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**2009 Grassland Bird Survey  
Report**

# **Grassland Bird Survey 2009 Breeding Season**

**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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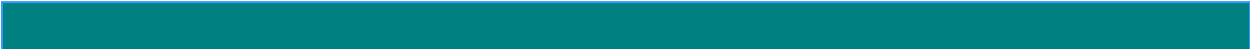
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# **L**ist of Abbreviations and Acronyms

NAS	Naval Air Station
East Brunswick	East Brunswick Radio Transmitter Site
EIS	Environmental Impact Statement
GIS	geographic information system

# 1

## Introduction

State-listed rare, threatened, and endangered grassland birds are known to occur at Naval Air Station (NAS) Brunswick. The approximately 500-acre grassland undeveloped portion of the airfield hosts common and rare grassland birds. State-listed species known to occur at NAS Brunswick include the endangered grasshopper sparrow (*Ammodramus savannarum*) and the threatened upland sandpiper (*Bartramia longicauda*). State species of special concern include the eastern meadowlark (*Sturnella magna*) and horned lark (*Eremophila alpestris*) (MDIFW 2009). The East Brunswick Radio Transmitter Site has also been identified as potentially supporting rare grassland birds.

In support of the Environmental Impact Statement (EIS) for the Disposal and Re-use of NAS Brunswick, point count surveys were conducted within the grassland communities at NAS Brunswick and East Brunswick during the 2009 breeding season. The purpose of the surveys was to determine whether state-listed species were present. The methodology and results of the survey are discussed below.

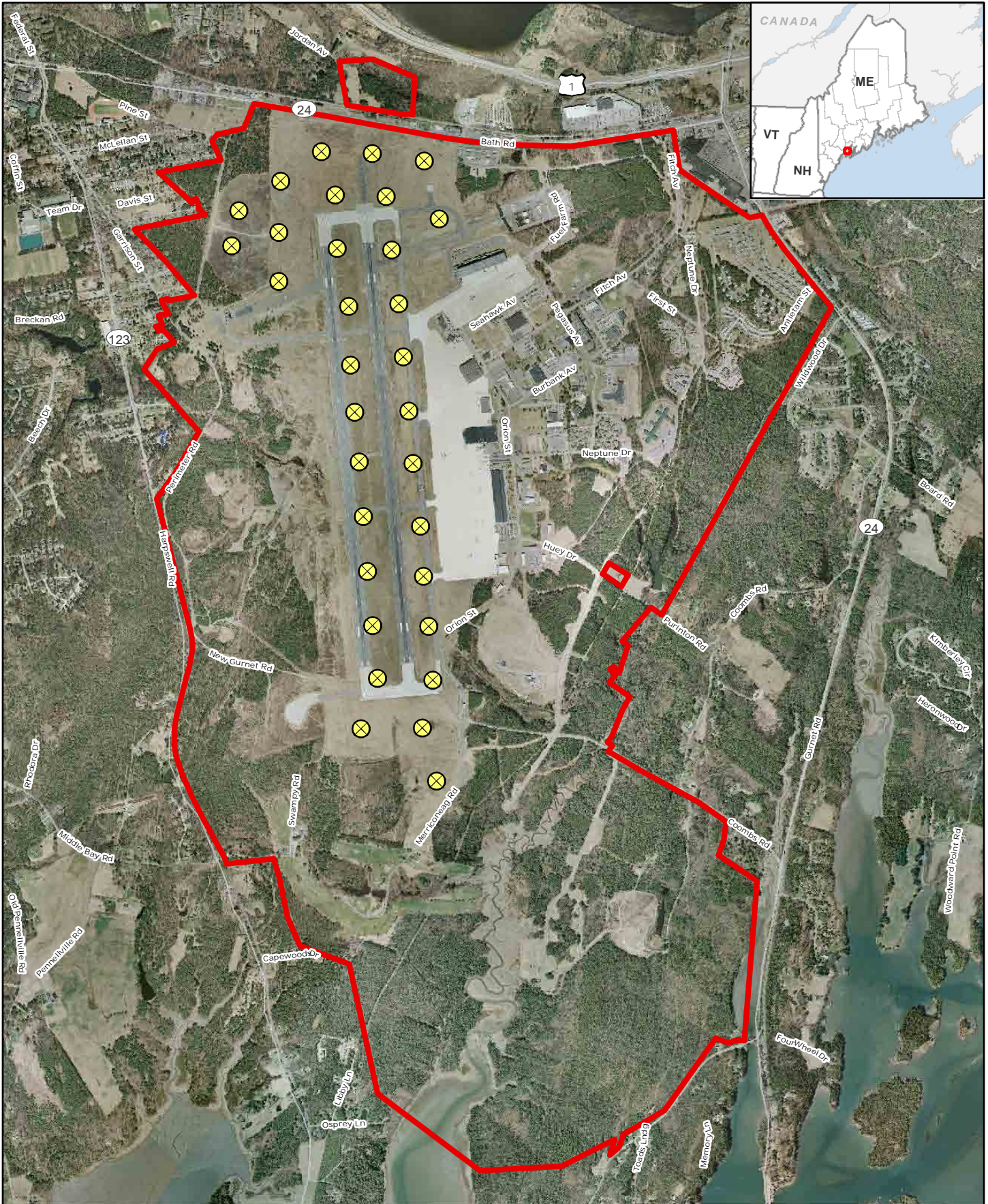
# 2

## Methods



Point count stations were established based on survey stations used in previous grassland bird studies at NAS Brunswick (Siegel and Kaschube 2005). Thirty stations were located approximately 250 meters apart and covered the maintained grassland areas associated with the airfield (see Figure 1). At East Brunswick Radio Transmitter Site, stations were randomly established at approximately 250 meters apart to cover the grassland portion of the property. This yielded four stations across the length and breadth of the East Brunswick property (see Figure 2).

Five-minute counts were conducted at each of the stations on June 3 and 4, during the 2009 breeding season. Beginning at preselected stations located in the field using geographic information system (GIS) -produced maps, the counts began within 30 minutes after sunrise and continued for no more than 5 hours after sunrise each day. All birds identified by sight or sound in the 5-minute periods at the selected survey points were documented.

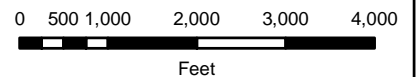




**Legend**



-  Grassland Survey Point
-  NAS Brunswick

**Figure 1**  
**Grassland Bird Survey Points**  
**NAS Brunswick**  
**Brunswick, Maine**

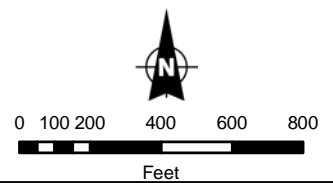




**Legend**

-  Grassland Survey Point
-  East Brunswick Radio Transmitter Site

**Figure 2**  
**Grassland Bird Survey Points**  
**East Brunswick Radio Transmitter Site**  
**Brunswick, Maine**



# 3

## Results

### **NAS Brunswick**

During the counts at NAS Brunswick, 330 detections of 44 species were recorded (see Appendix A). Grasshopper sparrows were not recorded at any stations. Upland sandpipers were recorded eleven times and at eight separate stations. Eastern Meadowlarks were recorded 61 times and at all but three stations. The most abundant species detected was the savannah sparrow (total of 85 detections and at but one station). A summary of the bird species recorded is provided in Table 1.

### **East Brunswick Radio Transmitter Site**

During the counts at the East Brunswick Radio Transmitter Site, 78 detections of 32 species were recorded (see Appendix B). Most of the bird species detected are more commonly associated with edge and forested habitat. No state-listed threatened or endangered species were detected during surveys; however, one state species of special concern was identified (Eastern Meadowlark, two detections). A summary of the bird species recorded is provided in Table 2.

**Table 1 Bird Species Identified at NAS Brunswick**

Common Name	Scientific Name	Total No. of Detections
Wild Turkey	<i>Meleagris gallopavo</i>	5
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	1
Great Blue Heron	<i>Ardea herodias</i>	5
Osprey	<i>Pandion haliaetus</i>	4
Red-tailed Hawk	<i>Buteo jamaicensis</i>	1
American Kestrel	<i>Falco sparverius</i>	1
Killdeer	<i>Charadrius vociferous</i>	3
Upland Sandpiper	<i>Bartramia longicauda</i>	11
American Woodcock	<i>Scolopax minor</i>	1
Ring-billed Gull	<i>Larus delawarensis</i>	2
Herring Gull	<i>Larus argentatus</i>	1
Great Black-backed Gull	<i>Larus marinus</i>	1
Rock Pigeon	<i>Columba livia</i>	2
Mourning Dove	<i>Zenaida macroura</i>	6
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	1
Pileated Woodpecker	<i>Dryocopus pileatus</i>	1
Eastern Wood-pewee	<i>Contopus virens</i>	1
Alder Flycatcher	<i>Empidonax alnorum</i>	9
Willow Flycatcher	<i>Empidonax traillii</i>	3
Red-eyed Vireo	<i>Vireo olivaceus</i>	1
American Crow	<i>Corvus brachyrhynchos</i>	9
Tree Swallow	<i>Tachycineta bicolor</i>	5
Black-capped Chickadee	<i>Parus atricapillus</i>	2
Hermit Thrush	<i>Catharus guttatus</i>	3
American Robin	<i>Turdus migratorius</i>	1
Cedar Waxwing	<i>Bombycilla cedrorum</i>	4
Yellow Warbler	<i>Dendroica petechia</i>	7
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	6
Black-throated Green Warbler	<i>Dendroica virens</i>	3
Prairie Warbler	<i>Dendroica discolor</i>	4
Black-and-white Warbler	<i>Mniotilta varia</i>	1
Ovenbird	<i>Seiurus aurocapillus</i>	6
Common Yellowthroat	<i>Geothlypis trichas</i>	9
Chipping Sparrow	<i>Spizella passerine</i>	9
Field Sparrow	<i>Spizella pusilla</i>	16
Savannah Sparrow	<i>Paserculus sandwichensis</i>	85
Song Sparrow	<i>Melospiza melodia</i>	3
Dark-eyed Junco	<i>Junco hyemalis</i>	1
Bobolink	<i>Dolichonyx oryzivorus</i>	25
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	2
Eastern Meadowlark	<i>Sturnella magna</i>	61
Common Grackle	<i>Quiscalus quiscula</i>	2
Brown-headed Cowbird	<i>Molothrus ater</i>	2
American Goldfinch	<i>Carduelis tristis</i>	4

**Table 2 Bird Species Identified at the East Brunswick Radio Transmitter Site**

Common Name	Scientific Name	Total No. of Detections
Osprey	<i>Pandion haliaetus</i>	1
Ring-billed Gull	<i>Larus delawarensis</i>	3
Herring Gull	<i>Larus argentatus</i>	1
Mourning Dove	<i>Zenaida macroura</i>	2
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1
Eastern Kingbird	<i>Tyrannus tyrannus</i>	1
Red-eyed Vireo	<i>Vireo olivaceus</i>	3
Blue Jay	<i>Cyanocitta cristata</i>	5
American Crow	<i>Corvus brachyrhynchos</i>	4
Tree Swallow	<i>Tachycineta bicolor</i>	1
Black-capped Chickadee	<i>Parus atricapillus</i>	3
Hermit Thrush	<i>Catharus guttatus</i>	2
Wood Thrush	<i>Hylocichla mustelina</i>	1
Cedar Waxwing	<i>Bombycilla cedrorum</i>	2
Nashville Warbler	<i>Vermivora ruficapilla</i>	3
Yellow Warbler	<i>Dendroica coronata</i>	1
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	1
Black-throated Green Warbler	<i>Dendroica virens</i>	1
Prairie Warbler	<i>Dendroica discolor</i>	11
Black-and-white Warbler	<i>Mniotilta varia</i>	1
Ovenbird	<i>Seiurus aurocapillus</i>	2
Common Yellowthroat	<i>Geothlypis trichas</i>	4
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	6
Chipping Sparrow	<i>Spizella passerine</i>	2
Field Sparrow	<i>Spizella pusilla</i>	5
Song Sparrow	<i>Melospiza melodia</i>	2
Dark-eyed Junco	<i>Junco hyemalis</i>	1
Northern Cardinal	<i>Cardinalis cardinalis</i>	2
Eastern Meadowlark	<i>Sturnella magna</i>	2
Common Grackle	<i>Quiscalus quiscula</i>	2
Purple Finch	<i>Carpodacus purpureus</i>	1
American Goldfinch	<i>Carduelis tristis</i>	1

# 4

## Discussion

The grassland area at NAS Brunswick is an important resource for grassland birds. Although grasshopper sparrows were not detected during the field season, this species has been detected at NAS Brunswick in the past. Grasshopper sparrows were last documented at NAS Brunswick in 2005, which is the last time that surveys were conducted prior to the 2008 and 2009 surveys (Siegel and Kaschube 2005). Based on the most recent surveys, it is possible that grasshopper sparrows have been extirpated from NAS Brunswick. Little change in habitat has occurred within and around the airfield at NAS Brunswick over the past four years to cause the extirpation of this species, however, grasshopper sparrows have been reported as being in decline over much of their range in Maine and the northeast (MDIFW 2003). Additional surveys during the next few breeding seasons would be necessary to accurately gauge the status of this population at NAS Brunswick.

# 5

## References

- Maine Department of Inland Fisheries and Wildlife (DMIFW). 2009. Maine Endangered Species Program, available online at: [http://www.state.me.us/ifw/wildlife/species/endangered\\_species/index.htm](http://www.state.me.us/ifw/wildlife/species/endangered_species/index.htm) Accessed May 27, 2009.
- Maine Department of Inland Fisheries and Wildlife(MDIFW). 2003. State Endangered; Grasshopper Sparrow, available online at: [http://www.maine.gov/ifw/wildlife/species/endangered\\_species/grasshopper\\_sparrow/grasshopper\\_sparrow.pdf](http://www.maine.gov/ifw/wildlife/species/endangered_species/grasshopper_sparrow/grasshopper_sparrow.pdf) . Accessed June 9, 2009.
- Siegel, R. and D. Kaschube. 2005. *Status of Grasshopper Sparrows and Other Grassland-associated Bird Species at Naval Air Station Brunswick, Maine*. Final Report for Cooperative Agreement No. N62470-05-LT-L0010 between Naval Facilities Engineering Command, Atlantic Division, and the Institute for Bird Populations, Point Reyes, California, December 19, 2005.

**A**

**Brunswick Naval Air Station  
Breeding Bird Survey**



**Appendix A - 2009 Grassland Bird Survey**  
**NAS Brunswick, Breeding Bird Survey by Location**  
**June 3 and 4, 2009**  
**Observer: Chris Akios**

Species	Location																																Total		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			
Wild Turkey			3						1													1													5
Double-crested Cormorant						1																													1
Great Blue Heron								2					1			1												1							5
Osprey		1									1								1												1				4
Red-tailed Hawk																		1																	1
American Kestrel																					1														1
Killdeer				1							2																								3
Upland Sandpiper		1				2					2					1		1				1		1			2								11
American Woodcock				1																															1
Ring-billed Gull					1											1																			2
Herring Gull						1																													1
Great Black-backed Gull																									1										1
Rock Pigeon								2																											2
Mourning Dove			2													1		1														2			6
Black-billed Cuckoo										1																									1
Ruby-throated Hummingbird																																			0
Pileated Woodpecker																																	1		1
Eastern Wood-pewee																																		1	1
Alder Flycatcher												1											1		1		1	1	2	2					9
Willow Flycatcher																										2	1								3
Eastern Kingbird																																			0
Red-eyed Vireo										1																									1
Blue Jay																																			0
American Crow					1		1													1		1	1	1	1	1						1	1		9
Tree Swallow																1	1						1	2										5	

**Appendix A - 2009 Grassland Bird Survey**  
**NAS Brunswick, Breeding Bird Survey by Location**  
**June 3 and 4, 2009**  
**Observer: Chris Akios**

Species	Location																																Total			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32				
Black-capped Chickadee							1													1															2	
Hermit Thrush										2					1																					3
Wood Thrush																																				0
American Robin													1																							1
Cedar Waxwing										2															1			1								4
Nahville Warbler																																				0
Yellow Warbler																									1		1	1	1	2			1			7
Chestnut-sided Warbler																										1	1	1	2				1			6
Black-throated Green Warbler																									1	1							1			3
Prairie Warbler																																	3		1	4
Black-and-white Warbler																																		1		1
Ovenbird					2							1															1						1	1		6
Common Yellowthroat										1		2											1									1	2	1	1	9
Eastern Towhee																																				0
Chipping Sparrow				1	2		1	1		1															1		1	1								9
Field Sparrow		3	2	1							1	1												1	1				1	1	1	2	1		16	
Savannah Sparrow	5	4	3	2	3	4	3	3	4	3	2	3	2	4	3	4	2	1		1	2	1	1	3	1	2	4	2	3	2	4	4		85		
Song Sparrow																												2	1							3
Dark-eyed Junco																												1								1
Northern Cardinal																																				0
Bobolink																				1	4	1	6	3	2	2	4	2							25	
Red-winged Blackbird																										1	1									2
Eastern Meadowlark	6	3	2	1	1	2	2	3	1	2	2	2	3	3	2	3	2	1	1					2	2	1	1	3	2	1	1	2	4		61	
Common Grackle									1	1																										2
Brown-headed Cowbird								2																												2
Purple Finch																																				0

**Appendix A - 2009 Grassland Bird Survey**  
**NAS Brunswick, Breeding Bird Survey by Location**  
**June 3 and 4, 2009**  
**Observer: Chris Akios**

Species	Location																																Total			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32				
American Goldfinch																																	4		4	
<b>Total</b>																																				<b>330</b>

**B**

**East Brunswick Radio Transmitter  
Site Breeding Bird Survey**

**Appendix B - 2009 Grassland Bird Survey**  
**East Brunswick Radio Transmitter Site, Breeding Bird Survey by Location**  
**June 3 and 4, 2009**  
**Observer: Chris Akios**

Species	EB-1	EB-2	EB-3	EB-4	Total
Osprey		1			1
Ring-billed Gull			2	1	2
Herring Gull		1			1
Mourning Dove				2	2
Ruby-throated Hummingbird	1				1
Eastern Kingbird	1				1
Red-eyed Vireo	1	1		1	3
Blue Jay	2	1	2		5
American Crow		4			4
Tree Swallow			1		1
Black-capped Chickadee	1		1	1	3
Hermit Thrush		1	1		2
Wood Thrush		1			1
Cedar Waxwing	1			1	2
Nahville Warbler			1	2	3
Yellow Warbler	1				1
Chestnut-sided Warbler	1				1
Black-throated Green Warbler	1				1
Prairie Warbler	3	3	2	3	11
Black-and-white Warbler	1				1
Ovenbird	1	1			2
Common Yellowthroat	1	1	2		4
Eastern Towhee	2	1	2	1	6
Chipping Sparrow		1	1		2
Field Sparrow	3	1		1	5
Song Sparrow	1			1	2
Dark-eyed Junco		1			1
Northern Cardinal			1	1	2
Eastern Meadowlark	2				2
Common Grackle			1	1	2
Purple Finch		1			1
American Goldfinch				1	1
<b>Total</b>					<b>78</b>