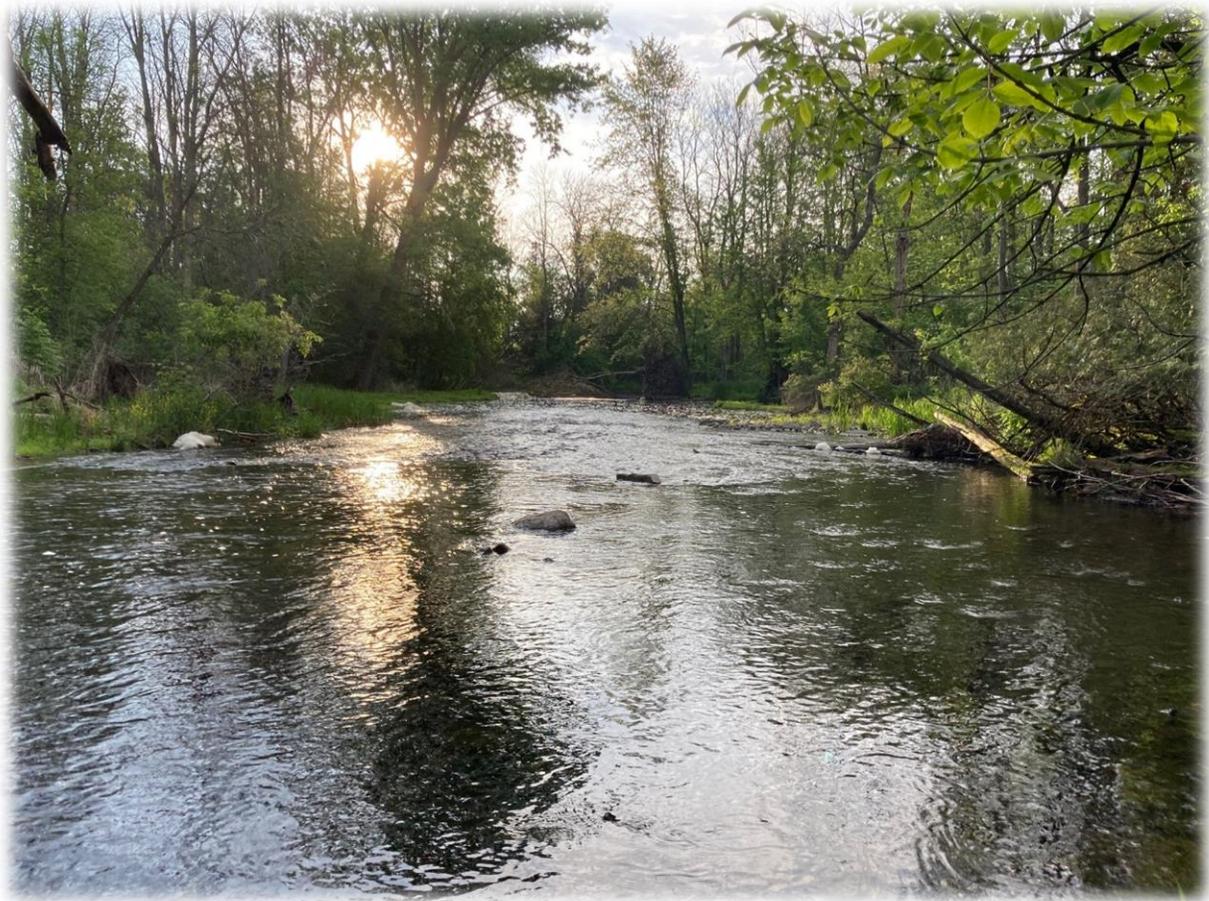


# 2022 Breeding Bird Survey of 8 Door County Parks



Field Work, Assessment and Report Writing Conducted for the “Friends of Door County Parks”

By:

Michael Grimm

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## **Acknowledgement of Support**

Thanks to “The Friends of the Door County Parks” for financial support for this project.

## **Note on Additional Sources of Information**

Sources of information accessed during this project included the Door County Web Map (<http://map.co.door.wi.us/map/>); previous bird surveys conducted at Ellison Bluff, Door Bluff Headlands, Meridian County Park and Harter-Matter Sanctuary; and data from the eBird online database (<https://ebird.org/home>). eBird was launched in 2002 by the Cornell Lab of Ornithology at Cornell University and the National Audubon Society and gathers basic data on bird abundance and distribution from individuals who submit observations. Records from Door Bluff Headlands, Ellison Bluff, Meridian / Harter-Matter Sanctuary, Sugar Creek, Cave Point, and the Forestville Millpond County Parks are in eBird and have been accessed to supplement the data gained from the 2002 bird surveys.

## **Land Acknowledgement**

This “Land Acknowledgement” recognizes and respects past and present Indigenous Peoples of the area, as traditional stewards of the land and the biota which occupies it. This land acknowledgement recognizes the lives spent, the cultures built, and any honor and respect bestowed upon the land covered in this report by native peoples before Euro-American settlement including the Ochethi Sakowin (Sioux), the Myaamia, the Menominee, the Odawa and the Bodewedmiakiwen (Potawatomi).

## SUMMARY

Between May 30 and June 12, 2022, bird surveys were conducted using standard 10-minute fixed point count methods on the following Door County Park properties: Sugar Creek, the Ahnapee Trail, Forestville Millpond, Robert La Salle, Cave Point, Meridian and Harter-Matter Sanctuary, Ellison Bluff and Door Bluff Headlands County Parks. In total 73-point counts were conducted across the parks noted.

93 total different species were recorded from the county parks surveyed in 2022, with the highest diversity being found along the Ahnapee Trail with 79 species and lowest diversity with 19 species identified from Cave Point County Park.

The park properties surveyed, number of survey points in each park, number of species and total number of birds recorded for each park, and several summary statistics are list below in Table 1 and Chart 1.

Park Property	Acres	Survey Points	Acres / Point	Species Recorded	Species / Acre	Total Number of Birds	Average Number / Acre	Average Number / Point
Ahnapee Trail	144	33	4.36	79	0.55	815	5.66	24.7
Cave Point	18.6	4	4.65	19	1.02	54	2.9	13.5
Door Bluff Headlands	252	10	25.2	20	0.08	93	0.37	9.3
Ellison Bluff	174	8	21.75	26	0.15	54	0.31	6.75
Forestville Millpond	79	3	26.33	38	0.48	69	0.87	23
Robert Lasalle	23	3	7.67	24	1.04	55	2.39	18.3
Meridian / Harter-Matter	155	8	19.37	38	0.25	136	0.88	17
Sugar Creek*	40	4	10	21 (22*)	0.53	45 (130*)	1.13	11.25
<b>* For this table the 85 white pelicans recorded at Sugar Creek were not counted as the pelicans were not 'in' the park but just offshore.</b>								

*Table 1. Park properties surveyed, number of survey points in each park, number of species and total number of birds recorded for each park, and several summary statistics.*

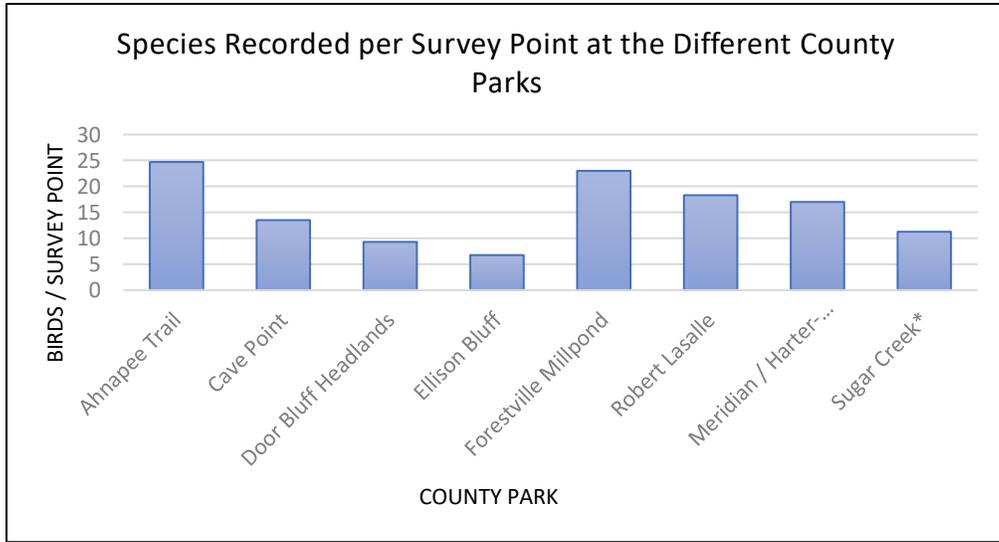


Chart 1. Species per survey point at the county parks surveyed.

Table 2 (below). Cumulative species list and frequency of occurrence for the 93 species recorded from 73 survey points at 8 county parks.

Species list and frequency of occurrence for the 93 species recorded from 73 survey points	
Number of points on which individual species were recorded	Species
45	Red-eyed Vireo
41	American Crow
37	Blue Jay
36	American Robin
36	Eastern Wood-Pewee
35	American Redstart
35	Common Yellowthroat
34	Red-winged Blackbird
33	Great Crested Flycatcher
28	Mourning Dove
27	Ovenbird
25	Black-capped Chickadee
25	Indigo Bunting
25	Song Sparrow
24	Northern Cardinal
22	House Wren
21	American Goldfinch
19	Red-bellied Woodpecker

16	Gray catbird
16	Mourning Warbler
14	Hairy Woodpecker
14	Ruffed Grouse
13	Brown-headed Cowbird
13	Yellow Warbler
12	Baltimore Oriole
12	Canada Warbler
12	Chestnut-sided Warbler
12	Sandhill Crane
11	Black-and-white Warbler
11	Northern Flicker
10	White-breasted Nuthatch
9	Rose-breasted Grosbeak
9	Swamp Sparrow
9	Warbling Vireo
8	Eastern Kingbird
8	Northern Waterthrush
8	Scarlet Tanager
8	Veery
8	Common Raven
7	Wild Turkey
6	Blue-gray gnatcatcher
6	Common Grackle
5	Black-billed Cuckoo
5	Canada Goose
5	Canada Warbler
5	Chipping Sparrow
5	Clay-colored Sparrow
5	Downy Woodpecker
5	Hermit Thrush
5	Red-breasted Nuthatch
4	Alder Flycatcher
4	Green Heron
4	Killdeer
4	Mallard
4	Nashville Warbler
4	Northern Parula
4	Pileated Woodpecker
3	Blackburnian Warbler
3	Brown Creeper
3	Eastern Bluebird
3	Eastern Phoebe

3	Field Sparrow
3	Great Blue Heron
3	Pied-billed Grebe
3	White-throated Sparrow
3	Wood Thrush
3	Yellow-billed Cuckoo
2	Barn Swallow
2	Blue-winged Teal
2	Bobolink
2	Eastern Meadowlark
2	Least Flycatcher
2	Marsh Wren
2	Purple Martin
2	Tree Swallow
2	Virginia Rail
2	Wood Duck
2	Yellow-bellied Sapsucker
2	Yellow-throated Vireo
1	Belted Kingfisher
1	Brown Thrasher
1	Chimney Swift
1	Cooper's Hawk
1	Eastern Towhee
1	House Finch
1	Northern Raven
1	Phoebe
1	Purple Finch
1	Savannah Sparrow
1	Sora Rail
1	Vesper Sparrow
1	White Pelican
1	Winter Wren

Table 3. (Below) Number of individual birds of each species recorded on the survey from all properties.

Number of individual birds of each species recorded on the survey	
Number	Species
105	Red-winged Blackbird
100	Red-eyed Vireo
85	White Pelican
63	American Crow
62	Common Yellowthroat
57	American Redstart
55	Canada Goose
47	American Robin
45	Blue Jay
42	Ovenbird
41	Song Sparrow
40	Eastern Wood-Pewee
37	Mourning Dove
35	Great Crested Flycatcher
34	Black-capped Chickadee
32	Indigo Bunting
28	Northern Cardinal
27	Black-capped Chickadee
27	House Wren
23	American Goldfinch
19	Mourning Warbler
19	Red-bellied Woodpecker
18	Cedar Waxwing
18	Yellow Warbler
16	Gray catbird
15	Hairy Woodpecker
14	Baltimore Oriole
14	Ruffed Grouse
13	Chestnut-sided Warbler
13	Sandhill Crane
12	Black-and-white Warbler
12	Northern Flicker
12	Northern Waterthrush
11	Veery
11	Warbling Vireo
11	Wild Turkey
10	Common Grackle
10	Rose-breasted Grosbeak
10	White-breasted Nuthatch

9	Common Raven
8	Eastern Kingbird
8	Nashville Warbler
8	Scarlet Tanager
7	Clay-colored Sparrow
7	Purple Martin
6	Blue-gray gnatcatcher
6	Chipping Sparrow
6	Downy Woodpecker
6	Hermit Thrush
6	Wood Duck
5	Alder Flycatcher
5	Black-billed Cuckoo
5	Pileated Woodpecker
5	Red-breasted Nuthatch
5	White-throated Sparrow
4	Bobolink
4	Eastern Bluebird
4	Great Blue Heron
4	Green Heron
4	Killdeer
4	Mallard
4	Northern Parula
4	Pied-billed Grebe
4	Yellow-billed Cuckoo
3	Blackburnian Warbler
3	Canada Warbler
3	Field Sparrow
2	Barn Swallow
2	Blue-winged Teal
2	Brown Thrasher
2	Eastern Meadowlark
2	Eastern Phoebe
2	Least Flycatcher
2	Marsh Wren
2	Savannah Sparrow
2	Swamp Sparrow
2	Tree Swallow
2	Virginia Rail
2	Wood Thrush
2	Yellow-bellied Sapsucker
2	Yellow-throated Vireo
1	Belted Kingfisher

1	Chimney Swift
1	Cooper's Hawk
1	Eastern Towhee
1	House Finch
1	Phoebe
1	Purple Finch
1	Sora Rail
1	Vesper Sparrow
1	Winter Wren

**Historic and eBird Data:**

Table 4 below shows all breeding season species recorded both during the 2022 bird survey incorporated with all historic (post 2000) and eBird data. The historic data sets included in this table are explained in each individual park section below. In all 124 breeding season bird species have been recorded from the 8 Door County Park properties since 2000.

*Table 4. All breeding season species recorded both during the 2022 bird survey incorporated with all historic (post 2000) and eBird data*

<b>TOTAL SPECIES (Historic, eBird and 2022 survey data from 7 parks plus 2022 Ahnapee Trail Survey)</b>	<b>Number of Parks from which the species was recorded out of 8 Parks</b>
American Crow	8
American Robin	8
Black-capped Chickadee	8
Blue Jay	8
Eastern Wood-Pewee	8
Great Crested Flycatcher	8
Northern Cardinal	8
Northern Flicker	8
Red-bellied Woodpecker	8
Red-eyed Vireo	8
Cedar waxwing	7
Hairy Woodpecker	7
House Wren	7
Mourning Dove	7
White-breasted Nuthatch	7
American Redstart	6
Black and White Warbler	6
Black-throated Green Warbler	6
Chipping Sparrow	6

Downy woodpecker	6
Ovenbird	6
Rose-breasted Grosbeak	6
Wood Thrush	6
Yellow Warbler	6
American Goldfinch	5
Brown Creeper	5
Common Yellowthroat	5
Gray Catbird	5
Indigo Bunting	5
Northern Parula	5
Pileated Woodpecker	5
Purple Martin	5
Red-breasted Nuthatch	5
Scarlet Tanager	5
Song Sparrow	5
Yellow-throated vireo	5
Barn Swallow	4
Belted Kingfisher	4
Canada Warbler	4
Chestnut-sided Warbler	4
Chimney Swift	4
Common Raven	4
Eastern Kingbird	4
Mourning Warbler	4
Turkey Vulture	4
Veery	4
Winter wren	4
Yellow-bellied Sapsucker	4
Yellow-billed Cuckoo	4
Bald Eagle	3
Black-billed Cuckoo	3
Blue-gray gnatcatcher	3
Clay-colored Sparrow	3
Eastern Phoebe	3
Great Blue Heron	3
Hermit Thrush	3
House Finch	3
Least Flycatcher	3
Mallard	3
Northern Waterthrush	3
Red-winged Blackbird	3
Rough-winged swallow	3

Ruffed Grouse	3
Sandhill Crane	3
Swamp Sparrow	3
Tree Swallow	3
Wild Turkey	3
Baltimore Oriole	2
Bank Swallow	2
Blackburnian Warbler	2
Blue-winged Teal	2
Bobolink	2
Broad-wing Hawk	2
Brown-headed Cowbird	2
Canada Goose	2
Common Grackle	2
Dickcissel	2
Eastern Bluebird	2
Eastern Towhee	2
Green-backed Heron	2
Killdeer	2
Nashville Warbler	2
Northern Raven	2
Northern Shoveler	2
Phoebe	2
Pied-billed Grebe	2
Pine Warbler	2
Red-headed Woodpecker	2
White Pelican	2
White-throated Sparrow	2
Wood Duck	2
Alder Flycatcher	1
Blue-winged Warbler	1
Brown Thrasher	1
Caspian Tern	1
Cliff Swallow	1
Common merganser	1
Cooper's Hawk	1
Double-crested cormorant	1
Eastern Meadowlark	1
Eastern Starling	1
Field Sparrow	1
Golden-winged Warbler	1
Herring Gull	1
House Sparrow	1

Lesser Scaup	1
Marsh Wren	1
Merlin	1
Northern Harrier	1
Orchard Oriole	1
Purple Finch	1
Red-breasted Merganser	1
Red-shouldered Hawk	1
Ruby-throated hummingbird	1
Savannah Sparrow	1
Sora Rail	1
Spotted Sandpiper	1
Vesper Sparrow	1
Virginia Rail	1
Warbling Vireo	1
Willow Flycatcher	1
Yellow-crowned Night Heron	1
Yellow-rumped Warbler	1
<b>Total Species</b>	<b>124</b>

## **INTRODUCTION**

Door County Wisconsin, defined by two major geophysical features the Niagara Escarpment and the coastal environment of the Great Lakes, is recognized as a landscape which holds a significant diversity of native animal and plant species. The Door County Park System comprises and protects multiple excellent high-quality examples of these geophysical features. This high natural quality has been recognized through the designation of two Door County Park properties as Wisconsin State Natural Areas, i.e., Ellison Bluff County Park and Meridian County Park / Harter-Matter Sanctuary. Despite the high quality of the County Park properties no systematic collection and compilation of breeding season bird information has been undertaken recently on the park properties.

To develop a preliminary understanding of the diversity of birds which utilize the county parks during the breeding season a standardized bird survey of county park properties with significant forest or wetland habitat was funded by the Friends of Door County Parks and conducted during the 2022 breeding season for breeding birds of this region.

The goals of the project were:

1. Obtain a list of all birds seen or heard in a park property in 2022;
2. Use a standardized method that could be repeated in future years;
3. Compile historic and eBird breeding season data from the parks if available;
4. Identify those species of conservation significance whose presence could be used as support for land management or land protection funding proposals;
5. Identify management needs related to habitat quality or health for the parks surveyed.

This report includes the species encountered in each surveyed park along with the number of each species recorded at each survey point; and a summary table of all species seen or heard on the survey date for the property. Interesting species or species of conservation interest will be highlighted in the report. A discussion section for each property will include thoughts on management or addition research recommendations to improve bird and wildlife habitat conditions for the properties.

Information gathered at each park includes the GPS coordinates for each survey point, habitat descriptions, site photographs, and maps of the survey locations.

Additionally previous bird surveys conducted by the author at Ellison Bluff, Door Bluff Headlands, Meridian County Park and Harter-Matter Sanctuary in 2000 or 2005; and from the eBird online database (<https://ebird.org/home>) are included in this report. These records from Door Bluff Headlands, Ellison Bluff, Meridian / Harter-Matter Sanctuary, Sugar Creek, Cave Point, and the Forestville Millpond County Parks have been accessed to supplement the data gained from the 2022 bird surveys.

## **METHODS**

This project used the generally accepted “unlimited distance full radius fixed point count” method at established points to gather data on the birds present during the 2022 breeding season (the period covered in this project was the end of May through early June) on Door County Park properties. While there are several methods that are used to inventory and monitor bird populations the fixed-point count is easily replicated and regularly used throughout WI. A point count is a tally of all birds detected by sight and sound by the observer located at a fixed position during a specified period of time (usually 3, 5

or 10 min.). Counts are usually conducted in the morning, typically early in the breeding season when birds are most vocal and territorial. The surveys of this report were taken between May 30, 2022, and June 12, 2022, between 4:45 am and 9:30 am using ten-minute survey periods on days having calm, clear sky weather. Being unlimited distance counts, some birds seen or heard from a fixed point may be detected from properties beyond the park boundaries. However, most birds, especially in forested settings recorded in this survey are likely to be utilizing park properties. The exception would be the narrow corridor of the Ahnapee State Trail on which the birds heard or seen could be either on County property or adjoining lands, but in either case be enjoyed by people using the trail. Species recorded on small properties (e.g., Cave Point, Robert LaSalle) should also be understood as possibly utilizing adjoining properties. GPS latitude and longitude coordinates were taken at all points to allow repeated surveys in future years if periodic or long-term monitoring efforts are desired. The survey points were distributed across the properties to capture different habitats found in the park, far enough apart to minimize double recording of most singing species and situated across the property in such a way as to require the observer to walk through most of the property on a survey morning. Records were kept of any additional species encountered while on the property walking between the points on the survey dates. The field data form used in this survey is appended to this report. Short habitat descriptions (dominant canopy trees, understory, and ground cover species, etc.) and photographs of the habitat at the survey points were taken, (not all photographs taken during the survey are included in this report, if those are desired the author would be glad to send them to the Door County Parks Department). Lastly notes were made on any management concerns (e.g., invasive species, needed additional surveys, trash etc.) found during the survey.

The properties included in this proposal were selected because they were large enough to 1) hold a diversity of birds and 2) assure that most birds heard or seen on the survey could be assumed to be utilizing the property and not adjoining properties, acknowledging the exceptions mentioned above.

Regarding the historic or eBird data used in this report, the historic surveys were also conducted in June and records from those surveys are considered to represent species breeding or attempting to breed at the sites where they were recorded. All the historic data sets are from surveys using 10-minute fixed point counts conducted by the author. “eBird” is an on-line data base of bird sightings submitted by birdwatchers and researchers throughout the world (<https://ebird.org/>) developed at Cornell University. For the eBird data, species records were sorted by month and only those birds recorded from late May 28 and running through mid-August were considered to be breeding or attempting to breed at the sites. eBird data is recorded to a ‘site’ without notes regarding the habitat type where the species was recorded. *Without more specific information on where the species was seen eBird data should be accepted as a list of species found in the general vicinity of the park but may cover areas outside the park itself.*

It should be noted that some county parks had many bird records for winter and migratory periods. To get a complete picture of bird usage at the Door County parks eBird records from all seasons should be consulted.

## RESULTS FOR INDIVIDUAL PARK PROPERTIES

### DOOR BLUFF HEADLANDS



*Figure 1. Bird survey point 6, Door Bluff Headlands County Park, June 12, 2022. Typical upland dry-mesic or mesic forest structure of the interior of the park.*

#### **Site Description**

Well stocked multi-aged mesic to dry-mesic hardwood stands comprising canopy trees of pole (10" to 14" dbh) and larger (e.g., 24" dbh) sugar maple, beech, red oak, and basswood occupy the rolling interior uplands of this park. Figure 1 above depicts the common forest stand structure away from the dense white cedar growth which clothes the park bluffs and fringes the interior hardwood forest. Large diameter sugar maples, red oaks and beech form the high canopy of the forest with smaller sugar maples, beech and ironwood comprising the codominant and understory species. Balsam fir and an occasional hemlock are scattered in low numbers as understory trees throughout the site. Ground cover plants are typical of upland dry-mesic / mesic forests in northern WI and here included large-leaved aster, white and red baneberry, wild leek, sweet cicely, downy yellow violet, wild oats, wild sarsaparilla, twisted stalk, zig-zag goldenrod, large-flowered trillium, and several woodland ferns, sedges, and grasses. The exception to the hardwood dominance in the interior of the park is the mature hemlock stand located along the park entrance road on the east side of the park (site of survey point # 10). This approximately 3 acre patch comprises 14"-22" dbh canopy forming hemlocks with a few scattered large

(up to 30" dbh) sugar maple and smaller beech. The understory and ground cover are sparse under the dense shade of the hemlocks.

**Results**

Door Bluff Headlands County Park was surveyed with 10 point counts on June 12, 2022, between 04:50 and 09:19. The locations of these 10 survey points are shown on the map below.

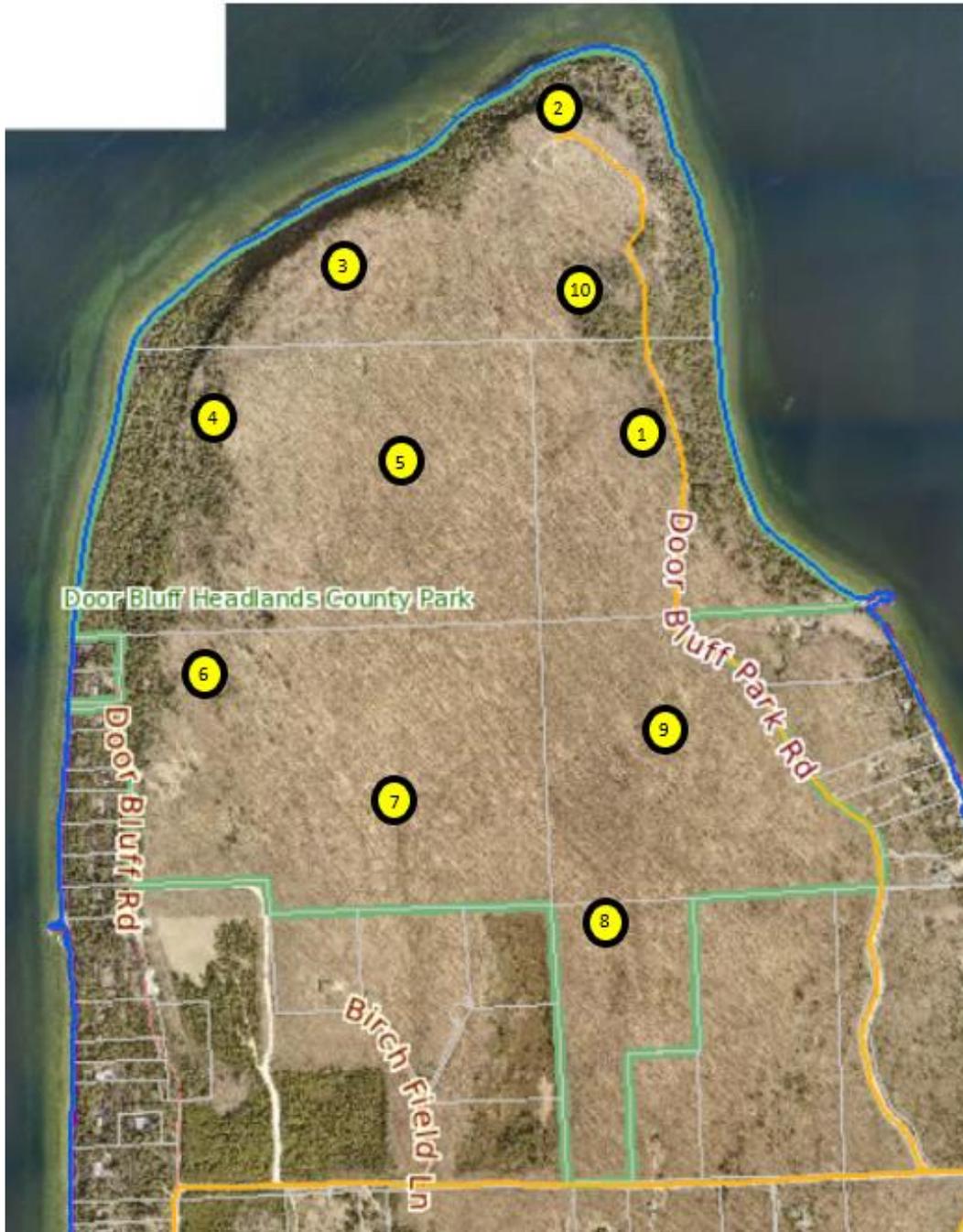


Figure 2. Door Bluff Headlands County Park, 252 acres, showing locations of the 10 bird survey points surveyed on June 12, 2022.

**Survey Results**

A total of 20 species were recorded from the 10 survey points, with the most frequently recorded species being red-eyed vireo, ovenbird, eastern wood pewee, great crested flycatcher, and black-throated green warbler. These species were recorded on over half the survey points. A complete list of the species found in the park are found in the tables below.

A total of 93 birds were recorded on the surveys.

**Survey Results Tables**

*Table 5. Species recorded at each survey point at Door Bluff Headlands County Park and frequency of occurrence*

DOOR BLUFF HEADLANDS	Points										Frequency points out of 10	Total
	1	2	3	4	5	6	7	8	9	10		
Species Recorded 20	1	2	3	4	5	6	7	8	9	10		
Red-eyed Vireo	3		3	3	4	3	3	3	3	2	9	27
Ovenbird	1	1	3	1	1	1	1	1	2		9	12
Eastern Wood-Pewee	1		1	1	1	1		1	1	1	8	8
Black-throated Green Warbler			1	1	1	3	1	1	2	1	8	11
Great Crested Flycatcher		1		1			1	1	1	1	6	6
Blue Jay			1		1				2	1	4	5
American Crow					1	1			1		3	3
Black-capped Chickadee			1			1				1	3	3
American Robin	1	1	1								3	3
Scarlet Tanager						1		1		1	3	3
American Redstart							1	2			2	3
Hairy Woodpecker							1	1			2	2
Brown Creeper			1			1					2	2
Red-bellied Woodpecker					1						1	1
Northern Flicker						1					1	1
Common Raven		2									1	2
White-breasted Nuthatch			1								1	1
Wood Thrush										1	1	1
Blackburnian Warbler										1	1	1
Northern Cardinal			1								1	1

*Table 6. Door Bluff Headlands, 2022 survey, species frequency of occurrence and total birds*

Common name	Frequency points out of 10	Total
Red-eyed Vireo	9	27
Ovenbird	9	12
Eastern Wood-Pewee	8	8

Black-throated Green Warbler	8	11
Great Crested Flycatcher	6	6
Blue Jay	4	5
American Crow	3	3
Black-capped Chickadee	3	3
American Robin	3	3
Scarlet Tanager	3	3
Hairy Woodpecker	2	2
Brown Creeper	2	2
American Redstart	2	3
Red-bellied Woodpecker	1	1
Northern Flicker	1	1
Common Raven	1	2
White-breasted Nuthatch	1	1
Wood Thrush	1	1
Blackburnian Warbler	1	1
Northern Cardinal	1	1

**Survey Point GPS Coordinates:**

*Table 7. GPS Points for 2022 survey points at Door Bluff Headlands County Park.*

GPS Coordinates for Points	Latitude	Longitude
1	45.2937	87.0592
2	45.2979	87.0607
3	45.296	87.0646
4	45.294	87.0677
5	45.2936	87.0637
6	45.2909	87.0675
7	45.2891	87.0642
8	45.2875	87.0603
9	45.2899	87.0591
10	45.29513	87.0601

**Additional Bird Data from Other Sources, Current and Historic:**

Two other available data sources were accessed to supply additional information on the summer birds of Door Bluff Headlands Park. On June 27, 2000, the author of this report conducted a similar June bird survey of Door Bluff Headlands for another project. The other data source is “eBird” an on-line data base of bird sightings submitted by birdwatchers and researchers throughout the world (<https://ebird.org/>). Door Bluff Headlands County Park is one of the sites which has data archived in ebird. Data from eleven observers contributed breeding season information to eBird for Door Bluff Headlands between 2017 and 2022.

Table 8. Breeding season species recorded from Door Bluff Headlands including historic, eBird and 2022 survey data.

Breeding season species recorded from Door Bluff Headlands 2000 - 2022	2000 survey	eBird (2017-2022); 11 Observers	2022 survey	Summary
Bald Eagle		x		x
Broad-wing Hawk		x		x
Mourning Dove		x		x
Ruby-throated hummingbird		x		x
Bank Swallow	x			x
Rough-winged swallow		x		x
Yellow-throated vireo		x		x
Red-eyed Vireo	x	x	x	x
Ovenbird	x		x	x
Eastern Wood-Pewee	x	x	x	x
Black-throated Green Warbler	x	x	x	x
Great Crested Flycatcher	x	x	x	x
Blue Jay	x		x	x
American Crow	x		x	x
Black-capped Chickadee		x	x	x
American Robin		x	x	x
Scarlet Tanager	x	x	x	x
Hairy Woodpecker	x	x	x	x
Brown Creeper			x	x
American Redstart		x	x	x
Downy woodpecker	x	x		x
Red-bellied Woodpecker		x	x	x
Northern Flicker	x		x	x
Common Raven	x	x	x	x
White-breasted Nuthatch			x	x
Eastern Bluebird		x		x
Wood Thrush			x	x
Pine Warbler		x		x
Blackburnian Warbler			x	x
Northern Cardinal		x	x	x
Cedar waxwing	x	x		x
Black and White Warbler		x		x
Rose-breasted Grosbeak	x	x		x
Chipping Sparrow		x		x
House Sparrow		x		x
House Finch		x		x
Veery	x			x

Winter wren	x			x
<b>Total Species</b>				<b>38</b>

**Discussion:**

The most often recorded birds in 2022 and the historic sources are indicative of the northern hardwood dominance of the forest in the park. These species include the red-eyed vireo, great-crested flycatcher, black-throated green warbler, and eastern wood pewee. These species favor larger blocks of intact, minimally disturbed upland hardwood forests with a range of size classes, i.e., from large diameter mature trees to smaller diameter understory or ‘sub-canopy’ trees.

The significant and high quality natural of the geological and biological features of this park warrant consideration as a State Natural Area, similar to the status given to Ellison Bluff and Meridian County Park / Harter-Matter Sanctuary. Aside from the presence of dame’s rocket the park has good ecological integrity and potential for several species of conservation significance. The major outcrops on the perimeter of the park, and perhaps more importantly, the small moss-covered outcrops in the interior of the park (Figure 3) provide habitat for a suite of rare land snails found elsewhere in Door County and should be surveyed.



*Figure 3. Small, moss draped outcropping of dolomite bedrock near Point 4, Door Bluff Headlands. Similar rock exposures are present throughout the upland forest near the periphery of the park, and inland from the major bluffs edging the headlands.*

Invasive species of concern for the park include dame’s rocket (*Hesperis matronalis*) was found throughout the northern and northeastern portions of the park particularly in the north central sections around survey point 3. Efforts should be undertaken to control the spread of this species in the park.

Lastly, with the recent expansion of the park on its southern border the park now lies close to lands owned by The Nature Conservancy and the Town of Liberty Grove. A public lands 'corridor' connecting the county park lands and TNC lands should be explored for both ecological and recreational goals.

## ELLISON BLUFF



*Figure 4. Early morning view over Green Bay from the top of a west facing bluff at Ellison Bluff County Park.*

### **Site Description:**

A high canopied mature or semi-mature stand of northern mesic or dry-mesic hardwoods occupy the inner northern sections of Ellison Bluff County Park. Here 12" to 20" dbh sugar maple, red oak and scattered white birch of similar size canopy over an understory of sugar maple, ironwood, beech, with scattered balsam fir and chokecherry. The southern portion of the park, away from the west and north facing bluff holds a forest of mixed conifers and hardwoods (e.g., Figure 5 below). Scattered white pine, eastern hemlock, and white cedar join with sugar maples and red oak to form a mixed canopy over a light shrub and sapling layer of balsam fir, ironwood, chokecherry, and leatherwood. The steep bluffs forming the perimeter of the park hold a mix of white cedar and mountain maple wherever these species can gain a root hold in the exposed bedrock and talus slopes.



*Figure 5. Forest structure at Survey Point 6.*

Forbs and northern forest grasses and sedges are found throughout the park with some of the more common species being large-flowered bellwort, large flowered trillium, wild geranium, zig-zag goldenrod, large-leaved aster, wild sarsaparilla, Canada mayflower, rice cut-grass, rose twisted stalk, Solomon's plume, bracken fern, yellow lady-slipper orchid, and Pennsylvania sedge. The non-native and invasive forget-me-not was found commonly in the northern and eastern parts of the park.

***Results:***

Ellison Bluff County Park was surveyed with 8 point counts on June 10, 2022, between 05:02 and 07:55. Locations of the 8 points are shown in Figure 6 below.



Figure 6. Ellison Bluff County Park, 174 acres, showing approximate location of the 8 bird survey points surveyed on June 10, 2022.

**Survey Results:**

A total of 26 species were recorded from the 8 survey points, with the most frequently recorded species being red-eyed vireo, American redstart, eastern wood pewee, great crested flycatcher, and black-throated green warbler. These species were recorded on over half the survey points. A complete list of the species found in the park are found in the tables below.

A total of 54 birds were recorded on the surveys.

**Survey results tables:**

*Table 9. 2022 survey results for each survey point, frequency of occurrence and total birds.*

ELLISON BLUFF 6/10/22	Survey Points								Frequency points out of 8	Total
	1	2	3	4	5	6	7	8		
Species Recorded 26										
Red-eyed Vireo	3	3	2	4	5	2	2	3	8	24
American Redstart	3	3	2	2	1	2	1	1	8	15
Eastern Wood-Pewee		1	1	2	2	1	1		6	8
Great Crested Flycatcher			1	1	2	1	1		5	6
Black-throated Green Warbler			1		1	1	3	3	5	9
Red-bellied Woodpecker	1	1	1	1					4	4
White-breasted Nuthatch		1		1			1	1	4	4
Black-capped Chickadee					1	1		1	3	3
Scarlet Tanager				1		1	1		3	3
Downy Woodpecker				2		1			2	3
Blue Jay			2		1				2	3
Mourning Dove		1							1	1
Chimney Swift					1				1	1
Yellow-bellied Sapsucker								1	1	1
Northern Flicker							1		1	1
Pileated Woodpecker		2							1	2
Yellow-throated Vireo						1			1	1
Red-breasted Nuthatch	1								1	1
Winter Wren								1	1	1
American Robin		1							1	1
Cedar Waxwing				3					1	3
Chipping Sparrow	1								1	1
Ovenbird					2				1	2
Black-and-white Warbler	1								1	1
Northern Cardinal								1	1	1
American Crow	1			1					1	1

*Table 10. Ellison Bluff County Park 2022 survey species, frequency of occurrence and total number of birds.*

ELLISON BLUFF 6/10/22	Frequency points out of 8	Total
Red-eyed Vireo	8	24
American Redstart	8	15
Eastern Wood-Pewee	6	8
Great Crested Flycatcher	5	6

Black-throated Green Warbler	5	9
Red-bellied Woodpecker	4	4
White-breasted Nuthatch	4	4
Black-capped Chickadee	3	3
Scarlet Tanager	3	3
Downy Woodpecker	2	3
Blue Jay	2	3
Mourning Dove	1	1
Chimney Swift	1	1
Yellow-bellied Sapsucker	1	1
Northern Flicker	1	1
Pileated Woodpecker	1	2
Yellow-throated Vireo	1	1
Red-breasted Nuthatch	1	1
Winter Wren	1	1
American Robin	1	1
Cedar Waxwing	1	3
Chipping Sparrow	1	1
Ovenbird	1	2
Black-and-white Warbler	1	1
Northern Cardinal	1	1
American Crow	1	1

**Point GPS Coordinates:**

*Table 11. Ellison Bluff 2022 survey point GPS coordinates.*

GPS Coordinates for Points	Latitude	Longitude
1	45.25725	-87.10713
2	45.25616	-87.10666
3	45.25811	-87.10265
4	45.25730	-87.09977
5	45.25636	-87.09666
6	45.25371	-87.10393
7	45.25133	-87.10554
8	45.25221	-87.10859

**Additional Bird Data from Other Sources; Current and Historic:**

Two other available data sources were accessed to supply additional information on the summer birds of Ellison Bluff County Park. On June 2, 2000, the author of this report conducted a similar June bird survey of Ellison Bluff for another project. The other data source is eBird. The table below summarizes data from this survey, the 2000 survey and eBird records.

Table 12. All breeding season species from historic, eBird and 2022 survey data for Ellison Bluff County Park.

Breeding season species recorded from Ellison Bluff 1999 - 2022	2000 survey	eBird (1999-2022); 23 observers	2022 survey	Summary
Bald Eagle		x		x
Turkey Vulture		x		x
Mourning Dove		x	x	x
Chimney Swift			x	x
Purple Martin		x		x
Rough-winged swallow	x			x
Yellow-throated vireo		x	x	x
Red-eyed Vireo	x	x	x	x
Eastern Phoebe	x			x
Least Flycatcher	x			x
Eastern Wood-Pewee	x		x	x
Eastern Kingbird		x		x
Great Crested Flycatcher	x	x	x	x
Blue Jay	x	x	x	x
American Crow	x	x	x	x
Common Raven		x		x
Black-capped Chickadee	x	x	x	x
American Robin	x	x	x	x
Scarlet Tanager	x	x	x	x
Hairy Woodpecker		x		x
House Wren		x		x
Brown Creeper		x		x
Yellow-bellied Sapsucker			x	x
Downy woodpecker		x	x	x
Pileated Woodpecker		x		x
Red-bellied Woodpecker		x	x	x
Northern Flicker		x	x	x
Blue-gray gnatcatcher		x		x
Red-breasted Nuthatch			x	x
White-breasted Nuthatch		x	x	x
Hermit Thrush		x		x
Wood Thrush	x			x
Gray Catbird		x		x
Northern Parula		x		x
Yellow Warbler		x		x
Chestnut-sided Warbler		x		x
Black-throated Green Warbler	x	x	x	x

American Redstart		x	x	x
Canada Warbler	x			x
Ovenbird	x	x	x	x
Black and White Warbler			x	x
Northern Cardinal		x	x	x
Cedar waxwing	x	x	x	x
Dickcissel		x		x
Rose-breasted Grosbeak	x	x		x
Clay-colored Sparrow		x		x
American Goldfinch		x		x
Chipping Sparrow			x	x
Winter wren	x		x	x
<b>Total Species</b>				<b>49</b>

**Discussion:**

The suite of birds most commonly found over the years in this park include the red-eyed vireo, great-crested flycatcher, scarlet tanager, black-throated green warbler, ovenbird, and eastern wood pewee. As with Door Bluff Headlands this group of species are characteristic of a mature or semi-mature upland northern hardwood forest.

Most of the species recorded from this park are typical hardwood forest dwelling species which is expected. The few grassland or open field associated species found in the eBird list, e.g., dickcissel, clay-colored sparrow, and purple martin were likely not found in the interior of the park but encountered at the shrubby edge to the forest, perhaps along the entrance road.

The Canada warbler found in 2000 in the park is a species of conservation significance due to its declining numbers over its range. Though not found in any surveys after the 2000 survey a follow-up survey in 2023 for this species might be warranted.

The non-native and invasive forget-me-not species (*Myosotis scorpioides*, *M. sylvatica* and/or *M. arvensis*) are present in scattered patches throughout the northeast sector of the park. It is considered a strong competitor to native wildflowers and can spread and occupy large areas of upland forest as it has in Peninsula State Park. Control measures are warranted for this species.

## Robert La Salle County Park



*Figure 7. View east over Lake Michigan from shore at Robert La Salle County Park; 6/1/2022.*

### ***Site Description:***

Robert La Salle County Park is a long narrow park that lies along the western shore of Lake Michigan in the Town of Clay Banks near the southern border of Door County. The wooded northern portion of the park which borders Lower La Salle Road holds dense pole-sized conifer plantations comprising white, red, and Scotch pine, white cedar, and Norway spruce. Adjacent to these conifer stands a hardwood forest of mixed age sugar maple and white birch climbs up the east facing slope lying west of the conifer plantation. The southern portion of the park straddles a steep wooded ravine holding an unnamed intermittent tributary to Lake Michigan. Beech, sugar maple and white birch cover the slopes of the ravine and the adjacent plateau in the park. Most trees are 6" – 10" in dbh though larger sugar maples to 20" are scattered through the stand. Large beech present appear to be stressed or dead due to beech bark disease.

The upper parts of the park along County U hold native open field wildflower plantings.

**Results:**

Robert La Salle County Park was surveyed on June 1, 2022 with 3 point counts between 05:13 and 06:01. These 3 points are shown on Figure 8. below.



Figure 8. Locations of the 3 survey points at La Salle County Park.

**Survey Results**

A total of 24 species were recorded from the 3 survey points, with the most frequently recorded species being red-eyed vireo, blue jay, American robin, American redstart, and indigo bunting. These species were recorded on all 3 survey points. A complete list of the species found in the park are found in the tables below.

A total of 55 birds were recorded on the surveys.

**Survey results tables:**

*Table 13. Species at each survey point, frequency of occurrence and total for 2022 survey, La Salle County Park.*

ROBERT LA SALLE COUNTY PARK 6/1/2022	Points			Frequency points out of 3	Total
	1	2	3		
Species Recorded 24					
Red-eyed Vireo	2	3	2	3	7
Blue Jay	1	1	1	3	3
American Robin	1	1	1	3	3
American Redstart	2	2	3	3	7
Indigo Bunting	2	1	1	3	4
Mourning Dove		1	1	2	2
Great Crested Flycatcher		1	1	2	2
Eastern Wood-Pewee		1	1	2	2
American Crow	2	1		2	3
House Wren		1	1	2	2
Chestnut-sided Warbler	1	1		2	2
Northern Cardinal	1	1		2	2
Red-winged Blackbird	3	2		2	5
Red-bellied Woodpecker			1	1	1
Common Raven	1			1	1
Black-capped Chickadee	1			1	1
Blue-gray gnatcatcher		1		1	1
Gray catbird			1	1	1
Cedar Waxwing		1		1	1
American Goldfinch		1		1	1
Ovenbird	1			1	1
Black-and-white Warbler	1			1	1
Canada Warbler		1		1	1
Chipping Sparrow	1			1	1

*Table 14. Species, frequency of occurrence and total birds recorded on 2022 survey, La Salle County Park.*

ROBERT LA SALLE COUNTY PARK 6/1/2022	Frequency points out of 3	Total Birds
Species Recorded 24		
Red-eyed Vireo	3	7
Blue Jay	3	3
American Robin	3	3
American Redstart	3	7
Indigo Bunting	3	4
Mourning Dove	2	2

Great Crested Flycatcher	2	2
Eastern Wood-Pewee	2	2
American Crow	2	3
House Wren	2	2
Chestnut-sided Warbler	2	2
Northern Cardinal	2	2
Red-winged Blackbird	2	5
Red-bellied Woodpecker	1	1
Common Raven	1	1
Black-capped Chickadee	1	1
Blue-gray gnatcatcher	1	1
Gray catbird	1	1
Cedar Waxwing	1	1
American Goldfinch	1	1
Ovenbird	1	1
Black-and-white Warbler	1	1
Canada Warbler	1	1
Chipping Sparrow	1	1

**Point GPS Coordinates:**

Table 15. GPS coordinates for the 2022 survey points, La Salle County Park.

GPS Coordinates for Points	Latitude	Longitude
1	44.69658	-87.36059
2	44.69368	-87.36251
3	44.69008	-87.36395

**Additional Bird Data from Other Sources; Current and Historic:**

Data from one other source (eBird) is included in the table below. The eBird data included data from 2009 to 2022, from 5 observers (<https://ebird.org/hotspot/L507018>). The table below summarizes this data.

Table 16. All breeding season species recorded from eBird and 2022 data, La Salle County Park.

Species Breeding season species recorded from Robert La Salle County Park 2009 - 2022	eBird; 5 Observers (2009 - 2022)	2022	Summary
Bald Eagle	x		x
Mourning Dove		x	x
Belted Kingfisher	x		x
Rough-winged swallow	x		x
Red-eyed Vireo	x		x

Eastern Wood-Pewee	x	x	x
Great Crested Flycatcher		x	x
Blue Jay	x	x	x
American Crow	x	x	x
Common Raven		x	x
Black-capped Chickadee	x	x	x
American Robin	x	x	x
House Wren	x	x	x
Red-headed Woodpecker	x		x
Red-bellied Woodpecker		x	x
Blue-gray gnatcatcher		x	x
Gray Catbird		x	x
Chestnut-sided Warbler		x	x
American Redstart	x	x	x
Canada Warbler		x	x
Ovenbird		x	x
Black and White Warbler		x	x
Northern Cardinal	x	x	x
Cedar waxwing	x	x	x
Indigo Bunting		x	x
Red-winged Blackbird		x	x
Song Sparrow	x		x
American Goldfinch		x	x
Chipping Sparrow		x	x
House Finch	x		x
<b>Total Species</b>			<b>30</b>

**Discussion:**

For its small size Robert La Salle Park has a fairly good diversity of species. The Canada warbler was the most significant species found in the survey. It was singing from the dense conifer plantation in the northern end of the park. It should be noted that a singing male, as in this case, does not prove the species is breeding successfully in the area where it is found. It indicates this individual bird in holding a territory in what it considers suitable habitat.

Small patches of garlic mustard (*Allaria petiolate*) were found along the trail in the conifer plantings at the north end of the park. The patches were small enough that hand pulling could be an effective control at this point. However, it wasn't determined if there were other patches off trail.

## Meridian County Park and Harter-Matter Sanctuary



*Figure 9. Survey point 1 showing complex forest structure with abundant coarse downed wood.*

### **Site description:**

Meridian County Park and the Harter-Matter Sanctuary occupy the isthmus between the southern shore of Kangaroo Lake and Lake Michigan and holds a mix of high-quality habitats. Much of the site is dominated by wooded sand dunes and ridges and the associated swale wetlands characteristic of the ridge-swale complexes in Door County. The Meridian County Park ridge and swale complex follows the arcing contour of a slight bay of Lake Michigan and parallels Highway 57 running along the park's southern border.

Distinctive habitats comprising the park include the dry-mesic forest of the high sand dunes at the north edge of the park, a calcareous wetland complex in the western portion of the park, a transitional forest of wet-mesic to mesic conditions between the ridge and swale wetlands and the drier conditions on the high sand dunes, and a small example (Figure 9) of an upland conifer forest common on thinned soiled sites on the dolomite bedrock of the county. The locations of these habitat types are sketched on the map in Figure 10 below.

The wooded sand dunes at the southern end of Kangaroo Lake rise to 60 feet above the level of Kangaroo Lake with a typical gently sloping windward side (towards Lake Michigan) and a more steeply sloping downwind side (facing Kangaroo Lake). The canopy trees are a mixture of sugar maple, beech,

and hemlock with the occasional black cherry and white ash. The understory varies from sparse to moderately dense and is composed of sugar maple and beech saplings with scattered balsam fir and hemlock. These dunes had, until the mid-1990's, an abundance of Canada yew in the understory particularly on the lower (i.e., moister) portion of the dunes. Currently Canada yew is uncommon in the park. The cause for the disappearance of this species is unclear, however eradication by deer browsing is suspected.



Figure 10. Approximation of habitat locations in Meridian and Harter-Matter Sanctuary County Parks.

The small area of perched escarpment forest on the west edge of the park is dominated with conifer species (white pine, balsam fir, white cedar, and hemlock) with scattered white birch, sugar maple and dead or stressed ash. Small treeless openings with abundant downed woody material punctuate the standing forest giving the area a high structural complexity providing habitat for several species of northern forest birds.

The open wetlands of Harter-Matter Sanctuary are of two types. The ephemeral marly bottomed southern section holds emergent bullrushes, reed canary grass, horsetail, and scattered blue-flag iris. The northern section has a permanent open water pond surrounded by northern shrub fen associated species.

**Results:**

Meridian County Park and the Harter-Matter Sanctuary were surveyed with 8 point counts on June 13, 2022. Figure 11 below shows the locations of these eight points.

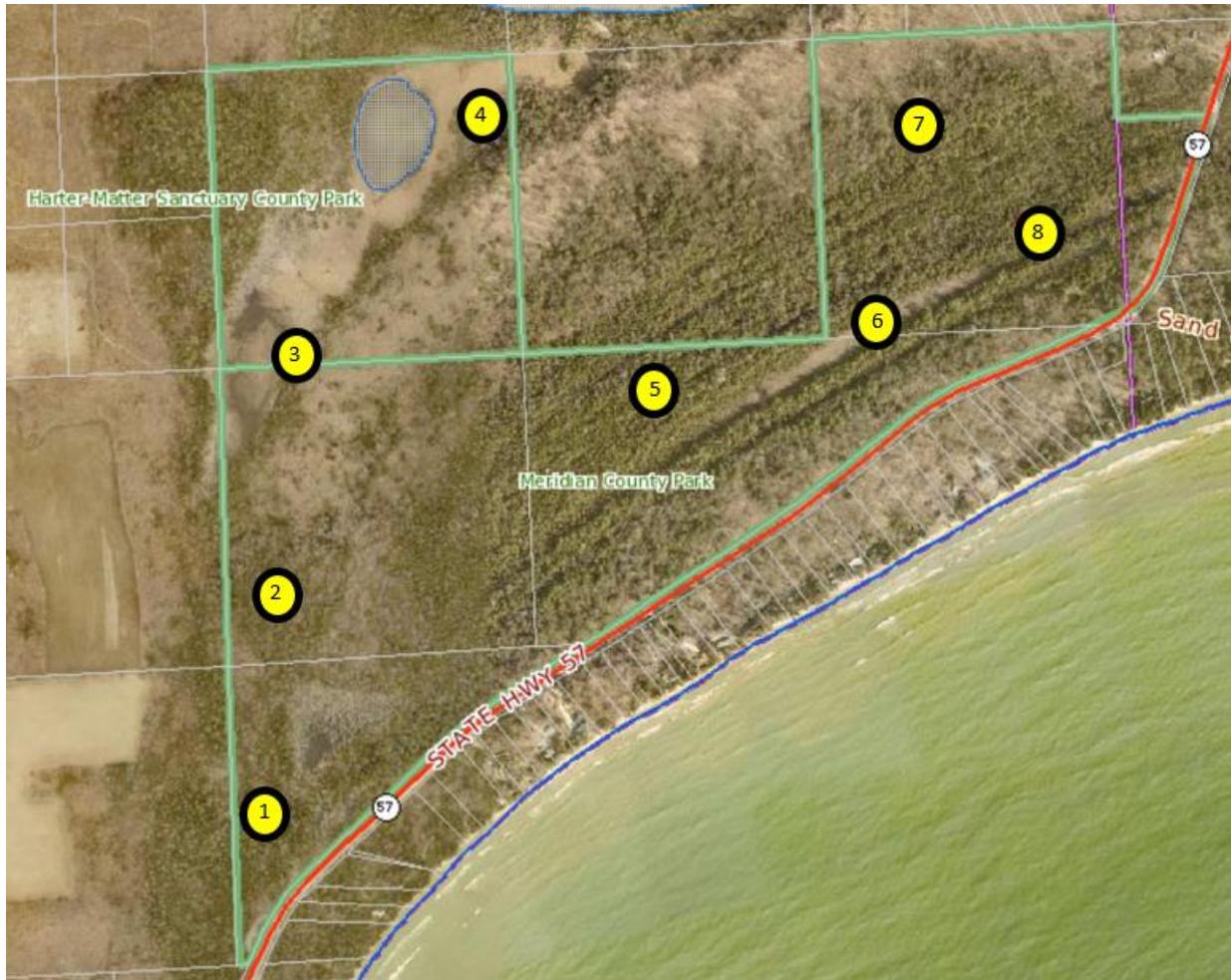


Figure 11. Meridian County Park, 155 acres, and Harter Matter Sanctuary County Park, 40 acres, showing approximate location of 8 survey points.

**Survey Results**

A total of 38 species were recorded from the 8 survey points, with the most frequently recorded species being blue jay, ovenbird, black-throated green warbler, red-eyed vireo, American crow, hermit thrush, red-winged blackbird, black and white warbler and northern waterthrush. These species were recorded on over half the survey points. A complete list of the species found in the park are found in the tables below.

A total of 136 birds were recorded on the surveys.

**Survey results tables**

*Table 17. Species at each survey point, frequency of occurrence, and total number for 2022 survey, Meridian, and Harter-Matter Sanctuary County Park.*

MERIDIAN and HARTER-MATTER SANCTUARY COUNTY PARK 6/13/22	POINTS								Frequency points out of 8	Total
	1	2	3	4	5	6	7	8		
<b>Species Recorded 38</b>										
Blue Jay	1	1	1		1	1	1	1	7	7
Ovenbird	2	3	3		2	1	2	1	7	14
Black-throated Green Warbler	3	1	1	1	1		1	2	7	10
Red-eyed Vireo		3	1	2		2	3	1	6	12
American Crow	1		2	1		1	1	1	6	7
Hermit Thrush	1	1	1	1			2		5	6
Red-winged Blackbird			1	2	1	3		1	5	8
Black-and-white Warbler			2	1	1	1		1	5	6
Northern Waterthrush			1	1	1	2		2	5	7
Mourning Dove		1	1	2		1			4	5
Veery	1	1	1					1	4	4
Hairy Woodpecker			1	1	1				3	3
Red-bellied Woodpecker	1	1				1			3	3
Black-capped Chickadee			1	2			1		3	4
American Robin		1		1	1				3	3
Common Yellowthroat			1	1		1			3	3
American Redstart	1		1	1					3	3
Canada Warbler					1	1		1	3	3
Northern Cardinal	1				1	1			3	3
Pied-billed Grebe			2	1					2	3
Great Crested Flycatcher	1		1						2	2
Eastern Wood-Pewee			1	1					2	2
American Goldfinch				1	1				2	2
Blackburnian Warbler		2							2	2
Mallard								1	1	1
Wild Turkey	1								1	1
Sora Rail						1			1	1
Northern Flicker		1							1	1
Eastern Kingbird				1					1	1
Yellow-throated Vireo		1							1	1
Northern Raven		1							1	1
White-breasted Nuthatch			1						1	1
House Wren				1					1	1
Brown Creeper					1				1	1

Cedar Waxwing								1	1	1
Swamp Sparrow			1						1	1
Mourning Warbler		1							1	1
Northern Parula Warbler	1								1	1

Table 18. Species recorded, frequency of occurrence and total for 2022 survey, Meridian and Harter-Matter Sanctuary County Park.

<b>MERIDIAN and HARTER-MATTER SANCTUARY COUNTY PARKS 6/13/22</b>	<b>Frequency points out of 8</b>	<b>Total</b>
Blue Jay	7	7
Ovenbird	7	14
Black-throated Green Warbler	7	10
Red-eyed Vireo	6	12
American Crow	6	7
Hermit Thrush	5	6
Red-winged Blackbird	5	8
Black-and-white Warbler	5	6
Northern Waterthrush	5	7
Mourning Dove	4	5
Veery	4	4
Hairy Woodpecker	3	3
Red-bellied Woodpecker	3	3
Black-capped Chickadee	3	4
American Robin	3	3
Common Yellowthroat	3	3
American Redstart	3	3
Canada Warbler	3	3
Northern Cardinal	3	3
Pied-billed Grebe	2	3
Great Crested Flycatcher	2	2
Eastern Wood-Pewee	2	2
American Goldfinch	2	2
Blackburnian Warbler	2	2
Mallard	1	1
Wild Turkey	1	1
Sora Rail	1	1
Northern Flicker	1	1
Eastern Kingbird	1	1
Yellow-throated Vireo	1	1
Northern Raven	1	1

White-breasted Nuthatch	1	1
House Wren	1	1
Brown Creeper	1	1
Cedar Waxwing	1	1
Swamp Sparrow	1	1
Mourning Warbler	1	1
Northern Parula Warbler	1	1

**Point GPS Coordinates:**

Table 19. GPS coordinates for 2022 survey points, Meridian and Harter-Matter Sanctuary County Park.

GPS Coordinates for Points	Latitude	Longitude
1	45.00567	-87.16177
2	45.00862	-87.16714
3	45.01130	-87.16557
4	45.01438	-87.16141
5	45.01133	-87.15934
6	45.01160	-87.15607
7	45.01415	-87.15476
8	45.01265	-87.15300

**Additional Bird Data from Other Sources; Current and Historic:**

Data from two other sources, eBird from 5 observers between 2015 and 2022, and surveys the author conducted at the park in 2005. The eBird data included data from 5 observers (<https://ebird.org/hotspot/L252146>). The table below summarizes this data.

Table 20. All breeding season species recorded from historic, eBird, and 2022 survey, Meridian and Harter-Matter Sanctuary County Park.

Species	2005	eBird 2015 - 2022; 5 observers	2022	Summary
American Crow	x		x	x
American Goldfinch	x	x	x	x
American Redstart	x		x	x
American Robin	x		x	x
Barn Swallow		x		x
Belted Kingfisher	x	x		x
Black-and-white Warbler		x	x	x
Blackburnian Warbler		x	x	x
Black-capped Chickadee	x		x	x
Black-throated Green Warbler	x		x	x

Blue Jay	x		x	x
Bobolink		x		x
Broad-winged hawk		x		x
Brown Creeper	x		x	x
Canada Warbler	x		x	x
Cedar Waxwing	x	x	x	x
Common Yellowthroat	x		x	x
Common Merganser		x		x
Double-crested cormorant	x			x
Eastern Wood-Pewee	x	x	x	x
Gray Catbird		x		x
Great Crested Flycatcher	x	x	x	x
Hairy Woodpecker	x		x	x
Hermit Thrush		x	x	x
House Wren			x	x
Indigo Bunting		x		x
Mallard			x	x
Mourning Dove	x	x	x	x
Mourning Warbler			x	x
Northern Cardinal	x		x	x
Northern Flicker	x		x	x
Northern Parula			x	x
Northern Raven		x	x	x
Northern Shoveler	x			x
Northern Waterthrush	x		x	x
Ovenbird	x	x	x	x
Phoebe		x		x
Pied-billed Grebe	x		x	x
Pileated Woodpecker		x		x
Purple Martin		x		x
Red-bellied Woodpecker		x	x	x
Red-breasted Merganser		x		x
Red-eyed Vireo	x		x	x
Red-headed Woodpecker		x		x
Red-winged Blackbird	x	x	x	x
Rose-breasted Grosbeak	x	x		x
Ruffed Grouse		x		x
Sandhill Crane	x			x
Scarlet Tanager		x		x
Sora Rail			x	x
Song Sparrow	x	x		x
Swamp Sparrow	x		x	x
Turkey Vulture	x			x

Veery	x		x	x
White-breasted Nuthatch			x	x
White-throated Sparrow		x		x
Wild Turkey		x	x	x
Winter Wren	x	x		x
Wood Thrush		x		x
Yellow Warbler		x		x
Yellow-billed cuckoo		x		x
Yellow-throated Vireo			x	x
<b>Total Species</b>				<b>62</b>

**Discussion:**

Meridian County Park and the Harter-Matter Sanctuary is a landscape of high habitat diversity. Emergent marshes (Figure 12), upland dry-mesic hardwood forest and wet-mesic conifer stands (Figure 13) all in close proximity create a landscape of ecological complexity and interest.



*Figure 12. Emergent marsh occupying the large swale near the center of the park near survey point 6.*



Figure 13. Typical white cedar swamp / wet-mesic forest near point 7.

This habitat complexity of the park is the likely cause for the high number of species diversity recorded in the park. Species of particular conservation importance for their rarity or documented recent decline over their range include the Canada warbler, wood thrush, veery and yellow-billed cuckoo.

The invasive non-native plant species of concern found in the park is the forget-me-not (*Myosotis spp*). It is present along the trail leading into the park from the wayside parking area and to a lesser degree above the bedrock ledge near the parking area. This species appears to be expanding out from the wayside into forest above and below escarpment to an alarming degree. Efforts (pulling, herbicide or propane wand torch) should be made to control this species.

Other biological recommendations for this park include a) surveying the east facing outcrop in the western portion of the park for rare land snails, b) survey the wetlands, particularly the open water areas of the swales for dragonflies, focusing on the Hine's emerald dragonfly (federally endangered species found in similar habitat at the Ridges Sanctuary), and c) survey the ridge and swale area for the presence of rare flora, especially orchids.

## Sugar Creek County Park



*Figure 14. Typical structure of interior forest in eastern portions of Sugar Creek County Park. Photo taken near survey point 3, June 11, 2022.*

### **Site Description:**

Sugar Creek County Park comprises 40 acres of woodland on a gradual west facing slope adjacent to Green Bay. Sugar Creek, a perennial stream, flows through the park emptying into the bay within the park.

Aside from the parking area the majority of the park holds some type of forest cover, transitioning from a wet-mesic hardwood stand bordering the creek to more mesic conditions upslope in the eastern portion of the park. Dead or stressed pole ash (probably mostly green ash) mix with patches of white cedar under scattered larger cottonwoods near the creek. Further east the forest cover transitions quickly to a northern hardwood stand of 12" – 20" dbh sugar maple with lesser numbers of basswood and a few live ash (white?). Balsam fir and white cedar in the understory provide a conifer component to the stand but are few and scattered widely. The understory is open with few saplings or shrubs (Figure 14). The ground cover is sparse to continuous and comprises typical northern forest species. Bedrock outcropping is present but low in stature and widely scattered.

**Results:**

Sugar Creek County Park was surveyed with 4 point counts on June 11, 2022, between 04:48 and 06:02. The 4 points are shown on the map below (Figure 15).

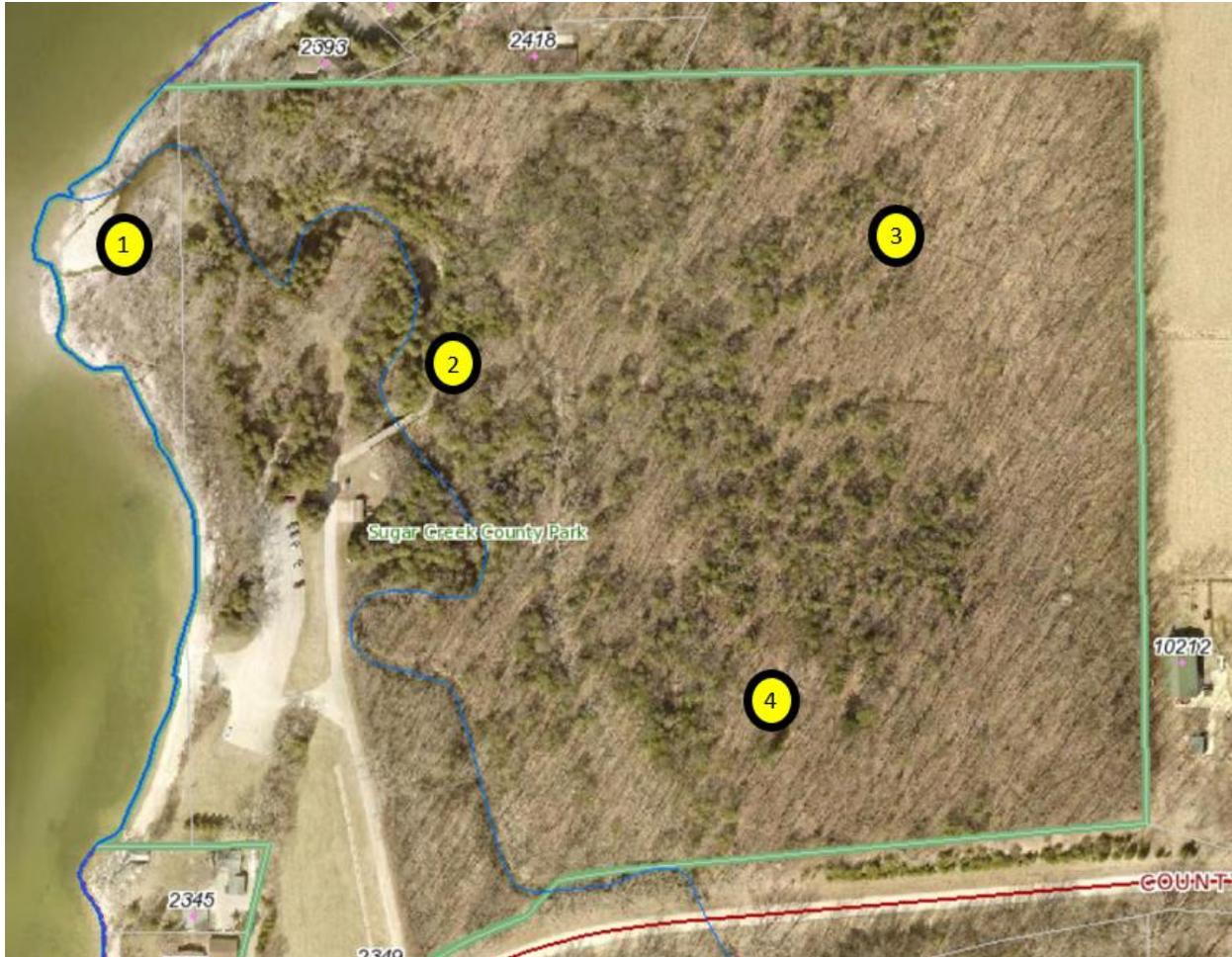


Figure 15. Sugar Creek County Park, 40 ac, showing location of 4 June bird survey points.

**Site Survey Results**

A total of 22 species were recorded from the 4 survey points, with the most frequently recorded species being eastern wood-pewee, red-eyed vireo, and American crow. These species were recorded on 3 out of the 4 points. A complete list of the species found in the park are found in the tables below.

A total of 130 birds were recorded on the surveys, with 85 of those birds being white pelicans which were roosting just offshore of the park beyond the mouth of the creek.

Table 21. Species at each survey point, frequency of occurrence and total for 2022 survey, Sugar Creek County Park.

SUGAR CREEK 6/11/22	POINTS				Frequency points out of 4	Total
	1	2	3	4		
Species Recorded 22						
Eastern Wood-Pewee		1	1	1	3	3

Red-eyed Vireo		2	4	3	3	9
American Crow	1	2		2	3	5
Red-bellied Woodpecker		1	1		2	2
Hairy Woodpecker			1	1	2	2
Northern Flicker		1		1	2	2
Great Crested Flycatcher		1		1	2	2
Blue Jay		2	2		2	4
White-breasted Nuthatch		1		1	2	2
Scarlet Tanager			1	1	2	2
Red-breasted Nuthatch		1			1	1
Great Blue Heron	1				1	1
Cooper's Hawk		1			1	1
White Pelican	85				1	85
Yellow-billed Cuckoo			2		1	2
Black-capped Chickadee		1			1	1
House Wren	1				1	1
American Robin		1			1	1
Song Sparrow	1				1	1
Northern Parula Warbler			1		1	1
Northern Cardinal	1				1	1
Indigo Bunting				1	1	1

Table 22. Species, frequency of occurrence and total number of birds recorded from 2022 survey, Sugar Creek County Park.

<b>SUGAR CREEK 6/11/22</b>	Frequency points out of 4	Total
<b>Species Recorded 22</b>		
Eastern Wood-Pewee	3	3
Red-eyed Vireo	3	9
American Crow	3	5
Red-bellied Woodpecker	2	2
Hairy Woodpecker	2	2
Northern Flicker	2	2
Great Crested Flycatcher	2	2
Blue Jay	2	4
White-breasted Nuthatch	2	2
Scarlet Tanager	2	2
Red-breasted Nuthatch	1	1
Great Blue Heron	1	1
Cooper's Hawk	1	1
White Pelican	1	85
Yellow-billed Cuckoo	1	2
Black-capped Chickadee	1	1

House Wren	1	1
American Robin	1	1
Song Sparrow	1	1
Northern Parula warbler	1	1
Northern Cardinal	1	1
Indigo Bunting	1	1

**Point GPS Coordinates:**

Table 23. GPS coordinates for 2022 survey points, Sugar Creek County Park.

GPS Coordinates for Points	Latitude	Longitude
1	44.78841	-87.66089
2	44.78772	-87.65890
3	44.78838	-87.65651
4	44.78665	-87.65791

**Additional Bird Data from Other Sources; Current and Historic:**

Data from one other source (eBird) is included in the table below. The eBird data included data from 2018, from 2 observers (<https://ebird.org/hotspot/L2197811>). The table below summarizes this data.

Table 24. Breeding season data from eBird and 2022 survey data, Sugar Creek.

Specie Breeding season species recorded from Sugar Creek County Park 2018 and 2022	eBird (2018); 2 Observers	2022	Summary
Eastern Wood-Pewee		x	x
Red-eyed Vireo		x	x
American Crow		x	x
Red-bellied Woodpecker		x	x
Hairy Woodpecker		x	x
Northern Flicker		x	x
Great Crested Flycatcher		x	x
Willow Flycatcher	x		x
Blue Jay		x	x
White-breasted Nuthatch		x	x
Scarlet Tanager		x	x
Red-breasted Nuthatch		x	x
Great Blue Heron		x	x
Cooper's Hawk		x	x

White Pelican		x	x
Yellow-billed Cuckoo	x	x	x
Black-billed Cuckoo	x		x
Black-capped Chickadee		x	x
House Wren		x	x
American Robin		x	x
Song Sparrow		x	x
Northern Parula		x	x
Northern Cardinal		x	x
Indigo Bunting		x	x
Orchard Oriole	x		
<b>Total</b>			<b>25</b>

**Site Discussion:**

An important conservation species noted from this site both in the 2018 eBird data and during the 2022 survey is the yellow-billed cuckoo. This bird is a species of regional conservation concern for the Upper Mississippi / Great Lakes Joint Venture program due to its decline population levels in this region.

Interesting more southern species that have been found in the park include the orchard oriole and willow flycatcher.

The upland forest of the eastern portion of Sugar Creek County Park comprises few if any small trees below 6 feet in height and has only scattered or sparse growth of woodland forbs (Figure 16).



Figure 16. Survey Point 2 showing lack of understory and sparse ground cover.

This condition is indicative of heavy browsing pressure from deer and is a common condition in unharvested and recently harvested upland forests of Door County. The WDNR's "Door County Forest Regeneration 2021 County Deer Advisory Report" of March 2022 indicates "that recently harvested stands in Door County are not meeting seedling and sapling regeneration guidelines on 94% of the observed stands" (WDNR, 2022 p. 7). To facilitate tree seedling and sapling survival, as well as resurgence of native ground cover forbs (i.e., wildflowers) the placement of deer exclosures throughout this upland stand as both an effort to support young tree survival and as educational tool might be considered. The lack of regionally common ground nesting birds (e.g., ovenbird, mourning warbler, Nashville warbler, wood thrush) detected in Sugar Creek County Park may be due the lack of understory cover for these species.

## Forestville Dam



*Figure 17. Near survey point 1, June 8, 2002.*

### ***Site Description:***

This site has a mix of widely different habitat types. Open water edged by an extensive emergent marsh occupies the basin of the millpond, a wet-mesic forest stand of small diameter (4" to 8" dbh) white cedar, white birch, trembling aspen, and dead green ash lies south of the millpond berm, and a floodplain swamp comprising 4" to 10" dead or stressed green ash over a solid stand of wetland sedges and forbs occupies the land between the cedar swamp and the Ahnapee River. The knee-high ground covering sedges, grasses and forbs of the floodplain forest bordering the river holds several species indicative of a high-quality natural area.

**Results:**

Forestville Dam County Park was surveyed with 3 point counts on June 8, 2022, between 04:52 and 05:49. The location of the 3 survey points are shown on Figure 18 below.



Figure 18. Forestville Dam County Park, 79 acres, showing location of 3 June bird survey points.

**Survey Results:**

A total of 38 species were recorded from the 3 survey points (Figure 18), with the most frequently recorded species being the common yellowthroat which was found on all three points. Other common species (those found on 2 of the 3 points) included green heron, great-crested flycatcher, American crow, black-capped chickadee, American robin, and red-winged blackbird. A complete list of the species found in the park is found in the tables below.

A total of 69 birds were recorded on the surveys.

**Survey Results Tables:**

*Table 25. Species at each 2022 survey point, frequency of occurrence and totals for each species, Forestville Dam.*

<b>FORESTVILLE DAM 6/8/22</b>	<b>POINTS</b>			<b>Frequency points out of</b>	
<b>Species Recorded 38</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>Total</b>
Common Yellowthroat	2	1	1	3	4
Green Heron	1		1	2	2
Great Crested Flycatcher		1	1	2	2
American Crow	1		3	2	4
Black-capped Chickadee		1	1	2	2
American Robin	2	1		2	3
Red-winged Blackbird	3		1	2	4
Canada Goose	7			1	7
Wood Duck	5			1	5
Blue-winged Teal	1			1	1
Mallard			1	1	1
Wild Turkey	1			1	1
Black-billed Cuckoo	1			1	1
Pied-billed grebe	1			1	1
Great Blue Heron		2		1	2
Mourning Dove			1	1	1
Hairy Woodpecker			1	1	1
Pileated Woodpecker			1	1	1
Eastern Wood-Pewee			1	1	1
Phoebe	1			1	1
Red-eyed Vireo			1	1	1
Blue Jay	1			1	1
Tree Swallow		1		1	1
Purple Martin	4			1	4
Red-breasted Nuthatch		1		1	1
House Wren			1	1	1
Cedar Waxwing			1	1	1
Red-eyed Vireo			1	1	1
Song Sparrow			2	1	2
Swamp Sparrow	1			1	1
American Goldfinch			1	1	1
Black-and-white Warbler	1			1	1
Mourning Warbler			1	1	1
Northern Waterthrush			2	1	2
Black-throated Green Warbler		1		1	1
Northern Cardinal		1		1	1

Rose-breasted Grosbeak			1	1	1
Indigo Bunting			2	1	2

Table 26. Species, frequency of occurrence and totals for each species, 2022 survey, Forestville Dam.

<b>FORESTVILLE DAM 6/8/22</b>	Frequency	
<b>Species Recorded 38</b>	points out	Total
	of 3	
Common Yellowthroat	3	4
Green Heron	2	2
Great Crested Flycatcher	2	2
American Crow	2	4
Black-capped Chickadee	2	2
American Robin	2	3
Red-winged Blackbird	2	4
Canada Goose	1	7
Wood Duck	1	5
Blue-winged Teal	1	1
Mallard	1	1
Wild Turkey	1	1
Black-billed Cuckoo	1	1
Pied-billed grebe	1	1
Great Blue Heron	1	2
Mourning Dove	1	1
Hairy Woodpecker	1	1
Pileated Woodpecker	1	1
Eastern Wood-Pewee	1	1
Phoebe	1	1
Red-eyed Vireo	1	1
Blue Jay	1	1
Tree Swallow	1	1
Purple Martin	1	4
Red-breasted Nuthatch	1	1
House Wren	1	1
Cedar Waxwing	1	1
Red-eyed Vireo	1	1
Song Sparrow	1	2
Swamp Sparrow	1	1
American Goldfinch	1	1
Black-and-white Warbler	1	1
Mourning Warbler	1	1
Northern Waterthrush	1	2
Black-throated Green Warbler	1	1

Northern Cardinal	1	1
Rose-breasted Grosbeak	1	1
Indigo Bunting	1	2

**Point GPS Coordinates:**

*Table 27. GPS coordinates for the 2022 survey points, Forestville Dam.*

GPS Coordinates for Points	Latitude	Longitude
1	44.69266	-87.49197
2	44.69144	-87.49220
3	44.69142	-87.49003

**Additional Bird Data from Other Sources; Current and Historic:**

Data from one other source (eBird) is included in the table below. The eBird data included data from 2020 - 2022, from 9 observers (<https://ebird.org/hotspot/L252139>). The table below summarizes this data.

*Table 28. Breeding season species data from eBird and 2022 survey, Forestville Dam.*

Species	eBird 2020 - 2022; 8 observers	2022	Summary
American Crow	x	x	x
American Goldfinch	x	x	x
American Robin	x	x	x
Bald Eagle	x		x
Baltimore Oriole	x		x
Bank Swallow	x		x
Barn Swallow	x		x
Belted Kingfisher	x		x
Black-and-white Warbler		x	x
Black-billed Cuckoo		x	x
Black-capped Chickadee		x	x
Black-throated Green Warbler		x	x
Blue Jay	x	x	x
Blue-winged Teal		x	x
Brown-headed Cowbird	x		x
Canada Goose	x	x	x
Caspian Tern	x		x
Cedar Waxwing	x	x	x
Chimney Swift	x		x

Chipping Sparrow	x		x
Cliff Swallow	x		x
Common Grackle	x		x
Common Yellowthroat	x	x	x
Downy Woodpecker	x		x
Eastern Kingbird	x		x
Eastern Starling	x		x
Eastern Wood-Pewee	x	x	x
Gray Catbird	x		x
Great blue Heron	x	x	x
Great Crested Flycatcher	x	x	x
Green-backed Heron	x		x
Hairy Woodpecker	x	x	x
Herring Gull	x		x
House Wren	x	x	x
Indigo Bunting	x	x	x
Killdeer	x		x
Lesser Scaup	x		x
Mallard	x	x	x
Merlin	x		x
Mourning Dove	x	x	x
Mourning Warbler		x	x
Northern Cardinal	x	x	x
Northern Flicker	x		x
Northern Harrier	x		x
Northern Raven	x		x
Northern Shoveler	x		x
Northern Waterthrush		x	x
Osprey	x		x
Phoebe		x	x
Pied-billed Grebe	x	x	x
Pileated Woodpecker		x	x
Purple Martin	x	x	x
Red-bellied Woodpecker	x		x
Red-breasted Nuthatch		x	x
Red-eyed Vireo	x	x	x
Red-shouldered Hawk	x		x
Red-winged Blackbird	x	x	x
Rose-breasted Grosbeak		x	x
Sandhill Crane	x		x
Song Sparrow	x	x	x
Spotted Sandpiper	x		x
Swamp Sparrow		x	x

Tree Swallow	x	x	x
Turkey Vulture	x		x
White Pelican	x		x
White-breasted Nuthatch	x		x
Wild Turkey	x	x	x
Wood Duck	x	x	x
Yellow Warbler	x		x
Yellow-crowned Night Heron	x		x
<b>Total Species</b>			<b>70</b>

**Discussion:**

The mix of habitat types and the structural and compositional complexity of the riparian forest below the millpond resulted in a high bird diversity for this site. The adjacency of the park to the open water of the millpond accounts for the large number of wetland and open water species recorded from this site. The yellow-crowned night heron, a very rare bird in the state of Wisconsin was seen along the Ahnapee River in mid-summer 2022 by several birders. It is unclear why the bird showed up at this site.

The high-quality sedge meadow found in the floodplain forest of dead ash surrounding point 3 west of the Ahnapee River (Figure 19) merits a through plant inventory for possible rare species. It would also be worthwhile to document the site’s current floristic composition and stand structure as a ‘baseline’ from which to monitor its transition to another forest community following the rapid death of the overstory ash. This question of what will follow the death of ash in these floodplain or lowland forests is a regional management question. This information gathered now from this high-quality undisturbed site before the trees begin to fall and the stand structure disintegrates may provide insights or guidance to forest managers in the region.



*Figure 19. Habitat of survey point 3; a wide floodplain stand of dead and stressed ash with lush groundcover of tall sedges, grasses and wetland forbs.*

## Cave Point County Park



*Figure 20. Typical forest structure of Cave Point County Park west of Schauer Road.*

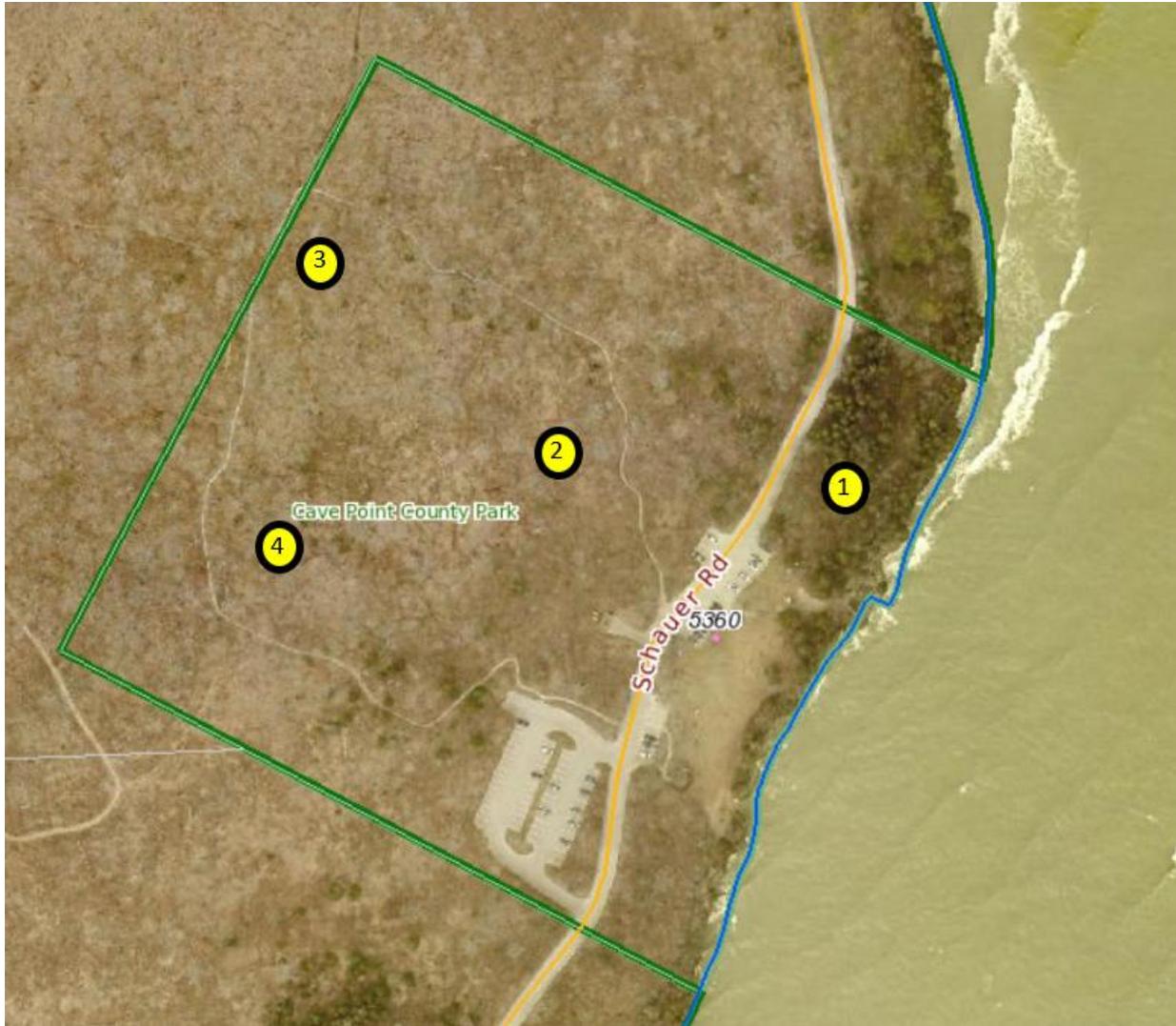
### **Site Description:**

Near the shore, at the first survey point this site is occupied by a low, light canopied upland forest stand of young balsam fir, white cedar, trembling aspen, and white birch with a variably dense shrub layer comprising thimble berry and non-native honeysuckle. Further inland, i.e., west of Schauer Road, widely scattered mature or semi-mature (16" – 20" dbh) sugar maple form a thin canopy over a moderately dense shrub and sapling layer of sapling beech, young ironwood, and sugar maple (Figure xx). Ground cover is dense throughout this stand consisting of spring ephemeral forbs (e.g., wild sarsaparilla, white trillium, blue cohosh, sweet cicely, downy yellow violet, and others), along with a mix of woodland ferns, sedges, and grasses. Some areas, particularly the south and west portions, of the park hold a dense shrub layer of thimble berry, raspberry, and non-native honeysuckle.

Garlic mustard is present along the trail in the southwest portion of the park.

**Results:**

Cave Point County Park was surveyed with 4 point counts on June 7, 2022, between 04:55 and 06:00. The location of these survey points is shown on Figure 21 below.



*Figure 21. Cave Point County Park, about 17 acres of suitable habitat, showing approximate location of 3 June bird survey points.*

A total of 19 species were recorded from the 4 survey points, with the most frequently recorded species being the red-eyed vireo which was heard on all 4 points. Other common species (those found on 3 of the 4 points) included blue jay, black-capped chickadee, ovenbird, American redstart, northern cardinal, mourning warbler and the indigo bunting. A complete list of the species found in the park is found in the tables below.

A total of 54 birds were recorded on the surveys.

**Survey Results Tables:**

*Table 29. Species at each point, frequency of occurrence and total birds for 2022 survey, Cave Point County Park.*

CAVE POINT 6/7/22	Points				Frequency points out of	
Species Recorded 19	1	2	3	4	4	Total
Red-eyed Vireo	2	2	2	2	4	8
Blue Jay	1	1		2	3	4
Black-capped Chickadee	1	1		1	3	3
Ovenbird		1	4	2	3	7
American Redstart	3		1	2	3	6
Northern Cardinal	1	1		1	3	3
Mourning Warbler		1	2	1	3	4
Indigo Bunting	1	1		1	3	3
Pileated Woodpecker		1	1		2	2
American Robin	1	1			2	2
Chestnut-sided warbler		1		1	2	2
Northern Parula warbler	1	1			2	2
Common Yellowthroat			1	1	2	2
Ruffed Grouse		1			1	1
Red-bellied Woodpecker				1	1	1
Hairy Woodpecker		1			1	1
Red-breasted Nuthatch		1			1	1
House Wren	1				1	1
Wood Thrush		1			1	1

*Table 30. Species, frequency of occurrence and total number for 2022 survey, Cave Point.*

CAVE POINT 6/7/22	Frequency points out of 4	Total
Species Recorded 19		
Red-eyed Vireo	4	8
Blue Jay	3	4
Black-capped Chickadee	3	3
Ovenbird	3	7
American Redstart	3	6
Northern Cardinal	3	3
Mourning Warbler	3	4
Indigo Bunting	3	3
Pileated Woodpecker	2	2
American Robin	2	2
Chestnut-sided warbler	2	2
Northern Parula warbler	2	2

Common Yellowthroat	2	2
Ruffed Grouse	1	1
Red-bellied Woodpecker	1	1
Hairy Woodpecker	1	1
Red-breasted Nuthatch	1	1
House Wren	1	1
Wood Thrush	1	1

**Point GPS Coordinates:**

Table 31. GPS coordinates for survey points, 2022 survey, Cave Point County Park.

GPS Coordinates for Points	Latitude	Longitude
1	44.9309	-87.17244
2	44.93109	-87.17390
3	44,93176	-87.17518
4	44.9308	-87.1754

**Additional Bird Data from Other Sources; Current and Historic:**

Data from one other source (eBird) is included in the table below. The eBird data included data from 2013 to 2022, from 14 observers (<https://ebird.org/hotspot/L252141>). The table below summarizes this data.

Table 32. Breeding season species data from eBird and 2022 survey, Cave Point County Park.

Species	eBird; 14 observers; 2013 to 2022	2022	Summary
American Crow	x		x
American Redstart		x	x
American Robin	x	x	x
Barn Swallow	x		x
Belted Kingfisher	x		x
Black-capped Chickadee	x	x	x
Blue-winged Warbler	x		x
Blue Jay	x	x	x
Brown Creeper	x		x
Cedar Waxwing	x		x
Chestnut-sided Warbler	x	x	x
Chimney Swift	x		x
Chipping Sparrow	x		x
Common Yellowthroat	x	x	x
Downy Woodpecker	x		x

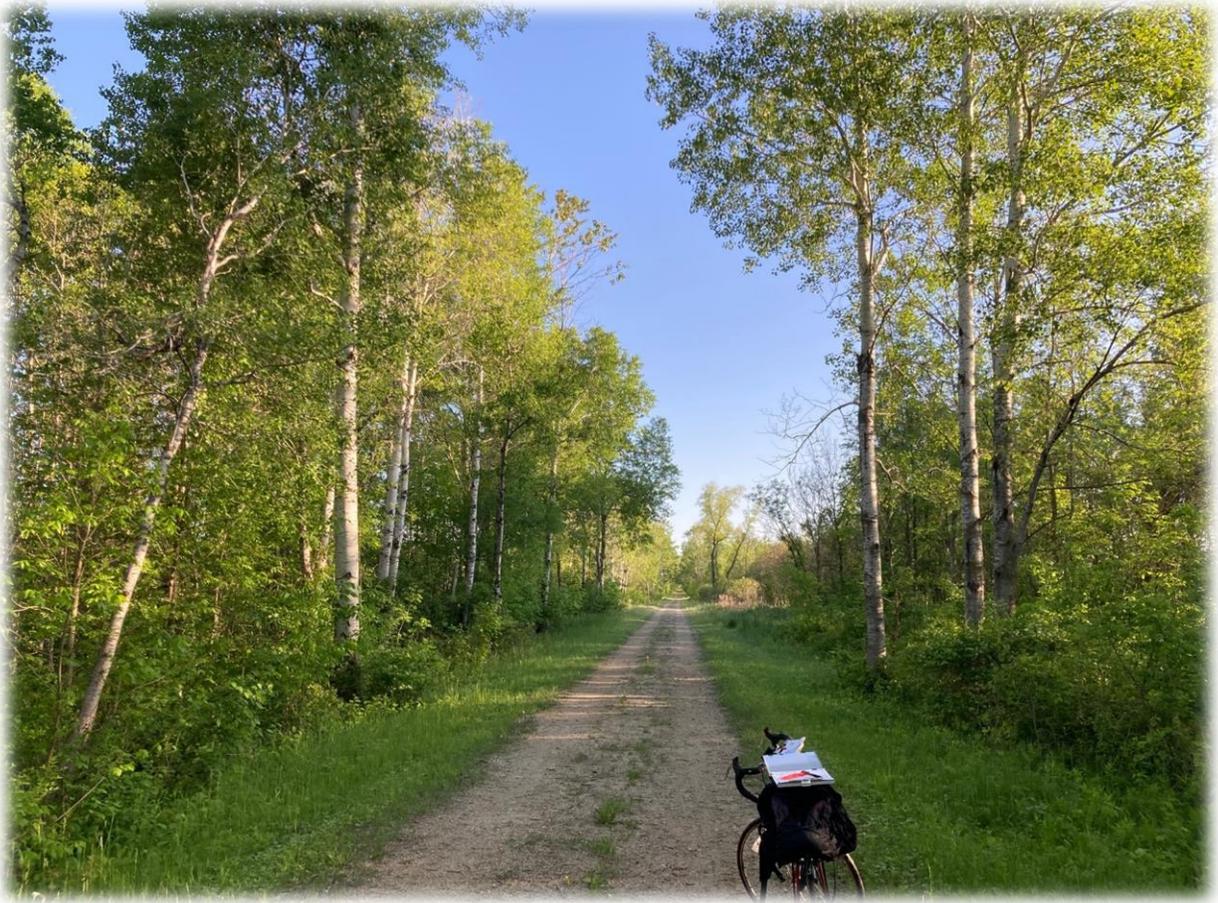
Eastern Towhee	x		x
Eastern Wood-Pewee	x		x
Golden-winged Warbler	x		x
Great Crested Flycatcher	x		x
Hairy Woodpecker	x	x	x
House Finch	x		x
House Wren		x	x
Indigo Bunting	x	x	x
Mourning Dove	x		x
Mourning Warbler	x	x	x
Nashville Warbler	x		x
Northern Cardinal	x	x	x
Northern Flicker	x		x
Northern Parula		x	x
Ovenbird	x	x	x
Pileated Woodpecker	x	x	x
Pine Warbler	x		x
Red-bellied Woodpecker	x	x	x
Red-breasted Nuthatch		x	x
Red-eyed Vireo	x	x	x
Red-headed Woodpecker	x		x
Ruffed Grouse	x	x	x
Song Sparrow	x		x
Tree Swallow	x		x
Veery	x		x
Winter Wren	x		x
Wood Thrush		x	x
Yellow Warbler	x		x
Yellow-bellied Sapsucker	x		x
Yellow-billed Cuckoo	x		x
Yellow-rumped Warbler	x		x
Yellow-throated Vireo	x		x
<b>Species</b>			<b>47</b>

**Discussion:**

The wood thrush was the one species of conservation significance found during the 2022 survey. The yellow-billed cuckoo another bird of conservation significance was also recorded from this site in the eBird data base.

This park holds at least two non-native plant species of management concern: garlic mustard (*Alliaria petiolata*) and non-native bush honeysuckle (*Lonicera spp.*). Both these species were particularly abundant in the southern and south-central portions of the park.

## Ahnapee State Trail



*Figure 22. View facing south, just south of Naze Road on the Ahnapee Trail, June 3, 2022.*

### **Site Description:**

The Ahnapee Trail passes through a wide range of land covers and habitats as it traverses the east-central section of southern Door County. Habitats include open emergent marsh, shrubby wetlands, lowland forests of both hardwood and conifers, upland hardwoods, shrub thickets, open fields under agricultural crops or fallow conditions, as well as the small towns of Maplewood and Forestville. Some of the most significant natural areas along the trail include:

1. The 'Hungry Settlement Swamp' between County Highway S and New Settlement Road;
2. The lowland hardwood forests and swamps accompanying the headwater flow of Stoney Creek on either side of Idlewild Road and;
3. The extensive floodplain forest and sedge meadow / shrub carr (a wetland dominated by shrubs such as dogwood and willow) border the Ahnapee River below the Forestville Millpond to the southern County line.

Brief descriptions of these large natural areas follow.

- 1) Though not visible from the trail the core of the Hungry Settlement Swamp on the north side of the trail comprises one of the few true bogs in Door County. The sphagnum moss hummocks at the center of the bog are interspersed with scattered tamarack and surrounded by a thin stand of tamarack, white birch, jack pine, red maple and white cedar that gradually increases in density near the north side of the trail. To the south of the trail a broad shrub carr (shrub dominated wetland) of various willow species, non-native buckthorn, along with small green ash and red maple occupies a large poorly drained basin. Water filled ditches line both sides of the trail and hold emergent wetland flora (e.g., sedges, arrow leaf, cattails etc.). This habitat was surveyed on May 30 with survey points 7, 8 and 9.
  
- 2) The upper headwater wetlands of Stoney Creek in the Idlewild Road area along the Ahnapee Trail for the most part comprise lowland hardwood swamps dominated by green ash. Large stands of dead ash now occupy these lowland settings rising out of thick beds of cattail, coarse sedges, or reed canary grass. Agricultural fields border these shallow wet soil depressions and shrubs and small box elders, elms and ash often line the higher ground along the trail. This section of the trail was surveyed on May 31 with survey points 2, 3, 4, 5, and 6, and on June 2 with points 1 and 2.
  
- 3) The floodplain of the Ahnapee River below the Forestville Millpond forms a wide riparian border varying from stands of 12"-16" dead standing ash over thick stands of tall sedge and reed canary grass, to broad cattail, sedge and reed canary grass wet meadows with scattered willows and ash snags. Occasionally stands of young ash, pole size trembling aspen, and white birch grow over thickets of non-native honeysuckle and small trees along the trail. Survey points 6 through 10 on June 3<sup>rd</sup> covered this area.

**Results:**

The Ahnapee Trail was surveyed with 33-point counts between May 30 and June 3, with 11 points on May 30; 6 points on May 31; 6 points on June 2, and 10 points on June 3. The locations of these point are shown on the Figures 23, 24, 25, 26, 27 and 28 below. The survey points were set along trail to encounter as many of the various habitats along the trail as possible. The distance between points averaged about 460 meters (1530 ft or a little over a quarter mile).

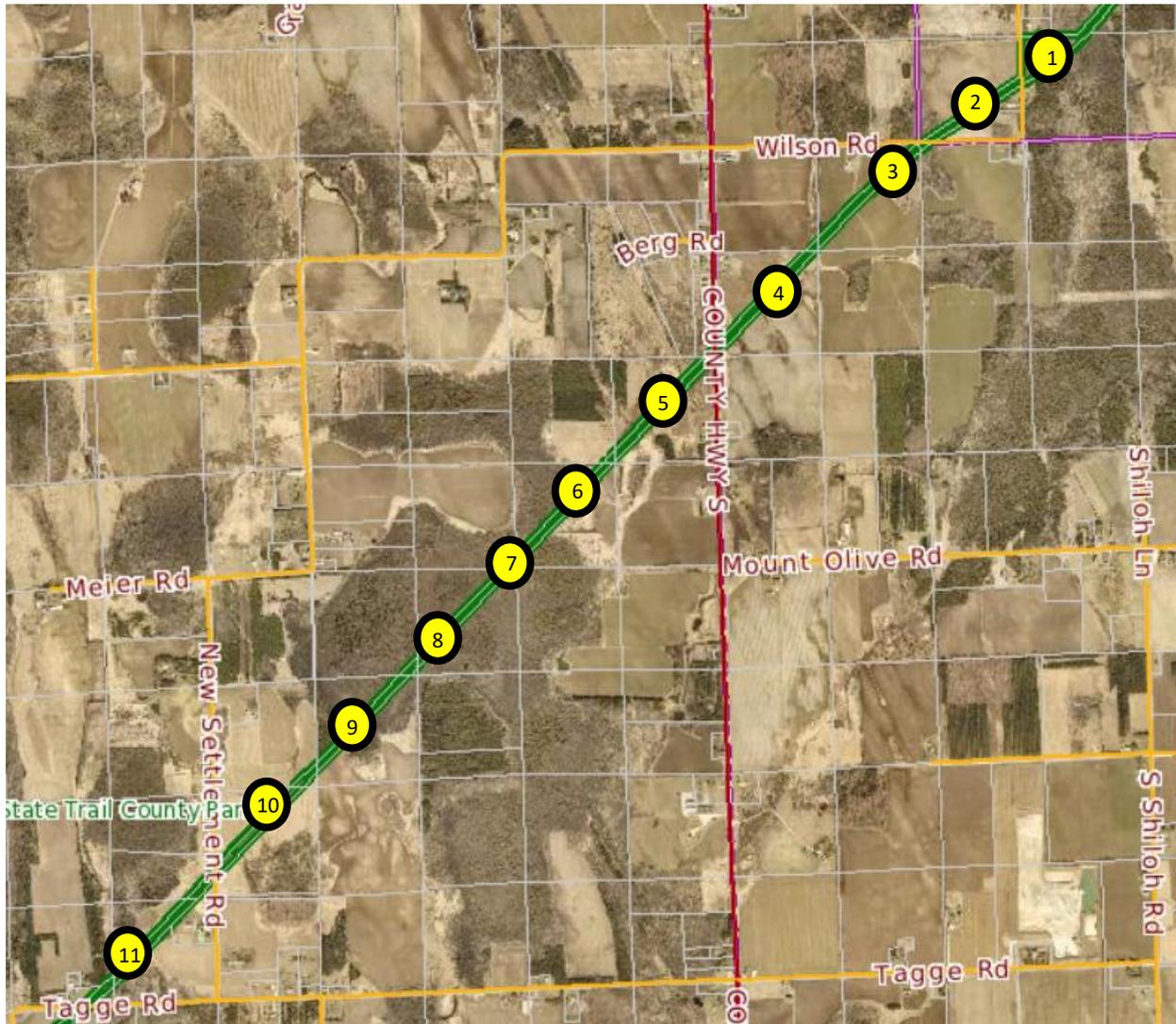


Figure 23. Ahnapee Trail May 30, 2022 - 11 Survey Points.

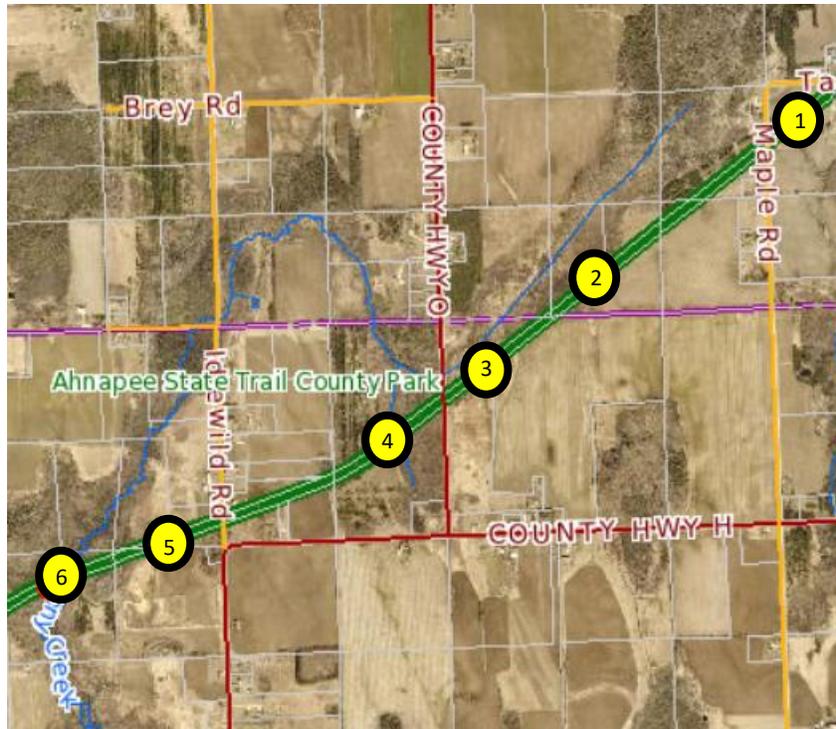


Figure 24. Ahnapee Trail May 31, 2022 – 6 Survey Points.

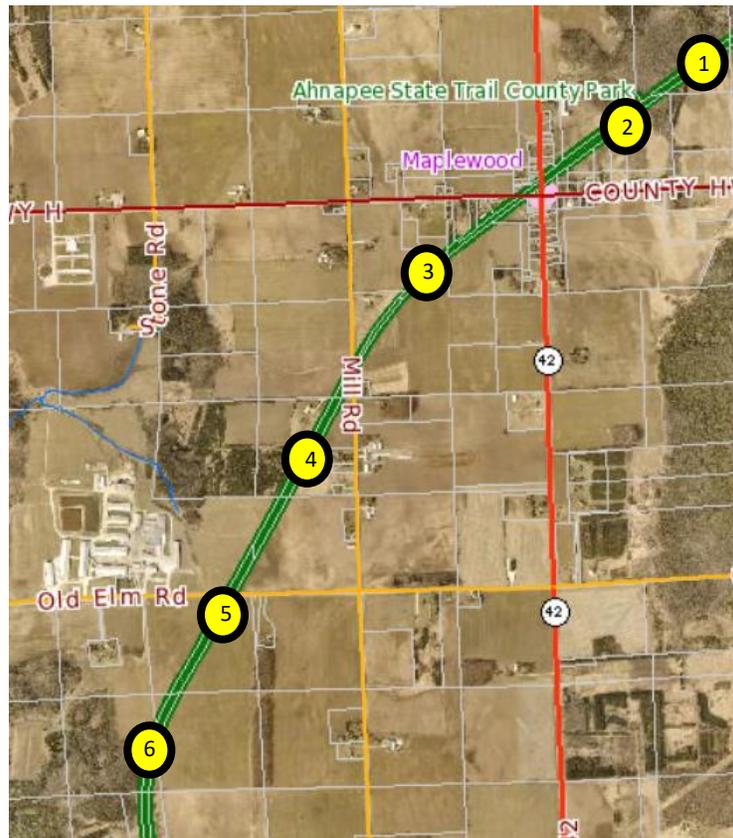


Figure 25. Ahnapee Trail June 2, 2022 - 6 Survey Points.

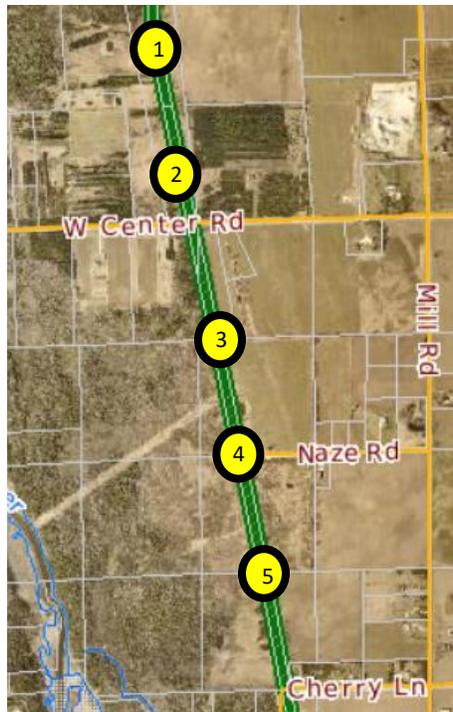


Figure 26. Ahnapee Trail June 3, 2022; Points 1 – 5.

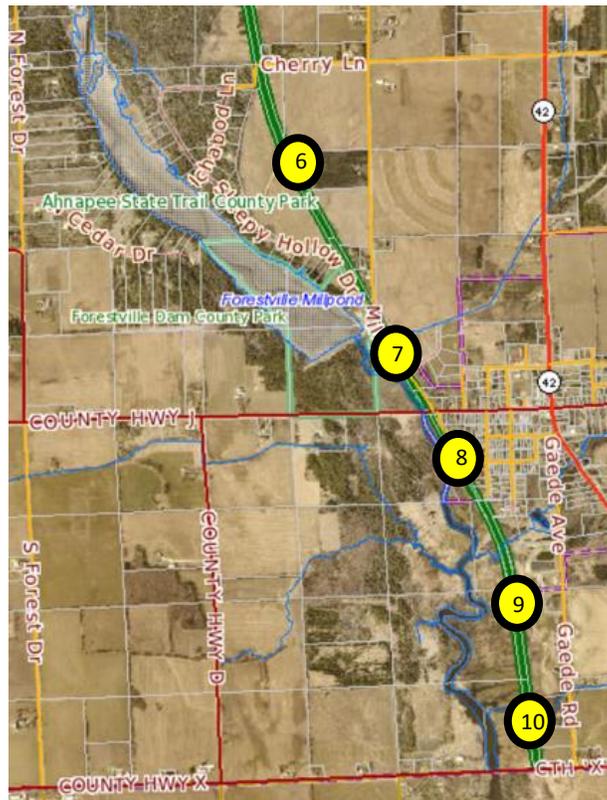


Figure 27. Ahnapee Trail June 3, 2022; Survey Points 6 – 10.



Figure 28. Ahnapee State Trail County Park, 12 miles or 144 acres, showing approximate location of all 33 June survey points.

**Results:**

79 species were recorded from the 33 point counts along the Ahnapee Trail comprising 815 total birds. The most commonly encountered species (encountered on over 50% of the points) included common

yellowthroat, red-winged blackbird, American crow, song sparrow, American robin, mourning dove, American goldfinch, and indigo bunting.

Species of conservation significance that were recorded along the trail included black-billed cuckoo, yellow-billed cuckoo, veery, Canada warbler, wood thrush, and bobolink.

The following tables list all the species encountered along the trail and their frequency of occurrence.

**Survey Results Tables:**

*Table 33. Species, frequency of occurrence at survey points and total numbers for 2022 survey, Ahnapee Trail.*

<b>AHNAPEE TRAIL 5/30/22; 5/31/22; 6/2/22 and 6/3/22</b>	<b>Frequency out of 33 points</b>	<b>Total</b>
<b>Species Recorded 79</b>		
Common Yellowthroat	27	53
Red-winged Blackbird	25	88
American Crow	24	40
Song Sparrow	23	38
American Robin	21	31
Mourning Dove	20	28
American Goldfinch	17	19
Indigo Bunting	17	22
American Redstart	16	23
House Wren	16	21
Blue Jay	15	18
Gray Catbird	15	15
Eastern Wood-Pewee	14	16
Great Crested Flycatcher	14	15
Brown-headed Cowbird	13	18
Ruffed Grouse	13	13
Yellow Warbler	13	18
Baltimore Oriole	12	14
Northern Cardinal	12	16
Sandhill Crane	12	13
Mourning Warbler	11	13
Red-eyed Vireo	10	11
Black-capped Chickadee	9	10
Warbling Vireo	9	11
Chestnut-sided Warbler	8	9
Rose-breasted Grosbeak	8	9
Cedar Waxwing	7	12
Eastern Kingbird	7	7
Red-bellied Woodpecker	7	7
Swamp Sparrow	7	9

Common Grackle	6	10
Northern Flicker	6	7
Ovenbird	6	6
Blue-gray Gnatcatcher	5	5
Common Raven	5	5
Hairy Woodpecker	5	6
Wild Turkey	5	9
Alder Flycatcher	4	5
Black-billed Cuckoo	4	4
Canada Goose	4	44
Chipping Sparrow	4	4
Clay-colored Sparrow	4	7
Killdeer	4	4
Nashville Warbler	4	8
Veery	4	7
Black-and-white Warbler	3	3
Downy Woodpecker	3	3
Eastern Bluebird	3	3
Field Sparrow	3	3
White-throated Sparrow	3	5
Barn Swallow	2	2
Black-throated Green Warbler	2	2
Bobolink	2	4
Eastern Meadowlark	2	2
Eastern Phoebe	2	2
Green Heron	2	2
Least Flycatcher	2	2
Mallard	2	2
Marsh Wren	2	2
Northern Waterthrush	2	3
Virginia Rail	2	2
White-breasted Nuthatch	2	2
Yellow-billed Cuckoo	2	2
Belted Kingfisher	1	1
Blue-winged Teal	1	1
Brown Thrasher	1	2
Canada Warbler	1	2
Eastern Towhee	1	1
Great Blue Heron	1	1
House Finch	1	1
Purple Finch	1	1
Purple Martin	1	3
Red-breasted Nuthatch	1	1

Savannah Sparrow	1	2
Tree Swallow	1	1
Vesper Sparrow	1	1
Wood Duck	1	1
Wood Thrush	1	1
Yellow-bellied Sapsucker	1	1

**Point GPS Coordinates:**

*Table 34. GPS coordinates for 33 survey points of 2022 survey, Ahnapee Trail.*

GPS Coordinates for Points	Latitude	Longitude	Survey Point	Survey Date
1	44.8022	-87.3797	1	May 30, 2022
2	44.80026	-87.38391	2	
3	44.79855	-87.38774	3	
4	44.79443	-87.39397	4	
5	44.79017	-87.40007	5	
6	44.78704	-87.40457	6	
7	44.78502	-87.40749	7	
8	44.78301	-87.41034	8	
9	44.78020	-87.41436	9	
10	44.77670	-87.41940	10	
11	44.77142	-87.42683	11	
12	44.76843	-87.43191	1	May 31, 2022
13	44.76445	-87.43939	2	
14	44.76122	-87.44546	3	
15	44.75869	-87.45025	4	
16	44.75531	-87.46212	5	
17	44.75435	-87.46577	6	
18	44.75102	-87.47359	1	June 2, 2022
19	44.74967	-87.47614	2	
20	44.74514	-87.48497	3	
21	44.73797	-87.49194	4	
22	44.73239	-87.49655	5	
23	44.72691	-87.50032	6	
24	44.72439	-87.50044	1	June 3, 2022
25	44.72042	-87.49952	2	
26	44.71492	-87.49825	3	
27	44.71119	-87.49724	4	
28	44.70595	-87.49604	5	
29	44.70021	-87.49404	6	
30	44.69103	-87.48725	7	
31	44.68815	-87.48500	8	
32	44.68359	-87.48236	9	
33	44.67952	-87.48161	10	

***Additional Bird Data from Other Sources; Current and Historic:***

No eBird or historic data was available for the Ahnapee Trail.

***Site Discussion:***

As noted above species of conservation significance that were recorded along the trail included black-billed cuckoo, yellow-billed cuckoo, veery, Canada warbler, brown thrasher, wood thrush, vesper sparrow and bobolink. Except for the wood thrush and Canada warbler the species mentioned are indicative of young forests, shrubby thickets, open treeless fields of grasses and meadow forbs or a mixture of the above. A pleasing unmanaged constantly changing mixture of these habitats is probably the most common condition along the trail. The Ahnapee Trail was also the site where nearly as many birds were identified by sight as by their songs or calls – the usual case when surveying in a forested site. This opportunity to see the birds was one of the great experiences of surveying along the Ahnapee Trail.

**REPORT DISCUSSION**

The following table gives the complete list of birds found at the 8 county park properties. The list is a compilation of data from the 2022 survey, the historic surveys, and the data from the eBird database. This list contains 124 species recorded from these park properties during the summer breeding season months for these species. This list does not include species that utilize the parks during migration or during the winter months. If those non-breeding season birds were included the list would be much longer.

Some obviously common, ubiquitous species, e.g., American crow, American robin, black-capped chickadee, and blue jay were expected to be found throughout the park properties. Species that are undoubtedly present as they are found throughout Door County but were missed on the 2022 survey and didn't show up in the other data sets were those birds that breed early in the season and/or those that call at night, e.g., American woodcock, several owls, and whip-poor-will.

*Table 35. Total breeding season species, and frequency of occurrence compiled from historic surveys, eBird data and 2022 survey data from the 7 parks plus the 2022 survey data for the Ahnapee Trail.*

<b>TOTAL SPECIES (Historic and 2022 data from 7 parks plus 2022 Ahnapee Trail Survey)</b>	<b>Number of Parks out of 8</b>
American Crow	8
American Robin	8
Black-capped Chickadee	8
Blue Jay	8
Eastern Wood-Pewee	8
Great Crested Flycatcher	8
Northern Cardinal	8
Northern Flicker	8
Red-bellied Woodpecker	8
Red-eyed Vireo	8
Cedar waxwing	7
Hairy Woodpecker	7
House Wren	7
Mourning Dove	7
White-breasted Nuthatch	7
American Redstart	6
Black and White Warbler	6
Black-throated Green Warbler	6
Chipping Sparrow	6
Downy woodpecker	6
Ovenbird	6
Rose-breasted Grosbeak	6
Wood Thrush	6
Yellow Warbler	6

American Goldfinch	5
Brown Creeper	5
Common Yellowthroat	5
Gray Catbird	5
Indigo Bunting	5
Northern Parula	5
Pileated Woodpecker	5
Purple Martin	5
Red-breasted Nuthatch	5
Scarlet Tanager	5
Song Sparrow	5
Yellow-throated vireo	5
Barn Swallow	4
Belted Kingfisher	4
Canada Warbler	4
Chestnut-sided Warbler	4
Chimney Swift	4
Common Raven	4
Eastern Kingbird	4
Mourning Warbler	4
Turkey Vulture	4
Veery	4
Winter wren	4
Yellow-bellied Sapsucker	4
Yellow-billed Cuckoo	4
Bald Eagle	3
Black-billed Cuckoo	3
Blue-gray gnatcatcher	3
Clay-colored Sparrow	3
Eastern Phoebe	3
Great Blue Heron	3
Hermit Thrush	3
House Finch	3
Least Flycatcher	3
Mallard	3
Northern Waterthrush	3
Red-winged Blackbird	3
Rough-winged swallow	3
Ruffed Grouse	3
Sandhill Crane	3
Swamp Sparrow	3
Tree Swallow	3
Wild Turkey	3

Baltimore Oriole	2
Bank Swallow	2
Blackburnian Warbler	2
Blue-winged Teal	2
Bobolink	2
Broad-wing Hawk	2
Brown-headed Cowbird	2
Canada Goose	2
Common Grackle	2
Dickcissel	2
Eastern Bluebird	2
Eastern Towhee	2
Green-backed Heron	2
Killdeer	2
Nashville Warbler	2
Northern Raven	2
Northern Shoveler	2
Phoebe	2
Pied-billed Grebe	2
Pine Warbler	2
Red-headed Woodpecker	2
White Pelican	2
White-throated Sparrow	2
Wood Duck	2
Alder Flycatcher	1
Blue-winged Warbler	1
Brown Thrasher	1
Caspian Tern	1
Cliff Swallow	1
Common merganser	1
Cooper's Hawk	1
Double-crested cormorant	1
Eastern Meadowlark	1
Eastern Starling	1
Field Sparrow	1
Golden-winged Warbler	1
Herring Gull	1
House Sparrow	1
Lesser Scaup	1
Marsh Wren	1
Merlin	1
Northern Harrier	1
Orchard Oriole	1

Purple Finch	1
Red-breasted Merganser	1
Red-shouldered Hawk	1
Ruby-throated hummingbird	1
Savannah Sparrow	1
Sora Rail	1
Spotted Sandpiper	1
Vesper Sparrow	1
Virginia Rail	1
Warbling Vireo	1
Willow Flycatcher	1
Yellow-crowned Night Heron	1
Yellow-rumped Warbler	1
<b>Total Species</b>	<b>124</b>

Several birds of conservation significance were found in the 2022 survey or in the historic or eBird data. The table below lists those species, the parks where they were encountered, the general habitats associated with those species and the conservation ranking system where they are listed and their rank. For information on these conservation ranking systems, e.g., purpose of the ranking system, how they rank species, the differences between the ranking systems etc., please refer to the links to these systems in below this table or consult with the author of this report.

*Table 36. Species of conservation significance, locations and conservation ranking systems.*

Species of Conservation Significance	Location	Wisconsin Natural Heritage Working List Rank**	Partners in Flight Species of Continental Concern*	USGS Species of greatest conservation need in WI***
<b>Forests</b>				
Golden-winged warbler	Cave Point		Red watch list	x
Canada warbler	Ahnapee Trail, Meridian, La Salle, Ellison Bluff		Yellow watch list	x
Wood Thrush	Ahnapee Trail, Meridian, Cave Point, Ellison Bluff, Door Bluff		Yellow watch list	x
Red-headed woodpecker	Cave Point, Meridian, La Salle	SC/M	Yellow watch list	
Black-billed cuckoo	Ahnapee Trail		Yellow watch list	x
Chimney swift	Ellison Bluff		Yellow watch list	
Yellow-billed cuckoo	Ahnapee Trail, Cave Point, Sugar Creek, Meridian		Common bird in steep decline	x
Least flycatcher	Ahnapee Trail, Ellison Bluff	SC/M	Common bird in steep decline	x

Field sparrow	Ahnapee Trail		Common bird in steep decline	
Red-shouldered hawk	Forestville Dam	THR		x
<b>Generalist, Multiple habitats</b>				
Purple martin	Forestville Dam, Ellison Bluff, Meridian	SC/M		
Common grackle	Forestville Dam		Common bird in steep decline	
<b>Grasslands Shrub lands</b>				
Eastern meadowlark	Ahnapee Trail	SC/M	Common bird in steep decline	x
Bobolink	Ahnapee Trail, Meridian	SC/M	Yellow watch list	x
Northern harrier	Forestville Dam			x
Brown thrasher	Ahnapee Trail			x
Vesper sparrow	Ahnapee Trail	SC/M		x
Willow flycatcher	Sugar Creek			x
<b>Wetlands</b>				
Caspian tern	Forestville Dam	END		x
Osprey	Forestville Dam			x
Bald eagle	Forestville Dam			x
Blue-winged teal	Forestville Dam			x
Yellow-crowned night heron	Forestville Dam			x
<b>*Partners-in-Flight Ranking (consult websites below for information on this ranking)</b>				
RECOVER: Red Watch List - Species with extremely high vulnerability due to small population and range, high threats, and rangewide declines				
REVERSE DECLINE: "D" Yellow Watch List - Species with population declines and moderate to high threats				
Common birds in steep decline				
Reference: <i>Partners-in Flight</i> , 2016.				
<a href="https://partnersinflight.org/species-of-cont-concern-from-pif-continental-plan-final-spread-2.pdf">SPECIES-OF-CONT-CONCERN-from-pif-continental-plan-final-spread-2.pdf (partnersinflight.org)</a>				
<a href="https://partnersinflight.org/pif-continental-plan-final-spread-single.pdf">pif-continental-plan-final-spread-single.pdf (partnersinflight.org)</a>				
<b>**Wisconsin Natural Heritage Working List</b>				
THR = state rank of threatened in WI				
END = state rank of endangered in WI				
SC/M = Special Concern and protected under the Migratory Bird Act				
Reference: <i>Wisconsin Department of Natural Resources</i> . 2021				
<a href="https://dnr.wisconsin.gov/topic/NHI/WList">https://dnr.wisconsin.gov/topic/NHI/WList</a>				
<b>*** SCGN = Species of Greatest Conservation Need in Wisconsin</b>				
Reference: <i>U.S. Geological Survey</i> . 2015				
<a href="https://www1.usgs.gov/csas/swap/state_list.html#state=Wisconsin">https://www1.usgs.gov/csas/swap/state_list.html#state=Wisconsin</a>				

There are multiple state and federal funding programs which could support habitat improvement projects in the Door County Park system. Several of these programs consider the biological or ecological

quality of the sites under consideration when ranking proposals. The information on the birds of conservation significance in the County Parks will be of importance in most proposals. For more information on the programs available for the habitat improvement, invasive species control or monitoring activities in the Door County Parks contact the regional wildlife biologist for the Wisconsin Department of Natural Resources, the Wisconsin Coastal Management Program, Green Bay office of the U.S. Fish & Wildlife Service or the author of this report.

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