

Como Park Bird Survey 2019

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Introduction

The scope of this project was to record the number and species of birds around Como Lake and the Como Woodland Outdoor Classroom (CWOC) and compare them to the results of a similar bird survey conducted in 2006. It was hoped that the data would be useful in determining if the changes in habitat in these areas affected the number of species and individual birds. Though more species and birds were observed in 2019 than in 2006, it is not possible to directly correlate the increases to habitat change due to differences in how and where the surveys were conducted.

Background

In 2006, a group of citizens conducted a bird and habitat study in eight areas within the District 10 Como Community Council boundaries. These surveys were conducted in a variety of parkland, nonresidential and/or wooded areas. Two of the areas in the study were Como Lake and the McMurray Fields. For the Como Lake bird surveys, one volunteer conducted all 17 surveys. For the McMurray Fields bird surveys, a different volunteer conducted all 10 surveys. In both areas, the surveys were conducted in the morning, usually before 10 AM. The 2006 report can be found on the Como Community Council District 10's website:

http://www.district10comopark.org/Como_Park_Bird_Community_and_Habitat_Analysis.html.

The 2019 bird survey was conducted on two of the areas that were surveyed in 2006. These are Como Lake and the Como Woodland Outdoor Classroom. The Como Woodland Outdoor Classroom is an area that was a part of the 2006 McMurray Fields area, however the 2019 survey did not include the athletic fields or the scrub and open habitat along the railroad tracks bordering the southern edge of McMurray Fields. The 2019 surveys also did not include any habitat evaluation.

Purpose

The purpose of this study was to determine whether habitat changes between 2006 and 2019 around Como Lake and within the Como Woodland Outdoor Classroom had a positive effect on the number and species of birds in each of these areas. The work conducted is summarized below.

Changes around Como Lake

Prior to 2002, the shoreline around Como Lake was a mix of turf grass, rip rap to prevent shoreline erosion, and invasive plant species. Work began in 2002 to remove these and replace them with native vegetation. The shoreline restoration work was conducted to decrease the invasive vegetation, reduce the polluted runoff from reaching the lake, remove invasive wildlife such as geese, and reduce excessive algal blooms with the goal of improving the water quality and increasing native vegetation and wildlife in and around Como Lake. Much of this work was conducted from 2005 through 2015. Work continues to maintain and improve the native shoreline.

Changes within the Como Woodland Outdoor Classroom

Work began in 2007 within the Como Woodland Outdoor Classroom to remove invasive plant species and develop native plant and habitat communities. Through grants (including an LCCMR grant in 2011) and volunteer work, the invasive plants were removed, and six study areas were developed representing six unique plant communities found in Minnesota. Much of the work was completed by 2016, although maintenance and improvement of the woodland is ongoing. The goal was to restore a more varied plant community that represented native plant communities of southern Minnesota and improve wildlife habitat.

2019 Study Methodology

The 2019 survey project ran from February 1, 2019 through January 31, 2020. This time frame allowed participants to observe winter residents as well as migratory birds in both the spring and fall migrations.

Surveys were submitted by volunteers recruited through the District 10 Como Community Council. It was not requisite that a volunteer live in the area and anyone interested was invited to participate.

Participants used eBird, a birding app created by the Cornell Lab of Ornithology, to record their surveys and load the information onto the eBird website where they were approved by the study coordinator and stored; eBird is the official data repository for this study.

Participants were given a brief tutorial in how to use eBird if they had not used it previously. The participants then selected the days and times to conduct their surveys. The only parameters were to keep within the boundaries of the study area, either Como Lake and the immediate surroundings (Figure 1) or the area of the Como Woodland Outdoor Classroom (Figure 2).

Participants surveyed all or part of an area. They reported birds sighted (both species and number of birds), their distance traveled while observing, and the duration of their surveys. Birds were observed in vegetation, on the ground or water, or in the air. Some participants recorded surveys by bird song as well.

Figure 1 Como Lake Area

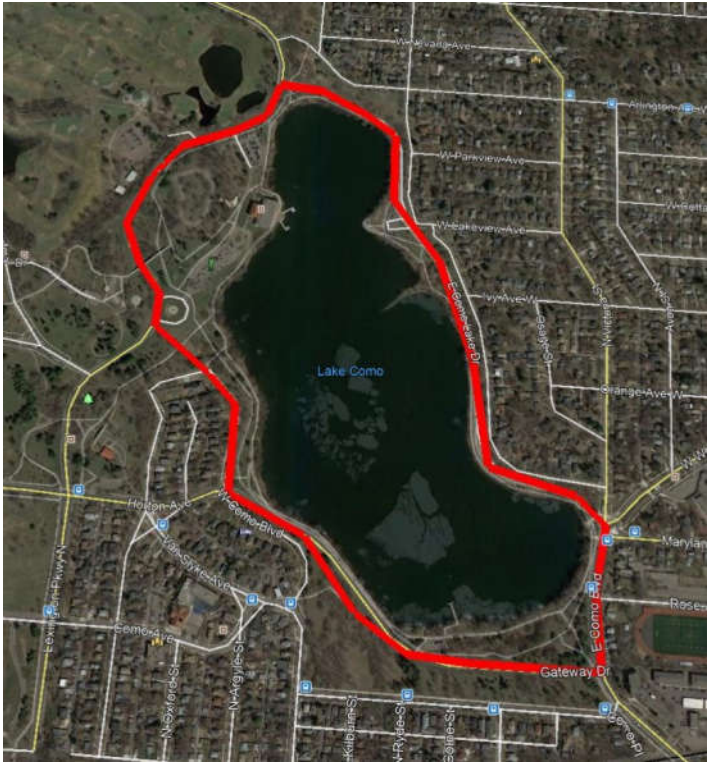


Figure 2 Como Woodland Outdoor Classroom Area



2019 Results

For the 2019 surveys, 15 volunteers contributed 130 surveys (or sightings) from both areas. A summary of the results from each area is presented below.

Como Lake

There were 109 species and 7,515 birds observed during the survey. Fifteen volunteers conducted 98 surveys which occurred in every month of the project. The complete list of sightings as provided by eBird is presented in Appendix A.

The highest number of species (83) and birds (1,745) observed was in May 2019.

The number of species observed includes several bird families, where the observer could not distinguish the particular species but could identify the family. To reduce the number of species listed in these counts, the counts were shifted to the most common species of those birds in that month and are included in the total species and bird count. These included the following:

- Gulls (50 birds) added to Ring Billed Gull
- Hawk (1 bird) added to Red Tailed Hawk
- Empidonax (2 birds) added to the Eastern Kingbird
- Flycatcher (1 bird) added to the Great Crested Flycatcher
- Vireo (1 bird) added to the Warbling Vireo
- Swallow (27 birds) added to Barn Swallow
- Blackbird (1 bird) added to Red Winged Blackbird

Averaging all sightings across the project, there were 6.8 species and 470 birds seen by each volunteer. There were 1.1 species and 76.7 birds seen in each survey.

The top ten species by number of birds observed is presented in Table 1. Only two of the ten are considered year-round residents, the American Goldfinch and the House Sparrow.

Table 1. Top ten species at Como Lake by number of birds sighted.

Species	Total number of birds observed
Mallard	1,762
Red-winged Blackbird	549
American Robin	508
Wood Duck	458
Canada Goose	425
American Goldfinch	316
House Sparrow	243

Ring-billed Gull	234
Common Grackle	206
Yellow-rumped Warbler	170

Como Woodland Outdoor Classroom

There were 80 species and 1,264 birds observed during the survey. Five volunteers (all of whom also conducted surveys at Como Lake) conducted 32 surveys. There were no observations in February 2019. The complete list of sightings as provided by eBird is presented in Appendix B.

The highest number of species was 48, observed in May. The highest number of birds was 242, observed in April.

The number of species observed includes several bird families, where the observer could not distinguish the particular species but could identify the family. To reduce the number of species listed in these counts, the counts were shifted to the most common species of those birds in that month and are included in the total species and bird count. These included the following:

- Flycatcher (1 bird) added to the Great Crested Flycatcher
- Sparrow (3 birds) added to the White Throated Sparrow

Averaging all sightings across the project, there were 16 species and 253 birds seen by each volunteer. There were 2.5 species and 39.5 birds seen in each survey.

The top ten species by number of birds observed is presented in Table 2. Seven of the ten are year-round residents. The three non-resident species were the American Robin, the Canada Goose, and the White Throated Sparrow.

Table 2 Top ten species at the Como Woodland Outdoor Classroom by number of birds sighted.

Species	Total number of birds observed
American Robin	156
American Goldfinch	81
Northern Cardinal	74
Blue Jay	72
Black-capped Chickadee	71
Downy Woodpecker	62
Canada Goose	60

White-throated Sparrow	59
White-breasted Nuthatch	53
American Crow	47

Comparison of number of birds and species between 2006 and 2019

Como Lake

In 2006, 84 species and 4,219 birds were observed. As mentioned above, in 2019 there were 109 species and 7,515 birds observed.

Seventy-five species were observed in both 2006 and 2019. This represents 63% of all the species observed in both years. There were 9 species seen only in 2006 representing 8% of all the species observed in both years. Thirty-four species observed only in 2019 representing 29% of all the species observed in both years.

The complete list of species and the number of birds seen in each year is presented in Table 3.

Table 3. Como Lake Species Comparison 2006 and 2019

Species	Seen in 2006	Seen in 2019
American Coot	636	11
American Crow	22	87
American Goldfinch	66	316
American Redstart	2	11
American Robin	73	508
American Tree Sparrow	1	7
Bald Eagle	0	16
Baltimore Oriole	23	101
Bank Swallow	2	0
Barn Swallow	164	119
Belted Kingfisher	2	3
Black-and-white Warbler	2	3
Blackburnian Warbler	0	3
Black-capped Chickadee	89	163
Black-crowned Night-Heron	9	0
Blackpoll Warbler	1	0
Black-throated Green Warbler	4	0
Blue Jay	10	148
Blue-gray Gnatcatcher	0	1
Blue-headed Vireo	1	1

Species	Seen in 2006	Seen in 2019
Blue-winged Teal	2	37
Broad-winged Hawk	0	2
Brown Creeper	5	7
Brown-headed Cowbird	1	23
Bufflehead	0	27
Canada Goose	758	425
Caspian Tern	2	1
Cedar Waxwing	26	65
Chestnut-sided Warbler	7	4
Chimney Swift	29	14
Chipping Sparrow	45	33
Cliff Swallow	0	3
Common Goldeneye	0	20
Common Grackle	134	206
Common Loon	0	16
Common Merganser	0	14
Common Yellowthroat	8	8
Cooper's Hawk	10	3
Dark-eyed Junco	105	109
Double-crested Cormorant	17	98
Downy Woodpecker	33	69
Eastern Bluebird	3	24
Eastern Kingbird	15	43
Eastern Phoebe	1	1
Eastern Wood-Pewee	0	2
European Starling	53	96
Forster's Tern	0	3
Fox Sparrow	0	1
Golden-crowned Kinglet	0	2
Gray Catbird	3	36
Great Blue Heron	9	30
Great Crested Flycatcher	1	10
Great Egret	8	2
Greater Scaup	0	2
Greater/Lesser Scaup	0	3
Green Heron	2	2
Hairy Woodpecker	11	17
Herring Gull	1	10

Species	Seen in 2006	Seen in 2019
Hooded Merganser	0	52
House Finch	26	87
House Sparrow	179	293
House Wren	0	11
Indigo Bunting	0	11
Killdeer	0	2
Least Flycatcher	1	2
Lesser Scaup	5	4
Lincoln's Sparrow	2	0
Magnolia Warbler	2	1
Mallard	708	1,762
Mourning Dove	5	34
Nashville Warbler	7	12
Northern Cardinal	46	163
Northern Flicker	2	11
Northern Parula	1	0
Northern Rough-winged Swallow	4	4
Northern Waterthrush	1	4
Orange-crowned Warbler	1	6
Osprey	0	3
Palm Warbler	4	24
Pied-billed Grebe	22	68
Pileated Woodpecker	0	3
Pine Siskin	0	29
Purple Finch	1	0
Red-bellied Woodpecker	0	33
Red-breasted Nuthatch	3	3
Red-eyed Vireo	1	3
Redhead	4	4
Red-tailed Hawk	0	14
Red-winged Blackbird	121	549
Ring-billed Gull	229	234
Ring-necked Duck	0	7
Rock Pigeon	41	0
Rose-breasted Grosbeak	0	1
Ruby-crowned Kinglet	22	26
Ruby-throated Hummingbird	0	2
Ruddy Duck	6	15

Species	Seen in 2006	Seen in 2019
Rusty Blackbird	0	2
Scarlet Tanager	0	1
Sharp-shinned Hawk	1	0
Song Sparrow	32	82
Sora	1	0
Spotted Sandpiper	2	0
Swainson's Thrush	0	2
Swamp Sparrow	2	1
Tennessee Warbler	17	8
Tree Swallow	28	41
Trumpeter Swan	0	18
Tundra Swan	0	1
Turkey Vulture	0	4
Warbling Vireo	6	55
White-breasted Nuthatch	18	36
White-throated Sparrow	26	29
Wilson's Warbler	3	5
Wood Duck	135	458
Yellow Warbler	6	27
Yellow-bellied Sapsucker	0	1
Yellow-rumped Warbler	102	170
Yellow-throated Vireo	0	1

Como Woodland Outdoor Classroom

In 2006, 48 species and 765 birds were observed in the Como Woodland Outdoor Classroom. As mentioned above in 2019, eighty species and 1,264 birds were observed there.

Forty species were observed in both 2006 and 2019. This represents 47% of all the species observed in both years. There were 8 species that were seen only in 2006, representing 9% of all the species observed in both years. Forty species observed only in 2019 representing 44% of all the species observed in both years.

The complete list of the species and number of birds seen in each year is presented in Table 4.

Table 4. Como Woodland Outdoor Classroom/McMurray Fields Species Comparison 2006 and 2019

Species	Seen at McMurray Fields in 2006	Seen at CWOC in 2019
American Crow	30	47
American Goldfinch	100	81

Species	Seen at McMurray Fields in 2006	Seen at CWOC in 2019
American Kestrel	1	0
American Redstart	0	7
American Robin	34	156
American Tree Sparrow	1	1
Bald Eagle	2	0
Baltimore Oriole	0	11
Barn Swallow	2	0
Barred Owl	0	1
Black-and-white Warbler	0	2
Blackburnian Warbler	0	3
Black-capped Chickadee	113	71
Blackpoll Warbler	0	1
Black-throated Green Warbler	0	1
Blue Jay	21	72
Blue-headed Vireo	0	2
Brown Creeper	23	14
Brown-headed Cowbird	0	10
Canada Goose	26	60
Canada Warbler	0	1
Cedar Waxwing	19	33
Chestnut-sided Warbler	1	8
Chimney Swift	1	8
Chipping Sparrow	8	11
Common Grackle	0	5
Common Yellowthroat	0	3
Cooper's Hawk	8	2
Dark-eyed Junco	4	44
Downy Woodpecker	33	62
Eastern Bluebird	6	22
Eastern Kingbird	0	4
Eastern Phoebe	0	2
Eastern Wood-Pewee	0	4
Empidonax sp.	0	2
European Starling	11	5
falcon sp.	0	1
Golden-crowned Kinglet	30	12
Gray Catbird	3	32

Species	Seen at McMurray Fields in 2006	Seen at CWOC in 2019
Great Crested Flycatcher	1	7
Great Egret	2	0
Green Heron	0	1
Hairy Woodpecker	9	35
Hermit Thrush	1	4
House Finch	4	11
House Sparrow	41	6
House Wren	0	13
Indigo Bunting	6	21
Killdeer	2	1
Least Flycatcher	1	0
Magnolia Warbler	0	1
Mallard	30	18
Marsh Wren	0	1
Mourning Dove	1	3
Nashville Warbler	1	12
Northern Cardinal	23	74
Northern Flicker	11	21
Northern Parula	0	1
Olive-sided Flycatcher	0	1
Orange-crowned Warbler	0	7
Ovenbird	0	1
Palm Warbler	6	0
Philadelphia Vireo	1	0
Pileated Woodpecker	1	0
Pine Siskin	0	3
Red-bellied Woodpecker	5	30
Red-breasted Nuthatch	1	2
Red-eyed Vireo	0	4
Red-headed Woodpecker	0	1
Red-tailed Hawk	1	3
Red-winged Blackbird	0	4
Ring-billed Gull	4	2
Rock Pigeon	70	0
Rose-breasted Grosbeak	0	2
Ruby-crowned Kinglet	2	16
Savannah Sparrow	0	3

Species	Seen at McMurray Fields in 2006	Seen at CWOC in 2019
Sharp-shinned Hawk	0	2
Song Sparrow	0	4
Swainson's Thrush	0	1
Tennessee Warbler	0	6
Turkey Vulture	0	1
Warbling Vireo	0	1
White-breasted Nuthatch	41	53
White-throated Sparrow	13	59
Wilson's Warbler	0	1
Winter Wren	0	1
Yellow-bellied Sapsucker	0	6
Yellow-rumped Warbler	10	17

Conclusion

The 2019 survey was conducted to evaluate whether the habitat changes around Como Lake and at the Como Woodland Outdoor Classroom between 2006 and 2019 increased the number of species and individual birds in the areas. This evaluation was done by comparing the number of birds and number of species observed in 2019 to those observed in 2006.

There were more species and individual birds observed in 2019 than in 2006. However, because of the differences in how and where the two bird surveys were conducted, it is not possible to directly correlate the habitat change to the increased number of birds and species in 2019. This was largely due to the differing size of the areas, number of volunteers, number of surveys, and number of times of day of observation.

It is hoped that this data will provide the basis for continued bird surveys in these two areas. They should be conducted at regular intervals and used to evaluate whether changes in the environment either locally, such as habitat changes or on a larger scale, such as climate change, are impacting bird populations around Como Lake and within the Como Woodland Outdoor Classroom.

Acknowledgements

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Appendix A

Como Lake 2019 Bird Survey Data

Appendix A is an electronic spreadsheet available online at the District 10 Como Community Council website or by contacting the District 10 Como Community Council administrator

Appendix B

Como Woodland Outdoor Classroom 2019 Bird Survey Data

Appendix B is an electronic spreadsheet available online at the District 10 Como Community Council website or by contacting the District 10 Como Community Council administrator