav	ed. Broad-leaved
PAB/ Shallow Marsh	Robust Narrow-leaved Broad	l-leaved Floating leaved	
PFL / Seasonally Flooded Flats	Emergent Shrub		<u> </u>
PEM / Wet Meadow	Ungrazed Grazed	<u> </u>	<u> </u>
(PSS / Shrub Swamp)	Sapling Bushy Comp	pact) Aquatic	
PFO / Wooded Swamp	Deciduous Evergreen	<u> </u>	<u> </u>
Bog	Compact shrub Bushy shrub		ergent d to surface, especially early in growing
Intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water permost years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season is	r extended periods especially early in	eason, but water table usually lies well i stermittently flooded (J) - substrate usua ariable periods without detectable seas rtificially flooded (K) - amount/duration	oresent for brief periods during growing below soil surface for most of the season ally exposed, but surface water is present for onal periodicity— of flooding controlled by dikes dams, pumps,
Hydrology:	Yes No	Depth to free water:	-
Cidalia lizza disentagan promis	Yes No	Depth to saturation:	•
If Present: Slope or Depressional	average - maximum -	Signs of altered hydrology?	Yes No
Carlos viana aspan	Saturated in upper 12" Water marks Drift line	s Sediment deposits Draina	ge patterns within wetlands Other
Plant Adaptations to Hydrology: Pneuma	stophores Polymorphic leaves Buttress Rhizospheric oxidation Shallow root sys		s Stooling Inflated leaves, Floating stems
	tely Well Somewhat Poorly	Poorly Very Poorly	Mapped Hydric Soil
Slope: Nearly level Gentle	Moderate Steep		
Upland Border: Slope: Nearly level	- Carao	Steep Meadow Mowed lawn	Farm
Cover Types: Mature forest Vegetation Density(S/M/D): Trees	Sapling forest Shrub thicket Saplings Shrub	M Gerbs M GOD D	

Soil: 22B - Adams-Lyman Complex

Leaf litter:	Well developed	Mode	erately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No.	
Slope	Gentle	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	(Low)	

GWD/GROUNDWATER DISCHARGE

+		Comments
Hardpan, shallow ledge		Completies
(Yes)	No.	
Well developed	Non/Poorly	
Yes		
(Yes)	_	
High Mod		
	Well developed Yes Yes	Yes No Well developed Non/Poorly developed Yes No No

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

+		Comments
Large	(Small)	Comments
	- 	
	1000	
		
	No	
Yes	No	
Yesh	No.	
High)-	- 	
/Well developed	None/Poorly developed	
	Large (arge) (Gentle) (Yes) (Yes) (Yes) (Yes) (High) (Well)	Large Small (Targe Small (Targe Small (Sentle) Moderate Steep (Yes) No

Function Present	Yes	No		
Degree of Function	High	Mod	(Low)_	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+	-	Comments		_	
Dominant land use adjacent to Waterbody	Forest, Shru	ıb, Meadow	Lawn		<u> </u>	<u> </u>	
Shallow littoral zone with emergent vegetation present?	Yes		No			_	
Waterbody at least 10' deep	Yes		No				
% of pond covered by submerged or emergent vegetation	15-40%	San Control of the Co	Other			_	
Direct stormwater discharge via culvert?	No		Yes				_
Sandbar present at inlet?	No		Yes			_	
Water transparency	High		Low				· ·
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Ýes		<u></u>	_ <u>-</u>	
Pond size ≥0.5 acre	Yes		No.				_
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	<u> </u>	Yes		-		_
Function Present	Yes		No				
Degree of Function	High	Mod	Low	<u> </u>	<u></u>		

F&SH/FINFISH HABITAT: STREAMS/RIVERS Excluding condition: Not associated with perennial stream

Criteria	+	<u>-</u>	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	<u> </u>
Barriers to anadromous fish (dams/high culverts) present in stream-reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, Peroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	<u> </u>
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolera	ant	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No -	Comments
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	(Gw)	
Vegetation density	High	No	·
Wetland edge broad and intermittently aerobic	Yes		
Drainage ditches in wettand		Yes	-
Water flow through wetland	Diffuse	Channelized	
Ponded water present		No	
Wetland basin topographic gradient	(Yes)	·	
Fine grained mineral or organic soils present	Yes	High	-
Watercourse, if present, has visible velocity decreases in wetland	Yes	No .	
ndicators of erosion or high water velocities are present		No No	<u> </u>
Function Present	(No)	Yes	
Degree of Function	High Mod	No Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	÷		Comments
Wetland size in relation to watershed	Large	(Smatt)	Continents
Potential sources of excess nutrients upstream	Yes	Nto	
Wetland is saturated most of the season	(Yes)	No	-
Emergent vegetation and/or dense woody stems are dominant	(Fes)	No -	
Water flow through wetland	Øiffuse)	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	Ves	No	
Deep or open water habitat is present	Yes	(A)	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	content	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes			No .	-	
Degree of Function -	High		Mod	_	Low) _
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)						
Criteria		+ _		_	<u> </u>	Comments
Wildlife food sources in wetland	d		ant		Few	
Vegetation density	_	High			Low	
Nutrients and/or organic matter flushed out of wetland into-watercourse		Yes	<u>_</u>		No	
Wetland has high degree of plant community structure and species diversity	_	Yes_			No_	
Detritus development is present within this wetland	_	Yes			No	
Flowering plants used by nectar gatherers present		Yes			No	
Evidence of wildlife use in wetland		Yes	.	_	No.	
Fish or shellfish develop/occur in wetland		Yes		_	No	
Function Present	_	Yes			No	· ·
Degree of Function		High	Мо	d	Low	
S&SS/SEDIMENT/SHORELINE STABILIZATION I 50 (ated		·_				
Criteria		+		<u> </u>		Comments
Topographical gradient in wetland	Yes			No		
Potential sediment sources upstream or upslope	Yes	3		No		
Wetland border >10' adjacent to pond or water	Yes	_	No No		·	
Distinct shoreline or bank evident between wetland and water	αN	o		Yes		
Open water fetch present	Yes	35		No		
Boating activity present	Yes	<u></u>		No _		
Floodplain stabilizing trees and shrubs present	Yes	· ·		No		
Indications of erosion or siltation present	Yes			No		-
Function Present	Yes	_	f	No	_	
Degree of Function	High		Mod_	L	ow	
REC/RECREATION					<u>-</u> ,	
Criteria		+	_			Comments
Wetland is part of recreation area, park, refuge, etc.	Yes	_	·	(Mg)		
Fishing is available in or from the wetland	Yes	_		(No)		<u> </u>
Hunting is permitted in wetland	Yes			(B)		
Hiking occurs or has potential to occur in wetland	Yes	<u>/_</u>	_	No		<u> </u>
Wetland is a valuable wildlife habitat	Yes	<u> </u>		No)	· <u>-</u>	<u> </u>

Wetland has high visual/aesthetic quality	Yes	No	
Boating or canoeing feasible in wetland	Yes	No	
Off-road public parking near wetland available	Yes	. (No)	
Safety Hazards (if present list them)	Yes	No No	
Function Present	(Yes)	No No	
Degree of Function	High	Mod Cow	·
SAIL LIBRARY DATES ALL DISTANCE		-1104	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	High No	Grassland, shrubs
Buffer width	Good to Excellent	Fair to Poor	arasiana, sviruos
Connectivity with other wetlands	Yes		
Size of landscape block in which wetland is located	Large	No Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	(High)		
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(IOW)	SS
Vegetation density	HIGH	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		┼───┤	Q. 1
Wetland plant species diversity	High (Mod Low	 	Sh, H,
Vernal pool	Yes	No -	
Edge diversity (List types)		<u> </u>	
Water regime	(Wetter)	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	1	
Flat rocks in/near watercourse (stream salamanders)	Present	Absept	_
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtie nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	(Yes)	No	<u> </u>
Degree of Function	High Mod	Low	

Criteria		-		Comments
Wetland contains listed species	Yes		No	
Wetland provides valuable wildlife habitat	Yes		(No)	
Wetland class diversity	High		Low _	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		(Low)	Shrubs grassland
Off-road parking near wetland available	Yes		(M)	
Proximity to schools	Near	_	Far	Bowdoin
Wetland contains perennial watercourse	Yes		(No)	
Wetland contains pond/lake	Yes		(No)	
Safety hazards (if present list them)		_		
Site currently used for educational/scientific purposes	Yes		(Nô)	
Function Present	Yes		(e)	
Degree of Function	High	Mod	Low	

U/H/UNIQUENESS/HERITAGE

Criteria		+	-	Comments
Wetland contains listed species	Yes		(No)	
Wetland identified as exemplary natural community	Yes		(6N)	
Wetland locally/regionally significant	Yes	_	6 9	
Function Present	Yes		(No)_	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	-	Comments	<u> </u>
Visible from primary viewing locations	Yes	<u>. </u>	(v)		
Views absent trash, debris, sign of degradation	(Yes)		No		
Low noise level	Yes		(No)		
Visual landuse contrast with wetland	Yes ·		(No)		
Function Present	Yes		(No		•
Degree of Function	High	Mod	Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria	+	-	Comments
Wetland contains or known to contain federal listed species or habitat	Yes	(Ng)_	_
Wetland contains critical habitat for state or federal listed species	Yes	(Ng)	
Area appears in state or national database	Yes	(No)	

	-,		
Function Present	Yes		(No 🌙
	100		
Degree of Function	High	Mod	Low
		1	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
	Low_	NO	mod.	Low	No	Low	mod	No	No	No	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 290 Direction: NE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search ☑ Wetland Types(s) Cowardin/Golet Classification	ecent Precipitati Dip netting		age ☐	• —	ove Average [☐ Don't Know ☐	Time Stop: N/A TBD Electro-shocking
Class	Subclass	<u> </u>					
POW/ Open water	Vegetated	Non-Vegetated	<u> </u>	<u> </u>		<u>_</u>	_ _
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-sh	rub	Robust	Narrow-leave	d Broad-leave	<u>d.</u>
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leaved	i Floatin	g leave <u>d</u>		_
PFL / Seasonally Flooded Flats	Emergent	Shrub	<u> </u>		<u></u>		
PEM / Wet Meadow	Ungrazed	Grazed			<u> </u>	<u> </u>	
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aquati	<u> </u>		<u>_</u>
PFO / Wooded Swamp	Deciduous	. Evergreen			<u>.</u>		
Bog Water Regimes (Cowardin Modifier):	Compact shrul	b Bushy shrub		Wooded		rgent to surface, especially e	arly in growing
Permanently flooded (H) - water covers land surfal Intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water permost years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	throughout the yes	ear except in years growing season in	except for Tempora season, Intermitte variable	or ground water sec arily flooded (A) - se but water table use ently flooded (J) - s periods without de	epage and ove urface water pr ually lies well b substrate usual tectable seaso	esent for brief periods on elow soil surface for modify exposed, but surface	during growing ost of the season water is present fo
If Present: Slope or Depressional Surface water depth: Hydrology indicators: Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots Soil Drainage classes: Well Moderat Slope: Nearly level Gentle Upland Border:	average - Saturated in uppe tophores F Rhizospheric oxid	Polymorphic leaves B dation Shallow n Somewhat Poorly	rift lines tuttressed tree oot systems Poorly Steep	Depth to free wa Depth to saturati Signs of altered Sediment deposit s Hypertro Floating to	on: hydrology? s Drainag phied lenticels leaves	Yes ge patterns within wetlan Stooling Floating stems Mapped Hydric Soit	No nds Other Inflated leaves,
Slope: Nearly level Cover Types: Mature forest Vegetation Density(S/M/D): Trees Soil i 25A - Adams loar	Sapling to	forest Shrub thi	•	****	Mowed lawn Grass	Farm	

Leaf litter:

Well developed

Moderately well developed

Absent

Cover objects:

Logs

Bark

Boulders

Rocks

Evidence of Erosion:

No Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments	
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge		
Wetland associated w/ perennial or seasonal watercourse	Yes	No		
Slope	Gentle	Moderate or Steep		
Function Present	Yes No		<u> </u>	<u>_</u>
Degree of Function	High Mod	d (Low		

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		Comments
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly	
Wetland contains an outlet, no inlet	(Yes)	developed No	
Function Present	A	No	
Degree of Function	High Mod	Low	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	Ţ <u></u>	Comments
Wetland size in relation to watershed	Large	Smail	Comments
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes.	No	
Wetland outlet restricted	Yes	No No	
Wetland vegetation density	(High)	Low	
Netland microrelief	Weil developed	None/Poorly developed	

•			
Function Present	Yes	No	
Degree of Function	High	Mod Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments
Dominant land use adjacent to Waterbody	Forest, Shr	ub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation.	15-40%		Other	
Direct stormwater discharge via culvert?	NO		Yes	
Sandbar present at inlet?	No	•	Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No	_	Yes	
Function Present	Yes	· ·	No	
Degree of Function	High	- Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream) Seasonal

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Low	High	· · · · · · · · · · · · · · · · · · ·
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	LOW	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	·
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor_	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	
Function Present	 Yes		No	
Degree of Function	High	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	- Comments
Duration of water retention in wetland	Long	Short	-
Evidence of sediment trapping in wetland	Yes		- -
Vegetation density	High	(Low)	- -
Wetland edge broad and intermittently aerobic	(Yes)	Low	
Drainage ditches in wetland	No		
Water flow through wetland	Diffuse)	Yes	-
Ponded water present	Yes	Channelized	
Wetland basin topographic gradient	- 	No	
Fine grained mineral or organic soils present	Low) Yes	High	
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	
Indicators of erosion or high water velocities are present	(No.)	No	
Function Present	(No)	Yes	
Degree of Function		lod (Low)	_

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Large Yes	Smajl No	
Yes (Yes)	No.	
(Yes)		
-	1 140	
(Yes)	No	
		
>		
Yes	 	
Organic/high clay		 _
		Diffuse Channelized Fligh Low Yes No Yes (No) Organic/high clay content Low High

Function Present	Yes			No	, <u></u>	
Degree of Function	High		Mod	Mod)
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)						
Criteria	-		+	_	-	Comments
Wildlife food sources in wetland	_	Abunda	ant)		Few	
Vegetation density		(High)			Low	
Nutrients and/or organic matter flushed out of wetland into watercourse		/Yes)	_		No	
Wetland has high degree of plant community structure and species diversity	_	Yes			No	
Detritus development is present within this wetland				_	No _	
Flowering plants used by nectar gatherers present	_	(Ves)	_		No	
Evidence of wildlife use in wetland		Yes		· 	NO	
Fish or shellfish develop/occur in wetland		Yes		<u>-</u> -	(P)	
Function Present		(es)		=	No	
Degree of Function		Hìgh	_ (Mo	od)	Low	· <u> </u>
S&SS/SEDIMENT/SHORELINE STABILIZATION			· _		. <u> </u>	
Criteria		+			<u>-</u>	Comments
Topographical gradient in wetland	Yes	<u> </u>		No		
Potential sediment sources upstream or upslope	Yes	_	_	(No)		
Wetland border >10' adjacent to pond or water	Yes			No		
Distinct shoreline or bank evident between wetland and water	(No)	<u> </u>	_	Yes	<u> </u>	
Open water fetch present	Yes	_	· <u>-</u>	(NB)		
Boating activity present	Yes			(NO)		
Floodplain stabilizing trees and shrubs present	Yes	<u> </u>	_	No		
Indications of erosion or siltation present	Yes			NO.		
Function Present	Yes		F	No 1/		_
Degree of Function	High	ı <u> </u>	Mod		Low)	
REC/RECREATION						
Criteria		+_				Comments
Wetland is part of recreation area, park, refuge, etc.	Yes			No		
Fishing is available in or from the wetland	Yes		_	(A)		
Hunting is permitted in wetland	Yes			(G)		<u> </u>
Hiking occurs or has potential to occur in wetland	(Yes			No _	<u> </u>	
Wetland is a valuable wildlife habitat	Yes	<u> </u>		No		

Wetland has high visual/aesthetic quality	Yes	40	
Boating or canoeing feasible in wetland	Yes	Mo	<u> </u>
Off-road public parking near wetland available	Yes		
Safety Hazards (if present list them)	Yes	No.	<u> </u>
Function Present	(es)	- - - - - - - - - - 	
Degree of Function		Mod Form Potential	
All Disall During Linds		LOW LOW	

WLH/WILDLIFE HABITAT

Criteria	+	-	Comments
Wetland degradation by human activity	Little or None	Moderate to	Comments
Wetland fragmentation by development	(Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Law A=Agriculture)	/n (Yes)	High No	Forest
Buffer width	Good to Excellent	Fair to Poor	1000001
Connectivity with other wetlands	Mes)	No No	·
Size of landscape block in which wetland is located	Łarge	Small	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	(High)		
Upland islands	Present	Low	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(Absent)	
Vegetation density	/High)	Low	_ Meaged smamb
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		200	Tree, sapting, shrub, Herb, Cl
Wetland plant species diversity	High Mod Low	 	ree, sapting, stirub, Herb, CC
Vernal pool	Yes	(No)	
Edge diversity (List types)		100	
Water regime	(Wetter)	Drier	
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	<u> </u>
Abundance of invasive exotic flora	, None or Low	High	<u> </u>
unction Present	Yes	No	
Degree of Function	High (Mod)	Low	

Criteria		+		Comments	
Wetland contains listed species	Yes	_	(W)		<u></u>
Wetland provides valuable wildlife habitat	(Yes)		No		·
Wetland class diversity	High		Low		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest	<u> </u>
Off-road parking near wetland available	Yes		(Ma)		
Proximity to schools	Near		Fer _	Bowdoin	<u></u>
Wetland contains perennial watercourse	Yes		(No)		
Wetland contains pond/lake	Yes		(No)		
Safety hazards (if present list them)				· .	<u>.</u> .
Site currently used for educational/scientific purposes	Yes		I KOD		
Function Present	(res)		No.		
Degree of Function	High	Mod_	(<u></u> (·

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments
Wetland contains listed species	Yes		(N)	<u> </u>
Wetland identified as exemplary natural community	Yes		(No)	
Wetland locally/regionally significant	Yes		(No)	
Function Present	Yes		(Ng	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	
Visible from primary viewing locations	Yes	No		
Views absent trash, debris, sign of degradation	Yes	No		
Low noise level	Yes	6		
Visual landuse contrast with wetland	Yes	No		·
Function Present	(es)	No		
Degree of Function	High Mod	(Low)		

ESH/ENDANGERED SPECIES HABITAT

Criteria		+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes		(No)_	
Wetland contains critical habitat for state or federal listed species	Yes	<u></u> .	(№)	
Area appears in state or national database	Yes		(No)	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	5&S	ESH
mod/mod	Mod	100	Cow	Low	mod	(ous)	hom	Cow	No	Low	No

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

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Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 291 Direction: S/SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet id#: /	CA 95 Da	ite: N/A Functional U	nit:	Weath		Time Start: N/A	
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitati	on: N/A Below av	erage 🗌	Average 🗌	Above Average		
Wildlife Investigation Method: Cover search ⊠	Dip netting	☐ Auditory	X	Scat 🛛	Tracks 🛛	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	ı					-	· · · · · · · · · · · · · · · · · · ·
Class	Subclass	<u></u>				<u>-</u> .	-
POW/ Open water	Vegetated	Non-Vegetate	ed			<u> </u>	_
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-s	shrub	Robust	Narrow-leav	ed Broad-le	eaved
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leave	d Flo	ating leaved	·	_
PFL / Seasonally Flooded Flats	Emergent	Shrub		<u>_</u>		_	
PEM / Wet Meadow	Ungrazed	Grazed					
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aqı	uatic		
PFO / Wooded Swamp	(Deciduous)	Evergreen		<u></u>	_ _ -		<u> </u>
Bog	Compact shrut	Bushy shrub	60 December	Wooded //	Colle saturate	ergept	ally early in growing
Water Regimes (Cowardin Modifier):			l season	hut are unsalur	ated by end of se	eason in most years;	surface water absent
Permanently flooded (H) - water covers land surfa-					seepage and ov		- de durina erouina
Intermittently Exposed (Z) -surface water present to of extreme drought			season,	but water table	usually lies well		or most of the season
Semi-permanently flooded (F) - surface water pers most years	sists throughout g	growing season in	Intermitt <i>variabl</i> e	ently flooded (J periods without) - substrate usua t detectable seas	ally exposed, but sui onal periodicity~	face water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended period n most years	ls especially early in	Artificiali etc	y flooded (K) -	amount/duration	of flooding controlled	d by dikes dams, pumps,
Hydrology:	يسام						
Ground water discharges present:	res · N	lo		Depth to free			
If Present: Slope or Depressional				Depth to satu		W	NI
OC. 1000 Hotel 4-1-1	iverage -	maximum -		J	red hydrology?	Yes	No vetlands Other
Hydrology indicators: Inundated	Saturated in uppe	The state of the s	Drift lines	Sediment dep		ge patterns within w	Inflated leaves,
Plant Adaptations to Hydrology: Pneumaistems, or roots Adventitious roots	tophores F Rhizospheric oxid	Polymorphic leaves tation Shallow	Buttressed tree root systems		ertrophied lenticel ing leaves	Floating stems	
Soil Drainage classes: Well Moderate	ely Well 🙎	omewhat Poorly	Poorly	Very i	Poorly	Mapped Hydric So	lic
Slope: Nearly level Gentle	Moderate	Steep					
Upland Border:							·
Slope: Nearly level	Gentle	Moderate	Steep			_	
. Cover Types: Mature forest	Sapling f	orest Shrub t	hicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D):	₽	Saplings) M	Shrubs	Herbs	Grass		
Soil: Au - Au Gres loan	ry sand						

	Leaf litter:	Weil developed	Mode	erately well developed	Absent
	Cover objects:	Logs	Bark	Boulders	Rocks
-	Evidence of Erosion:	⊘ No Yes	(Explain)		(100/10

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Gentle	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mod) Low	

GWD/GROUNDWATER DISCHARGE

+		Comments	
Hardpan, shallow ledge	- 	Connection	
	No.		
	Non/Poorly		
			
	- 		·
High (Mod)	Low	- -	
	Hardpan, shallow ledge Ves Well developed Yes High Mod	Well developed Wes No Non/Poorly developed No No No No	Ves No No No No No No No No No No No No No

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+	-		Comments
Wetland size in relation to watershed	Large	Small		
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No	Olicep -	
Wetland in floodplain of adjacent watercourse	Yes	No No	<u> </u>	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	<u> </u>	
Watershed has a history of economic loss due to flooding	Yes	No	_	
Wetland outlet restricted	Yes	(N)	_	
Wetland vegetation density	High	Low	_ _	
Wetland microrelief	Well developed	/None/Poorly seveloped		

Function Present	Yes	No		·
Degree of Function	High_	Mod	Low	·

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		÷	-	Comments
Dominant land use adjacent to Waterbody	Forest, Shi	ub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	-NO		Yes	
Sandbar present at inlet?	NO		Yes	
Water transparency	High		LOW	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes	<u> </u>	No	
Degree of Function	High	Mod	Low	·

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	(Yes)	No	
Gravel spawning areas present	Yes	(No)	·
Barriers to anadromous fish (dams/high culverts) present in stream reach	(No)	Yes	
Dominant bottom substrate	Gravel/cobbles	(Sand/silt	
Substrate embeddedness by sand & silt	Low	(fligh)	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	Unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intoler	ant	Mostly tolerant	Unknown
Function Present	(Yes)	-	No	
Degree of Function	High	Mod	(ow)	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

+		Comments
Yes	No	Comments
-	 	
-		
 		
		<u> </u>
		
		
		
	 i	
- ,- .	 "~-	-
	Yes Long Yes High Yes No Diffuse Yes Low Yes Yes Yes Yes Yes Yes	Yes No Short Yes Low High Nc Yes Channelized Yes No High Yes No Yes Yes No Yes No Yes No Yes No Yes No Yes No Yes

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		·
Wetland size in relation to watershed			Comments
Potential sources of excess nutrients upstream	Large	(Small)	
Wetland is saturated most of the season	Yes	(40)	
	Yes	(NO)	
Emergent vegetation and/or dense woody stems are dominant	Yes	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	(Low)	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay content	Sand/gravei	
Wetland basin topographic gradient	(Low)	High	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)

Criteria		+		Comments	_	_	
Wildlife food sources in wetland	Abundant		Few		<u>.</u>	_	<u>-</u>
Vegetation density	High		(Low)			_	
Nutrients and/or organic matter flushed out of wetland into watercourse	Yes		No		<u>_</u>		
Wetland has high degree of plant community structure and species diversity	Yes		No.				
Detritus development is present within this wetland	(es)		No		<u>-</u>	<u> </u>	<u>.</u>
Flowering plants used by nectar gatherers present	Yes	_				.	. <u>.</u>
Evidence of wildlife use in wetland	·Yes				·		
Fish or shellfish develop/occur in wetland	Yes		(No)				_
Function Present	Yes	·	(No)	<u>.</u>			-
Degree of Function	High	Mod	Low				

S&SS/SEDIMENT/SHORELINE STABILIZATION

Criteria	+	- Comments
Topographical gradient in wetland	Yes	No
Potential sediment sources upstream or upslope	Yes	(MO)
Wetland border >10' adjacent to pond or water	Yes	No
Distinct shoreline or bank evident between wetland and water	No	(Yes)
Open water fetch present	Yes	(No)
Boating activity present	Yes	(ND)
Floodplain stabilizing trees and shrubs present	(Yes)	No
Indications of erosion or siltation present	Yes	<u> </u>
Function Present	Yes	(%)
Degree of Function	High _	Mod Low

REC/RECREATION

			Comments
Criteria			
Welland is part of recreation area, park, refuge, etc.	Yes	N ₀	
Fishing is available in or from the wetland	Yes		
Hunting is permitted in wetland	Yes		
Hiking occurs or has potential to occur in wetland	(es)	No	Potential
Wetland is a valuable wildlife habitat	Yes	(No) _	

Yes	AL.	
Yes	- \ 	
Yes		
Yes		
High	Mod Low	-
	Yes Yes	Yes No Yes No Yes No

WLH/WILDLIFE HABITAT

Criteria	+	•	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(es)	High No	Forest
Buffer width	Good to Excellent	Fair to Poor	1.01624
Connectivity with other wetlands	(Yes)	No.	
Size of landscape block in which wetland is located	Large	Smail	
Wildlife food sources in wetland	Abundant	(Few)	
nterspersion of vegetation and open water	High	Low	
Jpland islands	Present	Absent	· · · · · · · · · · · · · · · · · · ·
Netland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	- - 	110andal suggest
/egetation density	High	(Low)	Wooded swallep
/egetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb L=Leaf litter)			Tree, herb, U.
Vetland plant species diversity	High Mod (Low	} 	Tree, nevb, U
/ernal pool	Yes	No	
dge diversity (List types)	-		1 . 4
Vater regime	Wetter	Driep	torest
labitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
over objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
lat rocks in/near watercourse (stream salamanders)	Present	Absent	
phagnum hummocks next to shallow pools	Present	Absent	
are well drained sandy soils near wetland (turtle nest site)	Present	Absent	
bundance of invasive exotic flora	None or Low	High	
unction Present	YES	No	
egree of Function	High Mod	(ow)	

Criteria	- +		Comments
Wetland contains listed species	Yes	<u>(6)</u>	
Wetland provides valuable wildlife habitat	Yes		
Wetland class diversity	High	(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	LOW)	Forest
Off-road parking near wetland available	Yes	(No)	
Proximity to schools	Near	Far	Bowdoin
Wetland contains perennial watercourse	Yes	No	
Wetland contains pond/lake	Yes		
Safety hazards (if present list them)	· [
Site currently used for educational/scientific purposes	Yes	(19)	
Function Present	Yes	No	
Degree of Function	High	Mod Ow	

U/H/UNIQUENESS/HERITAGE

Criteria		+	- <u>.</u> .	Comments
Wetland contains listed species	Yes		No	
Wetland identified as exemplary natural community	Yes		(e)	
Wetland locally/regionally significant	Yes		(No)	
Function Present	Yes		M6)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+		Comments	<u>.</u>		
Visible from primary viewing locations	Yes	N ₀	<u> </u>	<u>_</u>	<u> </u>	<u> </u>
Views absent trash, debris, sign of degradation	(Yes)	No		<u>-</u>		
Low noise level	Yes	(No)				
Visual landuse contrast with wetland	(Yes)	No			·	
Function Present	(Yes)	No				
Degree of Function	High Mod	Low		<u> </u>		<u> </u>

ESH/ENDANGERED SPECIES HABITAT

Criteria	1	F		Comments
Wetland contains or known to contain federal listed species or habitat	Yes	- (NA.	
Wetland contains critical habitat for state or federal listed species	Yes			
Area appears in state or national database	Yes	·	No	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	E00::			-	r – –					
GWK/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
Made.	1	1	141 -		- A	-				303	ESH
Modrad	هداهرا	Low	NO	No	100	NO	Low	1	110	k 1.	13
SUMMADY	E ENNOTIONS		1			[المراقع المراق	1-0-05	100	$\square N \circ$	100

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #:292 Direction: SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: Site investigator:Amy Goodstine & Chris Akios Re Wildlife Investigation Method: Cover search Wetland Types(s) Cowardin/Golet Classification	Dip netting ☐ Au	low average ☐ A	•	N/A Time S ve Average ☐ cks ☑ Minnow	tart: N/A Time Stop: I Don't Know ☐ TBD ☐ / Traps ☐ Electro-shock	
Class	Subclass					
POW/ Open water	Vegetated Non-Ve	egetated			<u>-</u>	
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust I	Narrow-leaved	Broad-leaved	
PAB/ Shallow Marsh	Robust Narrow-leaved	Broad-leaved	Floating	leaved		
PFL / Seasonally Flooded Flats	Emergent Shrub				·	
(PEM / Wet Meadow)	Ungrazed Grazed	1 Maintai	ned by mo	wing	<u></u>	
PSS / Shrub Swamp	Sapling Bushy	Compact	Aquatic	-	<u></u>	
PFO / Wooded Swamp	Deciduous Evergr	een _				
Bog	Compact shrub Bushy	shrub	Wooded	Emergent	ace, especially early in growing	<u> </u>
Water Regimes (Cowardin Modifier): Permanentiy flooded (H) - water covers land surfat Intermittently Exposed (Z) -surface water present of extreme drought Semi-permanently flooded (F) - surface water per- most years Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in Hydrology:	throughout the year except in year sists throughout growing season i	rs Temporal season, in Intermitte variable j	r ground water seep rily flooded (A) - sur out water table usua ently flooded (J) - su periods without dete y flooded (K) - arnou	page and overland the face water present in the face water present in the face water well below so the face water and the face	for brief periods during growing oil surface for most of the seas osed, but surface water is presi	g son sent for
Ground water discharges present:	res No		Depth to free wate			
If Present: Slope or Depressional			Depth to saturation		V No	
Quitabo water paper	average - maximum		Signs of aftered hy		Yes No ems within wetlends Othe	ner.
Hydrology indicators: Inundated	Saturated in upper 12" Water ma		Sediment deposits		Stooling Inflated leav	
	tophores Polymorphic leav Rhizospheric oxidation S	es Buttressed tree: Shallow root systems	Floating le		ng stems	700,
Soil Drainage classes Well Moderat	ely Well Somewhat Poorly	Poorly	Very Poorly	y Mapp	ed Hydric Soil	
Slope: Nearly level Gentle	Moderate S	Steep				
Upland Border:						
Slope: Nearly level	Gentle Moderate	•			Form	
Cover Types: Mature forest	Sapling forest	Shrub thicket	<u> </u>	Swed lawn	Farm	•
Vegetation Density(S/M/D): Trees	Saplings	Shrubs	Herb's Gr	ass) D		

Soil: Wm B - Windson loamy sand

	_		
J	₽af	ΤīΗ	tar:

Weil developed

Moderately well developed

Cover objects:

Logs

Bark

Boulders

Evidence of Erosion:

N	
(L)	

Yes

(Explain)

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetfand associated w/ perennial or seasonal watercourse	Nes	No	
Siope	Gentle	Moderate or Steep	
Function Present	Yes No	-	
Degree of Function	High (Mo	Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+	_	Comments
Soils	Hardpan, shallow ledge	-	
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorty	
Wetland contains an outlet, no inlet	Yes	developed No	·
Function Present	(YEST)	No	
Degree of Function	High (Mod)	Low	_

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Small		Comments
Amount of impervious surface in wetland watershed	Large	Small		
Wetland Slope	Gentle)	Moderate	Steep	
Wetland characterized by variable water level?	Yes	No	- Oreeh	
Wetland in floodplain of adjacent watercourse	Yes	No No		· · · · · · · · · · · · · · · · · · ·
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	-	
Watershed has a history of economic loss due to flooding	Yes	No		
Wetland outlet restricted	Yes	Con		
Wetland vegetation density	(High)_	Low		
Wetland microrelief	Well developed	None/Poorly developed		

Function Present	Yes	No		
Degree of Function	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments
Dominant land use adjacent to Waterbody	Forest, Shrub	, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep.	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at inlet?	-No		Yes	
Water transparency	High	-	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	<u> </u>
Pond size ≥0.5 acre	Yes	<u>-</u>	No	
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	No .		Yes	
Function Present	Yes	· .	No	
Degree of Function	High	Mod	Low	<u> </u>

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+	<u> </u>	Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt	
Substrate embeddedness by sand & silt	Fow	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, underedt banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolera	arit	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High _	Mod	Low	

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	(No)	Comments
Duration of water retention in wetland	Long	Short	
Evidence of sediment trapping in wetland	Yes	Low	<u> </u>
Vegetation density	(High)	No No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	(No)	Yes	
Water flow through wetland	(Diffuse)		
Ponded water present	(Yes)	Channelized	<u> </u>
Wetland basin topographic gradient	Cow	No	
Fine grained mineral or organic soils present	Yes	High No	
Watercourse, if present, has visible velocity decreases in wetland	Yes	·	<u> </u>
Indicators of erosion or high water velocities are present	(No)	No	
Function Present	Yes	Yes	
Degree of Function	High (Mod	Low	

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		
Wetland size in relation to watershed	Large	(Small)	Comments
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	(es)	No	
Emergent vegetation and/or dense woody stems are dominant	(S	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	
Potential for sediment trapping exists	Yes	No -	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	Content	High	
Wetland microrelief	Well developed	None, poorly developed	
	 '/ /-	The state of the s	·

Function Present	Yes			No			_			
Degree of Function	High		Mod	(Low				· 	
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)										
Criteria	_		+			Commen	s		<u> </u>	_
Wildlife food sources in wetland		Abunda	int	_	(Few)			<u>-</u> .		
Vegetation density		#ligh)			Low	ļ				٠.
Nutrients and/or organic matter flushed out of wetland into watercourse	<u> </u>	Yes			(No)				<u> </u>	
Wetland has high degree of plant community structure and species diversity		Yes	_		(No)	ļ				
Detritus development is present within this wetland		Yes			(b)	<u> </u>		 		
Flowering plants used by nectar gatherers present	<u>-</u>	Yes			<u>@</u>					
Evidence of wildlife use in wetland		Yes	_		No	TIRC	<i>Jerna</i>	u fools	<u> </u>	
Fish or shellfish develop/occur in wetland		Yes		_	(B)				_	· <u>-</u>
Function Present		Yes			No	1				
Degree of Function	_	High	Mod	3	(ow)	<u></u>	_			
S&SS/SEDIMENT/SHORELINE STABILIZATION						<u></u>	_			_
Criteria		+				Commer	ts	<u></u>		
Topographical gradient in wetland	Yes			No		1		 		_
Potential sediment sources upstream or upslope	Yes			No_			_	<u></u>	<u>-</u>	_
Wetland border >10' adjacent to pond or water	Yes			No_		<u> </u>	_		_	_
Distinct shoreline or bank evident between wetland and water	No			Yes				<u>-</u>		
Open water fetch present	Yes			No		 -	<u> </u>			
Boating activity present	Yes	_	_	No		<u> </u>				
Floodplain stabilizing trees and shrubs present	Yes	_		No			<u> </u>	<u>-</u> .	<u>-</u>	
Indications of erosion or siltation present	Yes	Yes		No.						
Function Present	Yes			(No)	_				
Degree of Function	High		Mod		Low	<u> </u>		-		
REC/RECREATION				·		_ _		<u> </u>		
Criteria		_ +		1		Comme	nts —	_		
Wetland is part of recreation area, park, refuge, etc.	Yes			6		 		-		
Fishing is available in or from the wetland	Yes			<u> @</u>		-		_		
Hunting is permitted in wetland	Yes			(No.		ļ <u> </u>	_			
Hiking occurs or has potential to occur in wetland	Yes			RO		 		<u>-</u>		
Wetland is a vaiuable wildlife habitat	Yes)		No	<u>-</u>	<u> </u>				_

Yes	<u> </u>	
Yes	- +	
 		
		
		
		_
	Yes Yes Yes Yes Yes High	Yes No No Yes No No

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	-Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	(High	:
Buffer width	Good to Excellent	Eair-to Poor	
Connectivity with other wetlands	(Yes)	No	
Size of landscape block in which wetland is located	Large	§mall	
Wildlife food sources in wetland	Abundant	Few	
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	LOW	wm
Vegetation density	(High)	Low	
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		1000	Herb
Wetland plant species diversity	High (Mod) Low	 	Herb
Vernal pool	Yes	No -	
Edge diversity (List types)	2	140	Tec Pool 29B+29C UPS
Water regime	Wetter	Drier	maintained grass
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	 	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	(Few)	
Flat rocks in/near watercourse (stream salamanders)	Present		
Sphagnum hummocks next to shallow pools	Present	Absent Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	Absent	
Abundance of invasive exotic flora	None or Low	High	
unction Present	(es)	No	
Degree of Function	High (Mod)	Low	

Criteria	+		Comments
Wetland contains listed species	Yes	No No	
Wetland provides valuable wildlife habitat	Yes	No	Vernal pools
Wetland class diversity	High	(Low)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	wowed grass
Off-road parking near wetland available	Yes _	(No)	
Proximity to schools	(Near)	Far	Bowdoin
Wetland contains perennial watercourse	Yes	(No)	
Wetland contains pond/lake	Yes	(No)	
Safety hazards (if present list them)			
Site currently used for educational/scientific purposes	Yes	No	
Function Present	<u></u>	No	
Degree of Function	High Mo	d M	

U/H/UNIQUENESS/HERITAGE

Criteria	\[\]	+	-	Comments
Wetland contains listed species	Yes	<u> </u>	(No)	
Wetland identified as exemplary natural community	Yes		(No')	
Wetland locally/regionally significant	Yes		(N)	
Function Present	Yes		(Nô)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria	+	-	Comments	
Visible from primary viewing locations	Yes	(No)		
Views absent trash, debris, sign of degradation	Yes	No		
Low noise level	Yes	No		_
Visual landuse contrast with wetland	Yes	Nó		
Function Present	Yes	No		
Degree of Function	High Mo	d Low		

ESH/ENDANGERED SPECIES HABITAT

Criteria		4	<u>-</u>	Comments
Wetland contains or known to contain federal listed species or habitat	Yes		(No)	
Wetland contains critical habitat for state or federal listed species	Yes		<u>(No)</u>	
Area appears in state or national database	Yes		(No)	

Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X-present, P-Principle Wetland Function)

GWR/D			1 -								
GWM/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
N. 1. 1. 1	Meal	3.4 -	Miss	100 = 1	 	- , -	ļ — —				Lean
Wood/Mod	ANOG	NO	mod	171- 0 -6	Low	l No	Med	(1971)	210	4100	51.10
SEMMARY	F FINCTIONS	 _	<u> </u>	· <u> </u>			, 10 0 CD	_0000	190_	100	NO 1

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 293 Direction: SE MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#:	FA 97498 Date: N/A F	Functional Unit:	Weath	er: N/A	Time Start: N/A	Time Stop: N/A
Site investigator: Amy Goodstine & Chris Akios R	• • • •	Below average	Ayerage □	Above Average	□ Don't Know □	TBD □
Wildlife Investigation Method: Cover search ⊠	Dip netting	Auditory 🛛	Scat 🗵	Tracks 🛛	Minnow Traps 🗌	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	n					
Class	Subclass					
POW/ Open water	Vegetated	Non-Vegetated		_		
PEM/PSS Deep Marsh	Dead Woody Shrub	Sub-shrub	Robust	Narrow-leav	ed Broad-leav	ed
PAB/ Shatlow Marsh	Robust Narrow-	leaved Broad-leav	red Flo	ating leaved		
PFL / Seasonally Flooded Flats	Emergent	Shrub				
PEM / Wet Meadow	Ungrazed	Grazed			<u>-</u> -	
(PSS / Shrub Swamp)	Sapling Bushy	Compact	Aqı	uatic	<u> </u>	
PFO / Wooded Swamp	-	Evergreen		<u>_</u>		
Bog	Compact shrub	Bushy shrub	Wooded		ergent	
Water Regimes (Cowardin Modifier):		Seaso	gally-saturatëd (Y	") - soils saturated rated by end of se	l to surface, especially ason in most years; su	early in growing rface water absent
Permanently flooded (H) - water covers land surfa	nce throughout year in all ye	ears except	for ground water	seepage and ove	erland flow	·
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the year except	t in years Tempo seaso	orarily flooded (A) n, but water table	- surface water p usually lies well i	resent for brief periods below soil surface for m	during growing ost of the season
Semi-permanently flooded (F) - surface water per most years	sists throughout growing se	eason in Interm variab	ittently flooded (J le periods withou) - substrate usua t detectable seas	ally exposed, but surfac onal periodicity~	e water is present foi
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended periods especia n most years	lly early in Artifici etc	aily flooded (K) -	amount/duration	of flooding controlled by	/ dikes dams, pumps
Hydrology:						
· · · · · · · · · · · · · · · · · · ·	Yes No		Depth to free	water:		
If Present: Slope or Depressional			Depth to satu	ıration:		
Surface water depth:	average - ma	iximum -	Signs of alter	red hydrology?	Yes	No
Hydrology indicators: Inundated	Saturated in upper 12) Wa	ater marks Drift lines	Sediment dep	osits Draina	ge patterns within wetla	
Plant Adaptations to Hydrology: Pneuma stems, or roots Adventitious roots	tophores Polymorph Rhizospheric oxidation	ic leaves Buttressed tr Shallow root systems		ertrophied lenticel ing leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Weil Moderal	tely Well Somewhat	Poorly Poor	iy Very	Poorly	Mapped Hydric Soil	
Slope: Nearly level Gentle	Moderate	Steep				
Upland Border:						
Stope: Nearly level	Gentle Me	oderate Stee	ep			
Cover Types: Mature forest	Sapling forest	Shrub thicket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees	Saplings.		Herbs	Grass		
Soil 25A - Adams lo	amy fine so	nd.				

Leaf litter:	Well developed	Wode	rately well developed	Absent
Cover objects:	(Ggs)	Bark	Boulders	Rocks
Evidence of Erosion:	✓NO⊋ Yes	(Evolaio)		поска

Evidence of Erosion: No Yes (Explain) GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	-	Comments
Solis	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No	
Slope	Centie	Moderate or Steep	
Function Present	(Yes) No		
Degree of Function	High Mod	Low	

GWD/GROUNDWATER DISCHARGE

Crîteria	+		Comments
Soils	Hardpan, shallow ledge		Comments
Seeps, springs observed?	Yes	(No	
Wetland microrelief	Well developed	Non/Poorly	
Wetland contains an outlet, no inlet	Yes	developedNo	
Function Present	(Yes)	No	
Degree of Function	High Mod	(Low)	-

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+		Comments
Wetland size in relation to watershed	Large ,	Small	
Amount of impervious surface in wetland watershed	Large (Small	·
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	(No	
Wetland in floodplain of adjacent watercourse	Yes	No	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	<u>76</u> 5	No	
Watershed has a history of economic loss due to flooding	Yes	No	
Wetland outlet restricted	Yes	No	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

		_		
Function Present (Yes	No		
Degree of Function	High	(Mod)	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments .
Dominant land use adjacent to-Waterbody	Forest, Shru	b, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation.	15-40%		⊕ther	
Direct stormwater discharge via culvert?	No		Yes	·
Sandbar present at inlet?	No		Yes	
Water transparency	High		Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense algal bleoms, nuisance aquatic vegetation or duckweed?	No	<u>.</u>	Yes	
Function Present	Yes		No	
Degree of Function	High	Mod ·	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	<u> </u>
Gravel spawning areas present	Yes	No	·
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	(Sand/silt)	
Substrate embeddedness by sand & silt	Low	High	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	(Low)	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	
Bank stability	Stable)	Unstable, eroding	
Bank vegetative cover	(High) (trees, shrubs)	Low	
Cover objects (fallen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	(High)	
Water quality	Good	Poor	Unknown

Pollution tolerance of benthic macro-invertebrate taxa Function Present	Mostly intolerant	Mostly tolerant	Unknown
Degree of Function	(Yes) High Mod	No	Curverted

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria				Comments
Sources of sediments or toxicants upstream	Yes		No _	Comments
Duration of water retention in wetland	Long			
Evidence of sediment trapping in wetland	Yes		Short	
Vegetation density	(High)		No	
Wetland edge broad and intermittently aerobic	Yes	-	-	
Drainage ditches in wetland	(No)	_	Low	
Water flow through wetland	Diffuse)	_	Yes	
Ponded water present	Yes		Channelized	
Wetland basin topographic gradient	Low		No.	
Fine grained mineral or organic soils present	Yes		High	
Watercourse, if present, has visible velocity decreases in wetland	Yes		No No	-
Indicators of erosion or high water velocities are present	No)		Yes	
Function Present				
Degree of Function	High	Mod	No	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		
Wetland size in relation to watershed	Large	-	Comments
Potential sources of excess nutrients upstream	Yes	(Small)	
Wetland is saturated most of the season	Yes		
Emergent vegetation and/or dense woody stems are dominant	(es)	No	
Water flow through wetland	- + >	No .	
Vegetation density	(Diffuse)	Channelized	
Potential for sediment trapping exists	Yes	Low	
Deep or open water habitat is present	Yes	No No	
Soil type	Organic/high clay	Now	
Wetland basin topographic gradient	content	Sand/gravel	
Wetland microrelief	(Low	High	
	Well developed	None, poorly developed	

·	, A	_		_		
Function Present	Yés	_	, 1	<u> </u>		
Degree of Function	High		Mod	_	Kow)
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)				_	·	
Criteria			+		-	Comments
Wildlife food sources in wetland		Abundant)		Few	
Vegetation density	(High			Low	
Nutrients and/or organic matter flushed out of wetland into watercourse		(Yes)		_	No _	
Wetland has high degree of plant community structure and species diversity	_	(Yes)		_	No	
Detritus development is present within this wetland		Yes			No	
Flowering plants used by nectar gatherers present	(Yes			No	
Evidence of wildlife use in wetland		Yes			NO NO	ļ
Fish or shellfish develop/occur in wetland		Yes			(M)	
Function Present		(YB) _			No	
Degree of Function		High	Mod	<i>)</i>	Low	
S&SS/SEDIMENT/SHORELINE STABILIZATION						
Criteria		+		_ · .		Comments
Topographical gradient in wetland	Yes			No -		
Potential sediment sources upstream or upstope	(Yes)	<u>-</u>		No		
Wetland border >10' adjacent to pond or water	Yes		<u>. </u>	No		
Distinct shoreline or bank evident between wetland and water	No		- 13	Yes) 	
Open water fetch present	Yes	_		Ng"		
Boating activity present	Yes			Ng		
Floodplain stabilizing trees and shrubs present	Yes	_		No		
Indications of erosion or siltation present	Yes	· _		No		
Function Present	Yes			No		
Degree of Function	High		lod)	<u> </u>	Low	<u> </u>
REC/RECREATION					<u>-</u>	
Criteria		+ _			-	Comments
Wetland is part of recreation area, park, refuge, etc.	Yes		((2)	<u></u>	
Fishing is available in or from the wetland	Yes			S	<u> </u>	
Hunting is permitted in wetland	Yes			(b)	<u>.</u>	
Hiking occurs or has potential to occur in wetland	Yes		_	No		Potential
Wetland is a valuable wildlife habitat	Yes	<u> </u>	_	No		<u> </u>

Wetland has high visual/aesthetic quality	Yes			
Boating or canoeing feasible in wetland	Yes			_
Off-road public parking near wetland available	Yes			
Safety Hazards (if present list them)	Yes	No -		
Function Present	λΈS	No No		
Degree of Function	High	Mod (Low)	Potential	

WLH/WILDLIFE HABITAT

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	Continents
Wetland fragmentation by development	Little or None	High Mederate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	(High No	Shrips
Buffer width	Good to Excellent	Fair to Poor	2010 pS
Connectivity with other wetlands	Yes	No.	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	(Abundant)	Few	
Interspersion of vegetation and open water	High	Cow	
Upland islands	Present	 	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(bsent)	Charten
Vegetation density	High	Low	shrap sweep
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		LOW	Tree, shub, sapring, herb,
Wetland plant species diversity	High (Mod) Low		inee, survey, sapring, herb,
Vernal pool	Yes	(No)	
Edge diversity (List types)			
Water regime	Wetter	Drier	Shribs
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	PAbundant)	Few	
Flat rocks in/near watercourse (stream salamanders)	Present	(Absent)	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present	(Absent)	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Y99	No	
Degree of Function	High Mod	Low	

Criteria		·		Comments
Wetland contains listed species	Yes		(No)	
Wetland provides valuable wildlife habitat	Yes		No	
Wetland class diversity	High	_	(Cow)	
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Shoub thicket.
Off-road parking near wetland available	Yes		No.	
Proximity to schools	Near		Far	Bowdoin
Wetland contains perennial watercourse	Yes		No	
Wetland contains pond/lake	Yes		No	
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes		(No)	
Function Present	(P)		No	
Degree of Function	High	Mod	(Low)	

U/H/UNIQUENESS/HERITAGE

	+	<u> </u>	Comments
Yes		(No)	
Yes	<u>-</u>	(NO)	
Yes		<u> </u>	
Yes		<u> </u>	
High	Mod	Low	
	Yes Yes Yes	Yes Yes Yes	Yes No Yes No

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+		Comments
Visible from primary viewing locations	Yes		(Ng)	
Views absent trash, debris, sign of degradation	Yes		NO	
Low noise level	Yes		Not .	
Visual landuse contrast with wetland	Yes		No	
Function Present	Yes		(N)	
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

Criteria	1	+		Comments
Wetland contains or known to contain federal listed species or habitat	Yes		(No	
Wetland contains critical habitat for state or federal listed species	Yes		<u> (No)</u>	
Area appears in state or national database	Yes		(No)	

Degree of Function		
Degree of Function High Mod	Low	-

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

		_ _		· - · -							
GWR/D	FFA	F&SH	S&TR	NR&R	PE	REC	WLH ·	ED/S	U/H	S&S	ESH
Modions	Mod	Low	tous	cow	llod	دعا	Mod	صرى	Na	Mint	4 1
SUMMARY O	E FUNCTIONS			<u> </u>		<u> </u>			1,0	moo	NO

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality, it relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #:295 Direction: NW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: 3 Site investigator:Amy Goodstine & Chris Akios Re	•		ige ☐ Average ☐			Time Stop: N/A
Wildlife Investigation Method: Cover search ⊠	Dip netting	I ☐ Auditory 🖾	Scat 🛚	Tracks 🛛	Minnow Traps 🗔	Electro-shocking [
Wetland Types(s) Cowardin/Golet Classification	n 		<u> </u>			
Class	Subclass	<u>-</u>	. <u></u> .			<u> </u>
POW/ Open water	Vegetated	Non-Vegetated				-
PEM/PSS Deep Marsh	Dead Woody	Shrub Sub-shru	ib Robust	Narrow-leav	red Broad-leav	əd
PAB/ Shallow Marsh	Robust	Narrow-leaved	Broad-leaved	Floating leaved		<u>-</u> -
PFL / Seasonally Flooded Flats	Emergent	Shrub				<u>_</u>
PEM / Wet Meadow	Ungrazed	Grazed		<u>_</u>		<u>-</u>
PSS / Shrub Swamp	Sapling	Bushy	Compact	Aquatic		
PFO / Wooded Swamp	Deciduous	Evergreen				· <u>-</u>
Bog	Compact shrub	Bushy shrub	Woode		ergent	
Water Regimes (Cowardin Modifier):			Seasonally saturate season, but are uns	d (Y) - soils saturate aturated by end of se	d to surface, especially e eason in most years; sur	eany in growing face water absent
Permanently flooded (H) - water covers land surfa-			except for ground w	ater seepage and ov	erland flow	
Intermittently Exposed (Z)-surface water present to of extreme drought	throughout the ye	ar except in years	Temporarily flooded season, but water to	i (A) - surface water j able usually lies well	oresent for brief periods below soil surface for m	during growing ost of the season
Semi-permanently flooded (F) - surface water persmost years	sists throughout g	prowing season in	Intermittently floode variable periods with	d (J) - substrate usu hout detectable seas	ally exposed, but surfactional periodicity~	water is present for
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	extended periods most years	s especially early in	Artificially flooded (F	<) - amount/duration	of flooding controlled by	dikes dams, pumps,
Hydrology:						
Ground water discharges present: Y	res No	o .	Depth to	free water:		
If Present: Slope or Depressional	•		•	saturation:		
Surface water depth: a	iverage -	maximum -	Signs of a	altered hydrology?	Yes	No .
Hydrology indicators: Inundated	aturated in upper	r 12) Water marks Dri	ft lines Sediment		ige patterns within wetla	
Plant Adaptations to Hydrology: Pneumat stems, or roots Adventitious roots F	tophores Pe Rhi <u>zosph</u> eric oxid	ψη,οιρικοισων		lypertrophied lenticel oating leaves	s Stooling Floating stems	Inflated leaves,
Soil Drainage classes: Well Mederate	eiy Well S	omewhat Poorly	Poorly Vo	ery Poorly	Mapped Hydric Soil	
Stope: Nearly level Gentle	Moderate	Steep				
Upland Border:		· · · · · · · · · · · · · · · · · · ·				
. Slope: Nearly level	Gentle	Moderate	Steep			
Cover Types: Mature forest	Sapling fo	orest Shrub thick	<u>ket</u> Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): (Trees	S §	aplings S &h	rubs D Herbs	Grass		•

Soil: 10B - Udorthents - Croghan Complex

Leaf litter:	Well develop	edMode	rately well developed	Absent
Cover objects:	Logs	Bark	Boulders	Rocks
Evidence of Erosion:	No Yes	(Explain)		
SWR/GROUNDWATER RECHAR	GE (Excluding co	ndition: Slope Wetland)		

Criteria	+	•	Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils, shallow ledge	
Wetland associated w/ perennial or seasonal watercourse	Yes	No No	·
Slope	Gentie	Moderate or Steep	
Function Present	Yes No		
Degree of Function	High Mod	d Low	

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledg		Comments
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	(Non/Poorly)	-
Wetland contains an outlet, no inlet	Yes	(developed	
Function Present	Yes		-
Degree of Function	High Mod	_ 	

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria_	+		Comments
Wetland size in relation to watershed	Large	(Smail)	
Amount of impervious surface in wetland watershed	Large	Small	
Wetland Slope	Gentle	Moderate Steep	
Wetland characterized by variable water level?	Yes	No	
Wetland in floodplain of adjacent watercourse	Yes	(No)	
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No	
Watershed has a history of economic loss due to flooding	Yes	(No)	
Wetland outlet restricted	Yes	(No	
Wetland vegetation density	High	Low	
Wetland microrelief	Well developed	None/Poorly developed	

Function Present	Yes	(No)		
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria	+		Comments
Dominant land use adjacent to Waterbody	Forest, Shrub, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes _	No	
Waterbody at least 10' deep	Yes	No	
% of pond covered by submerged or emergent vegetation	15-40%	Other	
Direct stormwater discharge via culvert?	(No)	Yes	
Sandbar present at inlet?	No	Yes	
Water transparency	High	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	NO _	Yes	
Pond size ≥0.5 acre	Yes	No	<u> </u>
Pond experiences dense algal blooms, nuisance aquatic vegetation or duckweed?	(N)	Yes	
Function Present	Yes	No	
Degree of Function	High (Mod)	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No	,
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/sitt	
Substrate embeddedness by sand & silt	Low	High	
instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low	
Channel alterations (channelization, islands or point bars)	Absent or Few	Numerous	·
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	High (trees. shrubs)	Low	
Cover objects (failen logs, boulders, undercut banks)	Many	Absent/few	
Riparian zone	Wide	Narrow	
Watershed development	Low	High	
Water quality	Good	Poor	

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intol	want	Mostly tolerant	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

\$&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

Criteria	+		Comments
Sources of sediments or toxicants upstream	Yes	No	- Community
Duration of water retention in wetland	(ong)	Short	<u> </u>
Evidence of sediment trapping in wetland	Yes	Cow	
Vegetation density	∠High)	No	
Wetland edge broad and intermittently aerobic	Yes	Low	
Drainage ditches in wetland	No.	Yes	
Water flow through wetland	Diffuse		
Ponded water present	(es)	Channelized	
Wetland basin topographic gradient	Low	No No	
Fine grained mineral or organic soils present	Yes	High	· ·
Watercourse, if present, has visible velocity decreases in wetland	Yes	No No	
Indicators of erosion or high water velocities are present	(6N)		
Function Present	Ves Ves	Yes	
Degree of Function	High Mod	No	-

N&RR/NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

Criteria	+		
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	(No)	-
Wetland is saturated most of the season	(Yes)	No.	
Emergent vegetation and/or dense woody stems are dominant	(Yes)	No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	(High)	Low	-
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	No	
Soil type	Organic/high clay	Sand/gravel	
Wetland basin topographic gradient	Low	(High)	
Wetland microrelief	Well developed	None, poorly developed	

Function Present	(Yes)			No			
Degree of Function	High		Mod	l	Low)	
PE/PRODUCTION EXPORT Excluding Condition: No Outlet)							
Criteria		_	+	_	-	Comment	s
Wildlife food sources in wetland		Abundan	t		Few		
Vegetation density		High			Low		
Nutrients and/or organic matter flushed out of weltand into watercourse		Yes			No	_	·
Wetland has high degree of plant community structure and species diversity		Yes			No		
Detritus development is present within this wetland		Yes			No	_	
Flowering plants used by nectar gatherers present	-	Yes		<u></u> .	No		
Evidence of wildlife use in wetland		Yes	••• <u>•</u>		No	_	
Fish or shellfish develop/occur in wetland		Yes			No		
Function Present		Yes			No		
Degree of Function		High	Mo	ed I	.ow		·
sass/sediment/shoreline stabilization Isolated				_		. -	
Criteria		+			<u>-</u>	Comment	<u> </u>
Topographical gradient in wetland	Yes	<u> </u>		No			
Potential sediment sources upstream or upslope	Yes		_	No			
Wetland border >10' adjacent to pond or water	Yes	مسدر		No			
Distinct shoreline or bank evident between wetland and water	-No-			Yes	_	<u> </u>	<u>_</u>
Open water fetch present	Yes		_	No			
Boating activity present	Yes	_,		No	<u>.</u>		<u>_</u>
Floodplain stabilizing trees and shrubs present	-Yes_			No			
Indications of erosion or siltation present	Yes			No		<u> </u>	
Function Present	Yes			-Na-		 	•
Degree of Function	High		Mod	Lo	W	<u> </u>	
REC/RECREATION							<u>_</u>
Criteria	<u> </u>	+		<u> </u>	-	Commen	ts
Wetland is part of recreation area, park, refuge, etc.	Yes			NO			
Fishing is available in or from the wetland	Yes			(No)		<u> </u>	
Hunting is permitted in wetland	Yes	<u> </u>		(No.)		<u> </u>	
Hiking occurs or has potential to occur in wetland	©	<u> </u>		No	_ <u>_</u> _	<u> </u>	<u> </u>
Wetland is a valuable wildlife habitat	(Yes	_		No			<u> </u>

Wetland has high visual/aesthetic quality	(Yes)	No		 .
Boating or canceing feasible in wetland	Yes	No		
Off-road public parking near wetland available	Yes	No)		· · · · · · · · · · · · · · · · · · ·
Safety Hazards (if present list them)	Yes	1 (3)	·	
Function Present	(Yes)	No		<u> </u>
Degree of Function		Mod Low		
TAIL LIBRAGE DE LETT LEADER -				

WLH/WILDLIFE HABITAT

Criteria	+	T -	Comments
Wetland degradation by human activity	Little or None	Moderate to	
Wetland fragmentation by development	Little or None	Moderate to	
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	(Yes)	High No	2
Buffer width	Good to Excellent	Fair to Poor	
Connectivity with other wetlands	Yes	(Ng)	
Size of landscape block in which wetland is located	Large	Small	
Wildlife food sources in wetland	Abundant	Few	•
Interspersion of vegetation and open water	High	Low	
Upland islands	Present	Absent	
Wetland class diversity (W=Wooded swamp_SS=Shrub swamp M=Marsh_WM=Wet meadow_OW=Open water)	High	 	65 8627
Vegetation density	(High)	Low	55,0W
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)			T, S, SH, H
Wetland plant species diversity	High (Mod) Low		* , 3 ; 2 ft , FT
Vernal pool	Yes	(No)	
Edge diversity (List types)		16.5	المراج ال
Water regime	Wetter	Drier	Shrub Kucket + Forest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	Abundant	(Few)	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundant	Rew	<u> </u>
Flat rocks in/near watercourse (stream salamanders)	Present	Absent	
Sphagnum hummocks next to shallow pools	Present	Absent	
Bare well drained sandy soils near wetland (turtle nest site)	Present-	Absent	
Abundance of invasive exotic flora	None or Low	High	
Function Present	Yes	No	
Degree of Function	High Mod	Low	
F&SV/FDIICATIONAL/SCIENTIFIC VALUE	- 1 WOOD	LOW	

Criteria	+		Comments	
Wetland contains listed species	Yes	(No)	<u> </u>	
Wetland provides valuable wildlife habitat	(Yes)	No		
Wetland class diversity	High	(Low)		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High	Low	FS	
Off-road parking near wetland available	Yes	(No)		<u> </u>
Proximity to schools	Near	Far	Bowdoin	
Wetland contains perennial watercourse	Yes	(No)		
Wetland contains pond/lake	Seg.	No	<u> </u>	<u> </u>
Safety hazards (if present list them)				
Site currently used for educational/scientific purposes	Yes	€		
Function Present	(Tes)	No		
Degree of Function	High Mod	(LOW)		

U/H/UNIQUENESS/HERITAGE

Criteria		+		Comments	<u> </u>
Wetland contains listed species	Yes				
Wetland identified as exemplary natural community	Yes		(%)		·
Wetland locally/regionally significant	Yes		(6M)		
Function Present	Yes		No		
Degree of Function	High	Mod	Low		·

VQA/VISUAL QUALITY/AESTHETICS

Criteria	÷		Comments
Visible from primary viewing locations	Yes		
Views absent trash, debris, sign of degradation	(es)	No	
Low noise level	Yes	(a)	
Visual landuse contrast with wetland	Yes	No	
Function Present	Yes)	No	
Degree of Function	High Mod	Low _	

ESH/ENDANGERED SPECIES HABITAT

Criteria	+) -	Comments	
Wetland contains or known to contain federal listed species or habitat	Yes	(No)		· <u> </u>
Wetland contains critical habitat for state or federal listed species	Yes	700		
Area appears in state or national database	Yes	(No)		

Function Present	Yes		(ND)	
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D			} <u> </u>		-		. – .		· · · · · · · · · · · · · · · · · · ·	<u> </u>	
GWKID	FFA	F&SH	S&TR	NR&R	PE	REC	WLH	ED/S	U/H	S&S	ESH
A1. A			i -	- -	 - ,		 				
NO/NO	NO	Mode	(Deco	Cow	No	Mah	Mod	l low	8 103	MIA	
STREETS	NE ELIMOTIONS					10000	11.000	_	NO	T .A.O.	NO

SUMMARY OF FUNCTIONS

Groundwater Recharge/Discharge: This function considers the potential for a welland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland Non-consumptive opportunities do not consume or diminish the resources of the wetland.

Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

Photo #: 296 Direction; SW MODIFIED FUNCTIONS AND VALUES ASSESSMENT

Project Name: Brunswick NAS Wet Id#: I	FA 100 Da	te: N/A	Functional Unit:	1	Weath		Time Start: N	
Site investigator: Amy Goodstine & Chris Akios Re	ecent Precipitatie	on: N/A	Below avera	ige 🗌 💮	Average 🗌	Above Average		
Wildlife Investigation Method: Cover search ⊠	Dip netting		Auditory 🛛		Scat 🛛	Tracks ⊠	Minnow Traps	Electro-shocking
Wetland Types(s) Cowardin/Golet Classification	ì		· .	<u>.</u>	·		<u></u>	
Class	Subclass	<u>.</u>		<u>-</u> .		<u>-</u>		
POW/ Open water	Vegetated		Non-Vegetated		_		<u>_</u>	<u> </u>
PEM/PSS Deep Marsh	Dead Woody	Shrub	Sub-shr	ub	Robust	Narrow-leav	red Broad	-leaved
PAB/ Shallow Marsh	Robust	Narrow	-leaved	Broad-leave	d Flo	oating leaved		
PFL / Seasonally Flooded Flats	Emergent		Shrub					_
PEM / Wet Meadow	Ungrazed	_	Grazed			<u>-</u>		
PSS / Shrub Swamp	Sapling	Bushy		Compact	Aq	uatic	<u> </u>	
PFO / Wooded Swamp	Deciduous		Evergreen		<u> </u>		<u> </u>	
Bog	Compact shrub	·	Bushy shrub		Wooded	Em	ergent	iolly early in growing
Water Regimes (Cowardin Modifier):				season	but are unsatu	rated by end of s	eason in most year	ially early in growing s; surface water absent
Permanently flooded (H) - water covers land surfa	ce throughout yea	ar in all y	/ears	except fo	or ground wate	r seepage and ov	erland flow	
Intermittently Exposed (Z) -surface water present of extreme drought	throughout the ye	ar excej	ot in years	season,	but water table	e usually lies well	below soil surface	riods during growing for most of the season
Semi-permanently flooded (F) - surface water permost years	sists throughout g	rowing :	season in	Intermitt variable	ently flooded (. periods withou	3) – substrate usu It detectable seas	ally exposed, but s conal periodicity~	urface water is present fo
Seasonally flooded (C) - surface water present for growing season, but is absent by end of season in	r extended period n most years	s espec	ially early in	Artificial etc	ly flooded (K) -	amount/duration	of flaoding control	ed by dikes dams, pumps
Hydrology:								
Ground water discharges present:	γ̃es Ν	o			Depth to free	e water:		
If Present: Slope or Depressional					Depth to sat	uration:		
	average -	អ	naximum -		Signs of aite	red hydrology?	Yes	No
Hydrology indicators: Inundated	Saturated in uppe	r 12") (Vater marks Dr	ift lines	Sediment de	oosits Draina	age patterns within	
Plant Adaptations to Hydrology: Pneuma	tophores P Rhizospheric oxid			ıttressed tree ot systems		ertrophied lentice ling leaves	ls Stooling Floating stems	Inflated leaves,
Soil Drainage classes Well Moderate	ely Weil S	omewh	at Poorly	Poorly	Very	Poorly	Mapped Hydric S	Soil
Slope: Nearly level Gentle	Moderate		Steep					
Upland Border:								
•	Gentle	ħ	Moderate	Steep)			
Cover Types: Mature forest	Sapling for	orest	Shrub thic	ket	Meadow	Mowed lawn	Farm	
Vegetation Density(S/M/D): Trees		Saplings	m s	hrubs	Herbs	Grass		

Soil: 30A. Udorthents - Adams Complex - Sandy

Leaf litter:	(Well developed)	Mode	Moderately well developed				
Cover objects:	Logs	Bark	Boulders	Absent Rocks			
Evidence of Erosion:	NA Voi	(Euglein)		ROGRS			

GWR/GROUNDWATER RECHARGE (Excluding condition: Slope Wetland)

Criteria	+	- Comments
Soils	Sand/gravel outwash	Hardpan, tight fine-grained soils.
Wetland associated w/ perennial or seasonal watercourse	Yes	shallow tedge No
Slope	Gentie)	Moderate or Steep
Function Present	(Yes) No	
Degree of Function	High Mod	Low

GWD/GROUNDWATER DISCHARGE

Criteria	+		Comments
Soils	Hardpan, shallow ledge		Comments
Seeps, springs observed?	Yes	No	
Wetland microrelief	Well developed	Non/Poorly)	
Wetland contains an outlet, no inlet	Yes	developed /	· · · · · · · · · · · · · · · · · · ·
Function Present	Yes	No	Sacrata C. Line
Degree of Function	High Mod	Low	Seepage from hillside indicates groundwater dishcharge

FFA/FLOODFLOW ALTERATION (Excluding condition: Slope Wetland)

Criteria	+			Comments
Wetland size in relation to watershed	Large	Smally		Comments
Amount of impervious surface in wetland watershed	Large	Smail		
Wetland Slope	Gentie)	Moderate	Steep	
Wetland characterized by variable water level?	/Yes\	No	Steep	
Wetland in floodplain of adjacent watercourse	Yes	No No		
Valuable properties, structures, or resources located in or near floodplain downstream from wetland	Yes	No		Airfield
Watershed has a history of economic loss due to flooding	Yes	No	_	
Wetland outlet restricted	Yes	(No)		unknown
Wetland vegetation density	High	Low		
Wetland microrelief	Well developed	None/Poorly developed	_	

<u> </u>	ICT T	T	-	
Function Present	Yes]	No	<u> </u>	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: POND &LAKE (Excluding condition: Not associated with pond/lake)

Criteria		+		Comments
Dominant land Use adjacent to Waterbody	Forest, Shri	ıb, Meadow	Lawn	
Shallow littoral zone with emergent vegetation present?	Yes		No	
Waterbody at least 10' deep	Yes		No	
% of pond covered by submerged or emergent vegetation	15-40%		Other	
Direct stormwater discharge via culvert?	No		Yes	
Sandbar present at iniet?	No	<u> </u>	Yes	
Water transparency	High	<u>-</u>	Low	
Significant nutrient source (fertilizers, waterfowl) present in watershed?	No		Yes	
Pond size ≥0.5 acre	Yes		No	
Pond experiences dense aigal blooms, nuisance aquatic vegetation or duckweed?	No		Yes	
Function Present	Yes		No	
Degree of Function	High	Mod	Low	

F&SH/FINFISH HABITAT: STREAMS/RIVERS (Excluding condition: Not associated with perennial stream)

Criteria	+		Comments
Channel shaded by riparian trees and/or shrubs	Yes	No	
Gravel spawning areas present	Yes	No)	
Barriers to anadromous fish (dams/high culverts) present in stream reach	No	Yes	
Dominant bottom substrate	Gravel/cobbles	Sand/silt)	
Substrate embeddedness by sand & silt	Low	(High)	
Instream habitat diversity (riffle, run, pool, shallow, deep)	High	Low)	
Channel alterations (channelization, islands or point bars)	(Absent or Few)	Numerous	
Bank stability	Stable	Unstable, eroding	
Bank vegetative cover	(High (trees, shrubs)	Low	Trees
Cover objects (fallen logs, boulders, undercut banks)	(Many)	Absent/few	Fallen logs
Riparian zone	(Wide)	Narrow	
Watershed development	Low	(High)	
Water quality	Good	Poor	unknown

Pollution tolerance of benthic macro-invertebrate taxa	Mostly intolerant	Mostly tolerant	Unknown
Function Present Degree of Function	Yes Mod Mod	No Low	Some potential habitat present

S&TR/SEDIMENT/TOXICANT/PATHOGEN RETENTION

. +		Comments
Yes	No.	Comments
- -	- 	
 		
 		
 		
	-	
		· · · · · · · · · · · · · · · · · · ·
		<u> </u>
<u></u>		
- 	- 	
- \		
	 -	
Yes High Mod		Narrow wetland border along stream, Little (no input of sediment
· · · · · ·	Yes Long Yes High Yes No Diffuse Yes Low Yes Yes No Yes	Yes No Long Short Yes Low High Mo Low Yes Low No Yes Diffuse Channelized Yes No Low High (Yes) No Yes No Yes No Yes No Yes No

Criteria	+		- Com
Wetland size in relation to watershed	Large	Small	Comments
Potential sources of excess nutrients upstream	Yes	No	
Wetland is saturated most of the season	Yes	No)	
Emergent vegetation and/or dense woody stems are dominant	Yes	No No	
Water flow through wetland	Diffuse	Channelized	
Vegetation density	High	Low	
Potential for sediment trapping exists	Yes	No	
Deep or open water habitat is present	Yes	(No)	
Soil type	Organic/high clay content	Sand/gravel	
Wetland basin topographic gradient	Low	High	
Wetland microrelief	Well developed	None, poorly developed	

	Yes			No				No sources of excess		
Function Present	High		Mod		Low			No sources of excess nutrients, short reference t		
Degree of Function	riigis		1,4100			1				
PE/PRODUCTION EXPORT (Excluding Condition: No Outlet)	_	<u>-</u>		_						
Criteria		_	+	_		-	Comment	ts		
Wildlife food sources in wetland	_	Abunda	ant		<u> </u>	Few)				
Vegetation density	_	High			— \	Lòw)	<u> </u>			
Nutrients and/or organic matter flushed out of wetland into watercourse	<u>-</u> ,	(Yes)				No	-			
Wetland has high degree of plant community structure and species diversity		(Yes)		_		No				
Detritus development is present within this wetland	<u>.</u> .	(Yes)				No _				
Flowering plants used by nectar gatherers present		Yes				No		<u> </u>		
Evidence of wildlife use in wetland	_	Yes				No)				
Fish or shellfish develop/occur in wetland		Yes	_	_	<	<u></u>				
Function Present		(Yes)				No	_			
Degree of Function		High	M	od)	Lo		<u> </u>			
S&SS/SEDIMENT/SHORELINE STABILIZATION							-, 			
Criteria		+	_		<u> </u>		Commen	nts		
Topographical gradient in wetland	Yes	<u>-</u>		No		_	<u> </u>			
Potential sediment sources upstream or upslope	Yes			(No)			<u> </u>			
Wetland border >10' adjacent to pond or water	Yes			No)						
Distinct shoreline or bank evident between wetland and water	No			Yes]					
Open water fetch present	Yes			NO			 _			
Boating activity present	Yes	_		No						
Floodplain stabilizing trees and shrubs present	Yes	<u> </u>		No		_				
Indications of erosion or siltation present	Yes	· .		No		_				
Function Present	Yes			No)	_				
Degree of Function	High	_	Mod		Low		<u> </u>			
REC/RECREATION					_		_ _			
Criteria		+				<u> </u>	Comme	ents		
Wetland is part of recreation area, park, refuge, etc.	Yes			No	~ —		<u> </u>			
Fishing is available in or from the wetland	Yes		_	(No)		 			
Hunting is permitted in wetland	Yes			No	,		<u> </u>	<u> </u>		
Hiking occurs or has potential to occur in wetland	Yes			No						
Wetland is a valuable wildlife habitat	Yes			No	§)					

Wetland has high visual/aesthetic quality	Yes		(Nd)	- -				
Boating or canoeing feasible in wetland	Yes		No)	<u> </u>	- -			
Off-road public parking near wetland available	Yes		NO					·
Safety Hazards (if present list them)	Yes	<u> </u>	 /-		<u> </u>			
Function Present	Yes		I No	<u> </u>		<u> </u>	<u> </u>	
Degree of Function	High	Mod	No)					
WLH/WILDLIFE HABITAT		IVIOU	<u>. i</u>	Low				<u> </u>

Criteria	+		Comments
Wetland degradation by human activity	Little or None	Moderate to	1
Wetland fragmentation by development	Little or None	High Moderate to	,
Buffer exists (F=forest M=Meadow S=Sapling/shrub thicket L=Lawn A=Agriculture)	Yes	HighNo	
Buffer width .	Good to Excell		Forest
Connectivity with other wetlands	Yes	No No	
Size of landscape block in which wetland is located	(Large)		· · · · · · · · · · · · · · · · · · ·
Wildlife food sources in wetland	Abundani	Small (Few)	
Interspersion of vegetation and open water	High	- \/	
Upland islands	Present	(Low)	
Wetland class diversity (W=Wooded swamp SS=Shrub swamp M=Marsh WM=Wet meadow OW=Open water)	High	(Absent)	
Vegetation density	High	Low	Wooded swamp
Vegetation strata (T=Tree S=Sapling SH=Shrub V=Vine H=Herb LL=Leaf litter)		(row)	
Wetland plant species diversity	High Mod	Low	Tree, sarling herb, leafliter
Vernal pool	Yes	No	
Edge diversity (List types)			
Water regime	Wetter	Drien	Mature forest
Habitat features (S=Snags L=Fallen logs SE=seep/spring)	(Abundant)	Few	
Cover objects (L=Logs/branches R=Rocks B=Bark)	Abundano	-	Snags, fallen logs Logs/branches
Flat rocks in/near watercourse (stream salamanders)	Present	Few	Loas / branches
Sphagnum hummocks next to shallow pools	Present	Absent Absent	
Bare well drained sandy soils near wetland (turfle nest site)	Present	- 	
Abundance of invasive exotic flora	None or Low	Absent	
function Present	Yes	High	
Degree of Function	High (Mo	No Low	

Criteria		+		Comments		
Wetland contains listed species	Yes		(No			
Wetland provides valuable wildlife habitat	(Yes)		No			
Wetland class diversity	High		(Low)	PFO		
Adjacent upland cover types (F=forest M=Meadow S=Sapling/shrub thicket A=Agriculture)	High		Low	Forest		
Off-road parking near wetland available	Yes		No)			
Proximity to schools	Near		Far	Bowdoin College		
Wetland contains perennial watercourse	Yes		No			
Wetland contains pond/lake	Yes		(No)			
Safety hazards (if present list them)						
Site currently used for educational/scientific purposes	Yes		(No)	No public access		
Function Present	Yes		(No)	No public access		
Degree of Function	High	Mod	Low			

U/H/UNIQUENESS/HERITAGE

Criteria		+	· -	Comments
Wetland contains listed species	Yes		No	
Wetland identified as exemplary natural community	Yes		(No)	
Wetland locally/regionally significant	Yes		No	
Function Present	Yes		(No)	
Degree of Function	High	Mod	Low	

VQA/VISUAL QUALITY/AESTHETICS

Criteria		+	\ _ -	Comments
Visible from primary viewing locations	Yes		(No)	
Views absent trash, debris, sign of degradation	Yes		No	
Low noise level	Yes		(No)	Noar airfield
Visual landuse contrast with wetland	(Yes)	· <u>_</u> .	No	
Function Present	Yes		No	No occess
Degree of Function	High	Mod	Low	

ESH/ENDANGERED SPECIES HABITAT

ESTREMBARTO EN LA CAMPAGNA DEL CAMPAGNA DEL CAMPAGNA DE LA CAMPAGN			
Criteria	+		Comments
Wetland contains or known to contain federal listed species or	Yes	No.	
habitat Wetland contains critical habitat for state or federal listed species	Yes	No	
Area appears in state or national database	Yes	No)	

	Yes No			
Degree of Function	High	Mod	Low	

CONCLUSION: SUMMARY TABLE (X=present, P=Principle Wetland Function)

GWR/D	FFA	F&SH	6070				,	 -			
		T CON	S&TR	NR&R	PE	REC	WLH-	ED/S	U/H	S&S	ESH
Modrad	1,0,0	mod	Mod	No	Mod	No	Med	No	No	No	120
SUMMARY O	F FUNCTIONS	;					<u> </u>		100	1 1 0	NO

Groundwater Recharge/Discharge: This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area and refers to the fundamental interaction between wetlands and aquifers, regardless of the size or importance of either.

Floodflow Alteration (Storage & Desynchronization): This function considers the effectiveness of the wetland in reducing flood damage by water retention for prolonged periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas

Fish and Shellfish Habitat: For freshwater systems, this function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish and shellfish habitat.

Sediment/Toxicant/Pathogen Retention: This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff water from surrounding uplands or upstream eroding wetland areas.

Nutrient Removal/Retention/Transformation: This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or TNW such as ponds, lakes, streams, rivers or estuaries.

Production Export: This function evaluates the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Sediment/Shoreline Stabilization: This function considers the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

Wildlife Habitat: This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.

Recreation (Consumptive and Non-consumptive): This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting or other active or passive recreational activities. Consumptive opportunities consume or diminish the plants, animals or other resources that are intrinsic to the wetland.

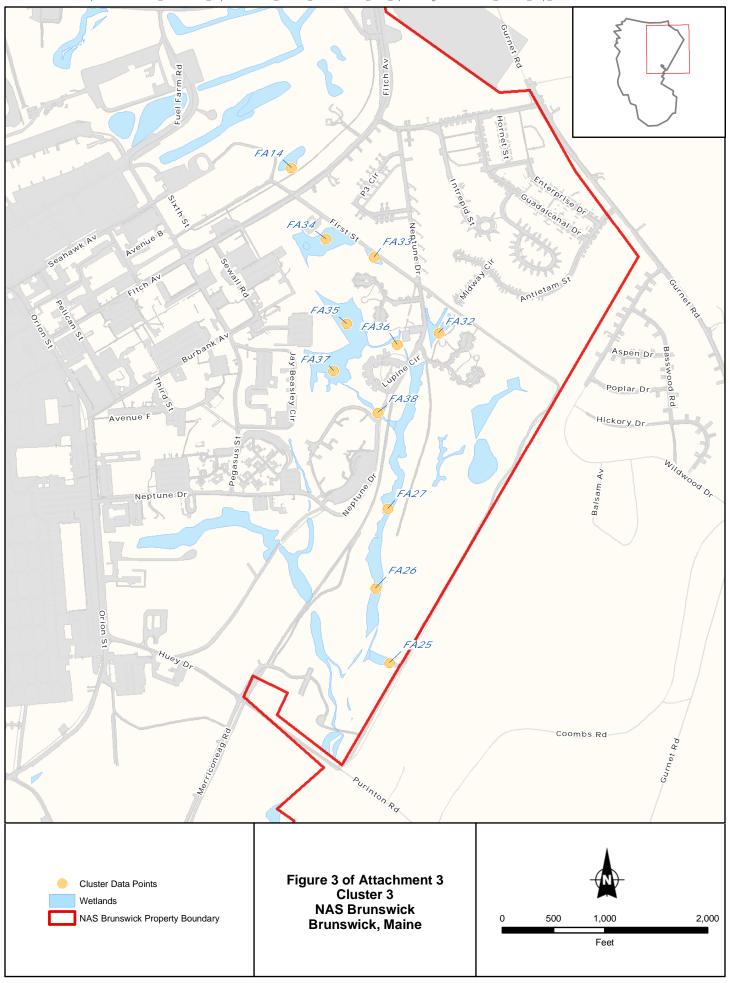
Educational/Scientific Value: This value considers the suitability of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage: This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation and habitat diversity.

Visual Quality/Aesthetics: This value considers the visual and aesthetic quality or usefulness of the wetland.

Endangered Species Habitat: This value considers the suitability of the wetland to support threatened or endangered species (either federal or state listed).

3 Wetland Clusters



Feet

