



# **2008 Grassland Bird Survey Report**

# **Grassland Bird Survey 2008 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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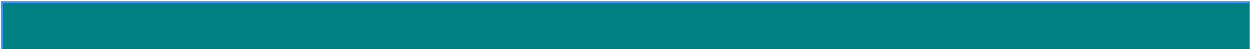
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## **L**ist of Abbreviations and Acronyms

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 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 2008). 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 Radio Transmitter Site during the 2008 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.

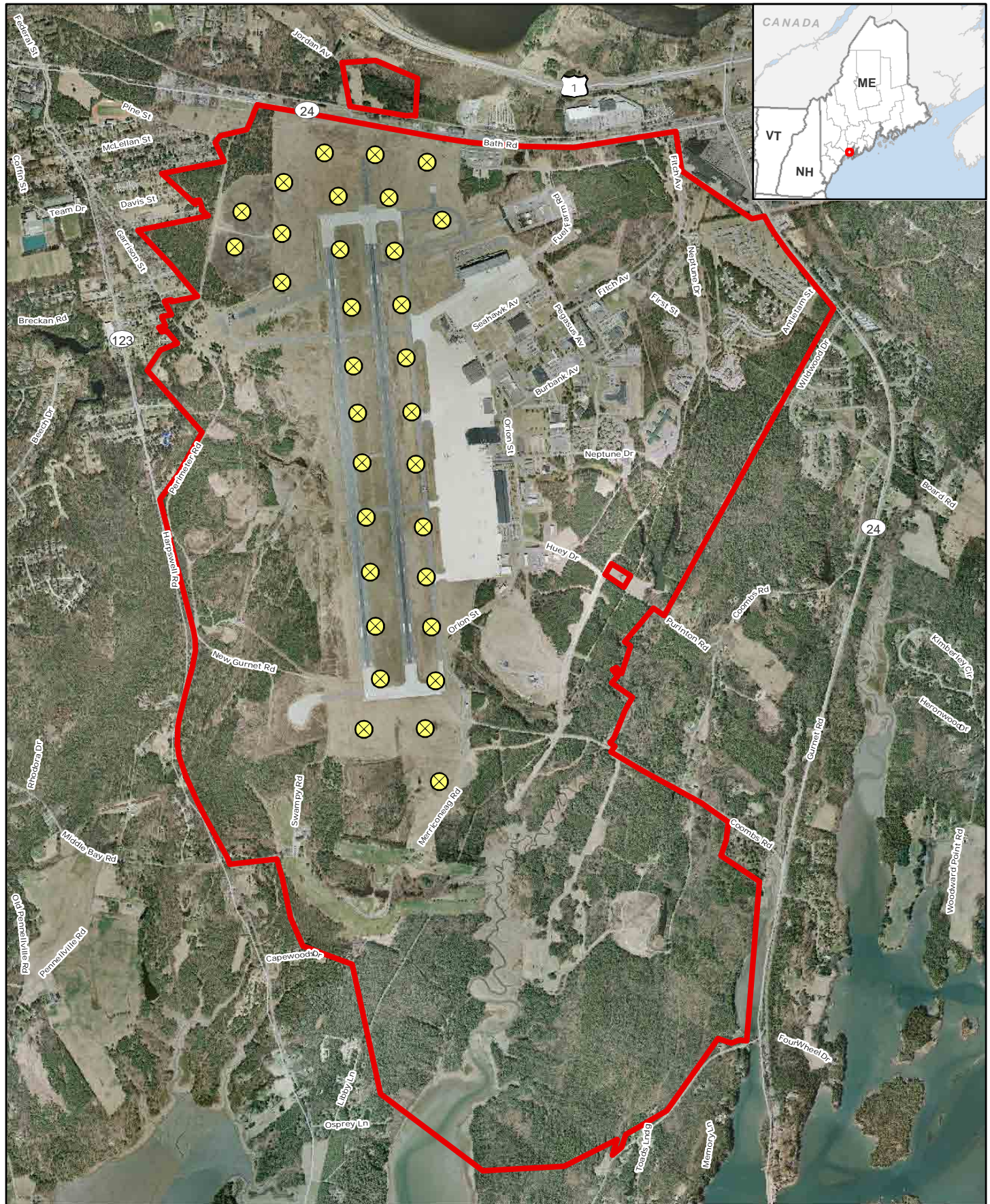
# 2

## Methods



Point count stations were selected based on 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. At East Brunswick Radio Transmitter Site, stations were randomly established at approximately 250 meters apart to cover the grassland portion of the property (see Figure 1). 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 17 and 18, during the 2008 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.

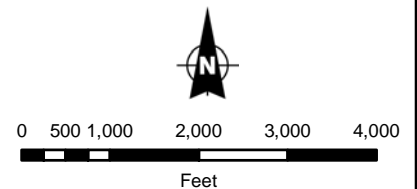




**Legend**

-  Grassland Survey Point
-  NAS Brunswick



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



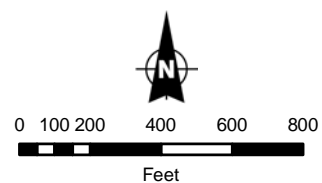




#### Legend

-  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, 453 detections of 46 species were recorded (see Appendix A). Grasshopper sparrows were not recorded at any stations. Upland sandpipers were recorded 16 times and at 12 separate stations. Eastern Meadowlarks were recorded 66 times and at all but three stations. The most abundant species detected was the savannah sparrow (total of 123 detections and at all 30 stations). 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, 82 detections of 22 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 or state species of special concern were identified. 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>	2
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	2
Great Blue Heron	<i>Ardea herodias</i>	12
Turkey Vulture	<i>Cathartes aura</i>	3
Osprey	<i>Pandion haliaetus</i>	6
Killdeer	<i>Charadrius vociferous</i>	10
Wilson's Snipe	<i>Gallinago gallinago</i>	3
Upland Sandpiper	<i>Bartramia longicauda</i>	16
Ring-billed Gull	<i>Larus delawarensis</i>	5
Herring Gull	<i>Larus argentatus</i>	2
Great Black-backed Gull	<i>Larus marinus</i>	1
Mourning Dove	<i>Zenaida macroura</i>	13
Eastern Kingbird	<i>Tyrannus tyrannus</i>	1
Red-eyed Vireo	<i>Vireo olivaceus</i>	6
Blue Jay	<i>Cyanocitta cristata</i>	7
American Crow	<i>Corvus brachyrhynchos</i>	49
Horned Lark	<i>Eromophila alpestris</i>	8
Tree Swallow	<i>Tachycineta bicolor</i>	1
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	5
Black-capped Chickadee	<i>Parus atricapillus</i>	3
Tufted Titmouse	<i>Parus bicolor</i>	1
Hermit Thrush	<i>Catharus guttatus</i>	4
American Robin	<i>Turdus migratorius</i>	10
Cedar Waxwing	<i>Bombycilla cedrorum</i>	6
Nashville Warbler	<i>Vermivora ruficapilla</i>	2
Yellow Warbler	<i>Dendroica petechia</i>	5
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	1
Yellow-rumped Warbler	<i>Dendroica coronata</i>	1
Pine Warbler	<i>Dendroica pinus</i>	1
Prairie Warbler	<i>Dendroica discolor</i>	1
Black-and-white Warbler	<i>Mniotilta varia</i>	2
Ovenbird	<i>Seiurus aurocapillus</i>	9
Mourning Warbler	<i>Oporonis philadelphia</i>	1
Common Yellowthroat	<i>Geothlypis trichas</i>	7
Scarlet Tanager	<i>Piranga olivacea</i>	1
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	2
Chipping Sparrow	<i>Spizella passerine</i>	2
Field Sparrow	<i>Spizella pusilla</i>	7
Savannah Sparrow	<i>Paserculus sandwichensis</i>	123
Indigo Bunting	<i>Passerina cyanea</i>	2
Bobolink	<i>Dolichonyx oryzivorus</i>	14
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	4
Eastern Meadowlark	<i>Sturnella magna</i>	66
Common Grackle	<i>Quiscalus quiscula</i>	2
Brown-headed Cowbird	<i>Molothrus ater</i>	2
American Goldfinch	<i>Carduelis tristis</i>	22

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

Common Name	Scientific Name	Total No. of Detections
Great Blue Heron	<i>Ardea Herodias</i>	1
Ring-billed Gull	<i>Larus delawarensis</i>	1
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	1
Eastern Kingbird	<i>Tyrannus tyrannus</i>	2
Blue Jay	<i>Cyanocitta cristata</i>	4
Tree Swallow	<i>Tachycineta bicolor</i>	2
Black-capped Chickadee	<i>Parus atricapillus</i>	5
House Wren	<i>Troglodytes aedon</i>	1
Winter Wren	<i>Troglodytes troglodytes</i>	1
American Robin	<i>Turdus migratorius</i>	3
Cedar Waxwing	<i>Bombycilla cedrorum</i>	17
Yellow-rumped Warbler	<i>Dendroica coronata</i>	1
Pine Warbler	<i>Dendroica pinus</i>	2
Prairie Warbler	<i>Dendroica discolor</i>	5
Common Yellowthroat	<i>Geothlypis trichas</i>	3
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	6
Chipping Sparrow	<i>Spizella passerine</i>	3
Field Sparrow	<i>Spizella pusilla</i>	7
Song Sparrow	<i>Melospiza melodia</i>	1
Indigo Bunting	<i>Passerina cyanea</i>	6
Purple Finch	<i>Carpodacus purpureus</i>	2
American Goldfinch	<i>Carduelis tristis</i>	8

# 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 (Siegel and Kaschube 2005), which is the last time that surveys were conducted prior to the 2008 surveys. Small songbird populations can also fluctuate considerably from year to year (Siegel Kaschube 2005), and 2008 may have been a poor year for grasshopper sparrows at NAS Brunswick.

To gain a better understanding of grassland bird populations at NAS Brunswick, especially the grasshopper sparrow, additional bird surveys will be conducted during the breeding bird season in 2009. Surveys will be conducted on two separate occasions to determine whether the state-listed (endangered) grasshopper sparrow is still present at NAS Brunswick.

# 5

## References

- Maine Department of Inland Fisheries and Wildlife (MDIFW). 2008. Maine State Endangered Species Program, available online at: [http://www.maine.gov/IFW/wildlife/species/endangered\\_species/index.htm](http://www.maine.gov/IFW/wildlife/species/endangered_species/index.htm) Accessed June 9, 2008.
- 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**

# **Naval Air Station Brunswick Breeding Bird Survey**



**Appendix A - 2008 Grassland Bird Survey**  
**NAS Brunswick, Breeding Bird Survey by Location**  
**June 17 and 18, 2008**  
**Observer: Alec Humann**

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					1																											1	2
Double-crested Cormorant				2																													2
Great Blue Heron		1		1		1				2								1		2			1			2	1						12
Turkey Vulture		1																									1			1			3
Osprey	1								1					2		1			1														6
Killdeer		2	1	1							2	1			2							1											10
Wilson's Snipe																											1	1	1				3
Upland Sandpiper				1				4			1	1			1	1		2	1	1		1		1						1			16
Ring-billed Gull								1																			3			1			5
Herring Gull																											1	1					2
Great Black-backed Gull																									1								1
Mourning Dove			1													1		3	1	3						1	1					2	13
Eastern Kingbird																	1																1
Red-eyed Vireo							1												1		1	1					1					1	6
Blue Jay																				2	2		1	1						1			7
American Crow	1			2	3	2	3	3		1	1	1		1		2	1			3	2	3	2	3	1	3	1	2		3	3	2	49
Horned Lark				1							2	2	2																1				8
Tree Swallow																									1								1
Cliff Swallow	3													1										1									5
Black-capped Chickadee						1	1																		1								3
Tufted Titmouse																						1											1
Hermit Thrush																					1										2	1	4
American Robin					2	3		1	2										1												1		10
Cedar Waxwing																			4												2		6
Nashville Warbler							1																									1	2
Yellow Warbler																							1	1		1			1		1		5

**Appendix A - 2008 Grassland Bird Survey**  
**NAS Brunswick, Breeding Bird Survey by Location**  
**June 17 and 18, 2008**  
**Observer: Alec Humann**

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	
Chestnut-sided Warbler																									1								1
Yellow-rumped Warbler																															1	1	
Pine Warbler																					1												1
Prairie Warbler																													1				1
Black-and-white Warbler						1																									1		2
Ovenbird										1										1	1			1						2	2	1	9
Mourning Warbler												1																					1
Common Yellowthroat																		1	1					1	1	1		1	1				7
Scarlet Tanager																			1														1
Eastern Towhee																												1			1		2
Chipping Sparrow																			1						1								2
Field Sparrow										1	1	1										1			1						1	1	7
Savannah Sparrow	3	3	3	3	2	4	3	4	4	6	3	2	4	7	3	6	4	3	3	5	6	4	4	6	4	3	3	3	4	4	4	3	123
Indigo Bunting																									1	1							2
Bobolink																		1		3		4	2	2	2							14	
Red-winged Blackbird					2								1										1										4
Eastern Meadowlark		1	2	3	2	5	3	3	5	6	1	2	3	2	2	1	2	2	3	2	2		2	2	2	2			3	2		1	66
Common Grackle																				1					1								2
Brown-headed Cowbird																				1	1												2
American Goldfinch					1				2			1				2				1	1	5	2		2	2			3				22
Total Birds																																	453

**B**

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

**Appendix B - 2008 Grassland Bird Survey**  
**East Brunswick Radio Transmitter Site, Breeding Bird Survey by Location**  
**June 18, 2008**  
**Observer: Alec Humann**

<b>Species</b>	<b>EB-1</b>	<b>EB-2</b>	<b>EB-3</b>	<b>EB-4</b>	<b>Total</b>
Great Blue Heron		1			<b>1</b>
Ring-billed Gull			1		<b>1</b>
Great Crested Flycatcher				1	<b>1</b>
Eastern Kingbird				2	<b>2</b>
Blue Jay	3			1	<b>4</b>
Tree Swallow			1	1	<b>2</b>
Black-capped Chickadee	3		2		<b>5</b>
House Wren		1			<b>1</b>
Winter Wren	1				<b>1</b>
American Robin			1	2	<b>3</b>
Cedar Waxwing		3	2	12	<b>17</b>
Yellow-rumped Warbler	1				<b>1</b>
Pine Warbler	1		1		<b>2</b>
Prairie Warbler	1		3	1	<b>5</b>
Common Yellowthroat			2	1	<b>3</b>
Eastern Towhee	1	2	1	2	<b>6</b>
Chipping Sparrow		2	1		<b>3</b>
Field Sparrow	2	1	2	2	<b>7</b>
Song Sparrow	1				<b>1</b>
Indigo Bunting	1	1	1	3	<b>6</b>
Purple Finch	1			1	<b>2</b>
American Goldfinch	3		2	3	<b>8</b>
<b>Total Birds</b>					<b>82</b>