

**An Assessment of Birds of Scientific and Natural Areas located
within the Minnesota River Prairie, Mille Lacs Upland, Hardwood Hills,
Anoka Sand Plain, Big Woods and St. Paul Baldwin Plains
Subsections of Minnesota**

Final Report – April 27th, 2009

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Brief Description of the Project.

This project is designed to assimilate existing data, and to gather additional data concerning birds present on Scientific and Natural Areas (SNA's), located within the Minnesota River Prairie, Anoka Sand Plain, Big Woods, Mille Lacs Upland, Hardwood Hills and St. Paul Baldwin Plains ecological subsections of Minnesota. Species of Greatest Conservation Need (SGCN) are observed when present, and recorded for each SNA unit. This project began in April 2006, and concluded in December of 2008. The project was the second phase of a project which began in 2004.

The observational information was compiled in a data base (excel spread sheet) for each unit. A checklist was created for each of the surveyed units, listing birds of each SNA, with each bird species ranked as to seasonal occurrence and status within the unit. These checklists were linked to several places on the Minnesota Department of Natural Resources (DNR) web site, so that a link is available on the SNA general description page which directs the user to each bird checklist. In addition, there is also a page listing all units which have bird lists available (<http://www.dnr.state.mn.us/snass/birdchecklists.html>).

The project budget included funds from several different sources including RIM, St. Paul general fund, SWG federal funds, and RIM matching funds.

Current expenditures were monitored by Wendy Crowell of Federal Aid, and the Project Manager, to make certain that necessary expenses were correctly coded, and that funds were spent within allotted time frame.

Project Objectives

1. To assemble past information on bird occurrence on **46** SNAs.
2. To conduct surveys of current bird use of 46 SNAs located in the Minnesota River Prairie, Hardwood Hills, Mille Lacs Upland, St. Paul Baldwin Plains, Anoka Sand Plain and Big Woods subsections during 2006, 2007 and in 2008.
3. To create bird checklists for 46 SNAs.
4. Administer project and prepare reports.

Project Accomplishments

To accomplish project objectives, the Project Manager wrote and initiated a Professional/Technical Contract for the Primary researcher (Robert Janssen), as well as several field survey Annual plans for Jerry Bonkoski (project assistant). In addition, contracts for the graphics work was written to accomplish the conversion of the spread sheets to checklists.

Project accomplishments since that date have included the following;

1. The Project Manager created a survey schedule for the project to incorporate visits during all four seasons in a three year period, as well as procedures for data summary and data submission.
2. The Project Manager has monitored data submission, paid bills, and submitted federal aid cost code reimbursements for approval.
3. 43 SNAs have were visited by the contractors during 2006, 2007 and 2008, and birds presence and abundance on the units were assessed (Table 3). Contractors researched information on each unit which had been previously gathered by other researchers, and if applicable, that information was incorporated into each checklist. Three proposed sites were not visited due to logistical problems (too difficult to access).
4. Data gathering was completed, and species occurrences were entered onto excel spreadsheets for the units surveyed.
5. Federal and state Listed species sightings short forms were submitted to Natural Heritage staff for inclusion in the MN DNR Natural Heritage Data Base
6. Final checklists for 43 SNA's were completed and incorporated into the DNR website. These checklists included information on site accessibility.
7. Interim reports, and final report was submitted to the US Fish and Wildlife Service.

RESULTS

Minnesota is diverse in terms of avifauna, and potentially 74 % of the Species of Greatest Conservation Need (SGCN) recently identified in Appendix G, of "Tomorrow's Habitat for the wild and rare, Minnesota's comprehensive wildlife conservation strategy, 2006" could potentially be found on the units to be surveyed for this project. This was determined from the species' presence in the ecological sub-sections where the SNA's to be surveyed are located. There were potentially 71 SGCN species which could be recorded on the units. Surveys conducted during this project have recorded **59 SGCN** species on the units surveyed.

This relatively high percentage of SGCN seen indicates the relative importance of these SNA's for providing habitat for species of importance to the MN DNR.

The undisturbed native prairie of the "Minnesota River Prairie", the oak savannahs and wetlands of the "Anoka Sand plain", the hardwood forests found in the "Big Woods" subsection, and the oak and aspen, prairie and mixed woodlands of the "St. Paul Baldwin Plains", as well as the woodlands of the "Hardwood Hills" and "Mille Lacs Upland" provide important breeding and migratory habitats for many of the species listed below

(Table 2.) Spring and summer surveys have yielded the greatest numbers of species observations.

This information will be useful in assessing the importance of land set-aside for targeted wildlife species. We will better be able to answer the question of the importance of the surveyed habitats to species of **Greatest Conservation Need** when we have recent and technically accurate information on species presence on these units. In addition, the information can be used for baseline information analysis on each unit during the management planning process.

In addition, the checklists help the birding public to know what bird species they might expect at each unit, as well as information on accessibility of the SNA sites.

Table 2. SGCN Species recorded in 43 surveyed SNA units, 2006, 2007 and 2008	
Henslow's Sparrow State Endangered	Common Loon
Le Conte's Sparrow	Bald Eagle State Special Concern
Grasshopper Sparrow	Wood Thrush
Northern Pintail	Franklin's Gull State Special Concern
Short-eared Owl State Special Concern	Red-headed Woodpecker
Upland Sandpiper	Swamp Sparrow
American Bittern	Black-crowned Night Heron
Red-shouldered Hawk State Special Concern	Connecticut Warbler
Swainson's Hawk	American White Pelican State Special Concern
Whip-poor-will	Rose-breasted Grosbeak
Virginia Rail	Black-backed Woodpecker
Veery	Eared Grebe
Black Tern	American Woodcock
Common Nighthawk	Ovenbird
Northern Harrier	Yellow-bellied Sapsucker
Marsh Wren	Dickcissel
Sedge Wren	Field Sparrow
Black-billed Cuckoo	Northern Rough-winged Swallow
Olive-sided Flycatcher	Wilson's Phalarope
Eastern Wood-Pee wee	Forster's Tern State Special Concern
Trumpeter Swan State Threatened	Eastern Meadowlark
Bay-breasted Warbler	Louisiana Waterthrush <i>state special concern</i>
Cerulean Warbler State Special Concern	Brown Thrasher
Cape May Warbler	Golden-winged Warbler
Bobolink	Greater Yellowlegs

Least Flycatcher	Winter Wren
Willow Flycatcher	Blue-winged Warbler
Rusty Blackbird	Canada Warbler
Peregrine Falcon State Threatened	Hooded Warbler
	White-throated Sparrow

The greatest number of species observed, occurred at Wolsfeld Woods SNA, located in Hennepin County (**Table 3**). This unit is over 200 acres in size and has diverse habitats. In addition, it has received previous survey attention. The average number of bird species per unit was 98. The smallest species total belonged to Joseph A. Tauer prairie with 52 species. This was a function of its more uniform habitat and small size.

Table 3. Scientific and Natural Areas with completed checklists for this project, showing Ecological Subsection, County, species totals, acres totals, and SGCN species totals.

SNA Name	Subsection	County	Acres	Species recorded	SGCN Species
Boot Lake	Anoka Sand Plain	Anoka	592	106	13
Clear Lake	Anoka Sand Plain	Sherburne	78	84	10
Harry W. Cater Homestead Prairie	Anoka Sand Plain	Sherburne	133	100	19
Helen Allison Savannah*	Anoka Sand Plain	Anoka	86	92	11
Mississippi River Islands	Anoka Sand Plain	Sherburne	73	Not completed	
Quarry Park	Anoka Sand Plain	Stearns	323	95	12
Rice Lake Savannah	Anoka Sand Plain	Sherburne	80	82	10
Uncas Dunes	Anoka Sand Plain	Sherburne	745	105	14
Cannon River Trout Lily	Big Woods	Rice	95	116	20
Chamberlain Woods	Big Woods	LeSueur	254	136	23
Mary Schmidt Crawford Woods	Big Woods	Wright	120	98	11
Savage Fen	Big Woods	Scott	45	79	9
Townsend Woods	Big Woods	Rice	73	122	21
Whitney Island	Big Woods	Rice	40	104	13
Wolsfeld Woods	Big Woods	Hennepin	221	150	22
Wood-Rill	Big Woods	Hennepin	150	87	9
Black Dog Nature Preserve*	St. Paul Baldwin Plains	Dakota	126	81	8
Falls Creek	St. Paul-Baldwin Plains	Washington	136	124	20
Grey Cloud Dunes	St. Paul-Baldwin Plains	Washington	220	117	20
Lost Valley Prairie	St. Paul-Baldwin Plains	Washington	200	128	22
Pig's Eye Island Heron Rookery	St. Paul-Baldwin Plains	Ramsey	100	89	12
PineBend Bluffs	St. Paul-Baldwin Plains	Dakota	256	111	13
St. Croix Savannah	St. Paul-Baldwin Plains	Washington	148	115	14
Bonanza Prairie	Minnesota River Prairie	Big Stone	85	83	9
Cedar Mountain	Minnesota River Prairie	Renville	317	117	19
Clinton Prairie	Minnesota River Prairie	Big Stone	160	56	10

SNA Name	Subsection	County	Acres	Species recorded	SGCN Species
Yellow Bank Hills	Minnesota River Prairie	Lac qui Parle	80	84	13
Blue Devil Valley	Minnesota River Prairie	Yellow Medicine	30	64	7
Gneiss Outcrops	Minnesota River Prairie	Chippewa	241	129	22
Swedes Forest, Homme-Kollin Unit	Minnesota River Prairie	Yellow Medicine	202	99	10
Cottonwood River Prairie	Minnesota River Prairie	Brown	181	135	11
Joseph A. Tauer prairie	Minnesota River Prairie	Brown	80	52	7
Osmundson Prairie	Minnesota River Prairie	Faribault	6	55	7
Rock Ridge Prairie	Minnesota River Prairie	Cottonwood	200	53	7
Kasota Prairie	Minnesota River Prairie	LeSueur	42	116	19
Roscoe Prairie	Minnesota River Prairie	Stearns	57	86	20
Sedan Brook	Minnesota River Prairie	Stearns	191	75	15
Avon Hills Forest	Hardwood Hills	Stearns	353	120	27
Blanket Flower SNA	Hardwood Hills	Clay	304	105	14
Partch Woods	Hardwood Hills	Stearns	120	83	10
Cold Spring Heron Colony SNA	Hardwood Hills	Stearns	62	79	13
Black Lake Bog	Mille Lacs Upland	Pine	1,414	68	7
Kettle River	Mille Lacs Upland	Pine	801	112	25
Ripley Esker	Mille Lacs Upland	Morrison	236	91	17

*Indicates partial ownership by The Nature Conservancy

There have been a total of 59 bird SGCN's(species) sighted on the 43 SNA's surveyed (**Table 4**). Highlights included documenting the Blue-winged Warbler at Cannon River Trout Lily SNA, Townsend Woods, Wolsfeld Woods Falls Creek Avon Hills Forest and Chamberlain Woods SNA's. The Eared Grebe finding at Yellow Bank Hills, the Short-eared Owl at Harry W. Cater SNA, and Henslow's Sparrow at 2 SNA's, and American Bittern at Grey Cloud Dunes were some of the highlights from the field work(Table 4). A recent finding has been the Connecticut Warbler at Cold Spring Heron Rookery SNA, and the finding of Golden-winged Warblers at several sites. The most abundant of the SGCN's recorded was Eastern Wood Pewee, which was recorded at 35 of the SNA's. Second most abundant was Least Flycatcher, recorded at 34 of the units. The SNA with the greatest number of SGCN species recorded was Avon Hills Forest SNA, a recently acquired site. Kettle River, with 25 SGCN species was second. Chamberlain Woods was third, with 23 SGCN species, and 7 sites had greater than 20 SGCN species observed.

One of the accomplishments of this project was the melding of historical with current data to assess species abundance at each site. The success of this project can be credited to the hard work and dedication of observers Robert Janssen and Jerry Bonkoski. Their tireless dedication to documenting bird species occurrence on public lands has really been the prime reason that the project continues.

Their similar efforts in state parks has resulted in a large body of work which accurately describes the birds of these units.

SNA's have been more challenging in many ways. Even though they are often smaller in size than state parks, there are fewer if any trails through the sites, and access can be difficult. Yet for the birds that use these small units, their importance cannot be overstated. This can be seen in the results of the study, with a wide variety of birds being sighted on these important units.

Continued funding has been requested to document bird use on additional SNA's, with a priority assigned to those units where management planning will be undertaken.

Summary

Species occurrence lists as well as species checklists have been completed for 43 State Scientific and Natural Areas. It is apparent that the SNAs provide quality habitat for birds, both common and rare. Some units show greater species diversity than others; usually due to habitat quality and diversity present on the site. It is our hope that this project can continue to document bird species on SNA's which are accessible to the public.

	Scientific Name	Boot Lake	Clear Lake	Harry Cater Homestead	Helen Allison Savannah	Quarry Park	Rice L. Savannah	Uncas Dunes	Cannon R. Trout Lily	Mary Schmidt Crawford	Savage Fan	Townsend Woods	Whitney Island	Wosfeld Woods	Wood-Rill	Gneiss Outcrops	Blackdog Nature Preserve	Grey Cloud Dunes	Pine Bend Bluffs	Falls Creek	Lost Valley Prairie	Pig's Eye	St. Croix Savannah	Bonanza Prairie	Clinton Prairie	Yellow Bank Hills	Blue Devil Valley	Swedes Forest	Cottonwood River	Joseph A. Taurer	Kasota Prairie	Ripley Esker	Kettle River	Black Lake Bog	Cold Spring Heron Colony	Partch Woods	Blanket Flower	Avon Hills Forest	Chamberlain Woods	Sedan Brook	Rock Ridge	Roscoe Prairie	Osmundson Prairie	Cedar Mtn	Total Species Recorded				
<i>Solirus molacilla</i>	Louisiana Waterthrush																																																1
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	O			O		O		CU			CU	C/U		O	U/O		C/O	CU		O	O	U				O	U									U/O	U/O	U/O	U						U		25	
<i>Spiza americana</i>	Dickcissel							O				O/U			U		O/U				U		O	O		O	U/C		O														O/U	O			13		
<i>Spizella pusilla</i>	Field Sparrow		U		C	U	C	U	U			U		O		C		U	U	O	U		C	C			U											C	C	C				U	C		24		
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow		C	O		U			U	O	C	U	U	O	O	U		U		O	U	C	U	O			U																			C		26	
<i>Sterna forsteri</i>	Forster's Tern							O				U		O					U			O																										8	
<i>Sturnella magna</i>	Eastern Meadowlark								U					O				C/U	CU	O	O							U/O																					14
<i>Toxostoma rufum</i>	Brown Thrasher				U	O	O		C		O	C		O		U	O	C	C	O	U		O																										23
<i>Tringa melanoleuca</i>	Greater Yellowlegs												U									O																										4	
<i>Troglodytes troglodytes</i>	Winter Wren		O	O				O	O			O	U	O	O/U			O	O	U																												14	
<i>Vermivora chrysoptera</i>	Golden-winged Warbler																																																5
<i>Vermivora pinus</i>	Blue-winged Warbler								U			U		O							U																												6
<i>Wilsonia canadensis</i>	Canada Warbler																																																2
<i>Wilsonia criteni</i>	Hooded Warbler																																																1
<i>Zonotrichia albicollis</i>	White-throated Sparrow																																																9
Total Number Bird Species		13	10	19	11	12	10	14	20	11	9	21	13	22	9	22	8	20	13	19	22	12	14	9	10	13	7	10	11	7	19	17	25	7	13	10	14	27	23	15	7	20	7	19		614			