



Animal and Plant Health
Inspection Service

Wildlife Services

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Mr. Derico,

Thank you for contacting Wildlife Services (WS) for assistance in reducing damage from resident Canada geese (*Branta canadensis*). Between 27 March and 4 June 2019, WS conducted a total of 13 site visits to Mill Creek MetroParks (MCMP) property. Wildlife Services employees addled Canada goose eggs at two different sites located on park-owned property. Egg addling was conducted in accordance with the approved 2019 Ohio Division of Wildlife nest destruction permit, which was obtained by MCMP. Nesting surveys were also conducted at the Wildlife Sanctuary, however at the request of the MCMP, nests and eggs were not treated at this site during the 2019 nesting season.

Mill Creek MetroParks have been managing the damages associated with a growing goose population since 2010. In 2014 the goose population at MCMP exceeded sociological carrying capacity and as a result a roundup of geese was completed to reduce the impacts to park facilities and water quality. As expected, in 2015 there were significantly lower numbers of nests and eggs due to the 2014 round up.

In total, WS located 34 active nests (**Figures 1 and 2**) and treated 173 eggs at the Newport Wetlands and Glacier Lake sites during the 2019 nesting season. Additionally, WS located 21 active nests (**Figure 3**) and 111 eggs at the Wildlife Sanctuary, however these nests were not treated during the 2019 nesting season. A global positioning system (GPS) coordinate was obtained for each active and inactive nest located (**Attachment 1**). Nests that were found abandoned or already depredated were marked and assigned a site ID number, but were not included in the active nest figures above. Nests that were previously depredated but then had new eggs laid in the same nest bowl retained their original nest ID number, while all new nest bowls were given a new ID number.

For the 2019 management season there was an average of 5.08 eggs treated/active nest in the management areas, and an average of 5.29 eggs/active nest at the Wildlife Sanctuary. These figures are expected as eggs were treated in the management areas as they were found, and therefore not all nests were completed before treated eggs either broke or were depredated, whereas the nests found in the Sanctuary were allowed to reach a full clutch. The total number of eggs and nests found in the management areas could also be higher due to management efforts, as the probability of nest depredation of treated eggs or eggs

breaking increases as the eggs decompose, potentially resulting in more re-nesting efforts, although direct causation is unknown. The combined average of eggs found per active nest for all sites regardless of management status was 5.16 eggs/active nest during the 2019 season.

When compared to the 2013-2018 efforts, the total number of goose nests and eggs located in 2019 was higher than the six-year average (**Table 1**), however the number of nests and eggs treated was lower as no management activities occurred at the Wildlife Sanctuary in 2019. The overall number of eggs found and treated at Newport Wetlands was also down 22% from 2018. This decrease is likely due to a higher than average number of nests and eggs treated in 2018 as a result of flooding that had occurred during the week of 16 April 2018, which may have caused a reported increase in re-nesting events for that year. Other environmental factors may have also contributed to a decrease in eggs laid per active nest, as the 2018 season had an average of 6.10 eggs/nest compared to 5.16 eggs/nest combined average of all sites in 2019 regardless of management status. There were three more active nests located at the Wildlife Sanctuary during the 2019 season than compared to 2018, however the number of eggs found was the same. No goose nesting behavior was observed by WS or reported by MCMP staff at Lily Pond, Lake Cohasset, or other areas on MCMP property during the 2019 season.

-Of the 21 active nests found at the Wildlife Sanctuary where no treatments occurred, there were only two potentially successful nests. Nests S07 and S08 were each found abandoned with two eggs remaining after 26 days of monitoring, but no shell fragments were left to confirm that the nests were indeed successful or depredated. These nests were otherwise undisturbed, and were therefore potentially successful. Accounting for the two unhatched eggs, the brood sizes for each nest would have been three and five goslings respectively. A brood of seven goslings was observed at the Sanctuary on 5/16/19, and a brood of an unknown number was observed during the last site visit on 6/4/19. Coyote (*Canis latrans*) and raccoon (*Procyon lotor*) sign was abundant at the Wildlife Sanctuary, with raccoon sightings occurring during the day in nesting areas on two different occasions, one of which was a raccoon actively preying on a gosling. One raccoon was also observed at the Newport Wetlands nesting area toward the end of the nesting season.

Two broods of four goslings each were observed on multiple occasions by WS on the west side of Glacier Lake during the survey period. Two nests of seven and four eggs were found and treated at Glacier Lake by WS during the 2019 season, but no other nesting behavior was observed on MCMP property in that area. Potentially nesting pairs were observed under and north of the I-680 bridge, but these were not investigated further as they were considered to be off of MCMP property. No goslings were observed by WS personnel anywhere else in the management area, but MCMP staff reported seeing twenty-five goslings with one pair of adult geese at Newport Lake after a flooding event. Both WS and MCMP staff speculate that these geese were washed out of nearby areas elsewhere in the watershed by the flooding event as the goslings were noted to be larger in size and no evidence of successful nesting had been observed in that area

previously. Ultimately, all treated nests were eventually depredated or washed out by flooding.

Although treatments are occurring on MCMP property, there is always potential for geese to nest on neighboring properties and subsequently inhabit MCMP property. Wildlife Services personnel strive to find and treat as many nests as possible on MCMP property, but the size and complexity of the river system makes detection of all nests on property difficult to achieve. Wildlife Services encourages the help and continued cooperation of MCMP staff in reporting nesting pairs and potential nesting areas to optimize management efforts.

Because habitat features attracting Canada geese are found on MCMP properties, it is realistic to expect that geese will continue to utilize these areas. Therefore it is recommended that the following methods to reduce Canada goose damage continue as part of an integrated Canada goose damage management plan at your location:

- Harassment activities in areas where geese are not desired should continue and must be implemented immediately when geese are present for maximum effectiveness. Harassment may include the use of loud noises, chasing on foot or with vehicles, pyrotechnics, dogs, etc. It is important to be persistent and proactive with harassment efforts to ensure that geese do not become established in large numbers. Please remember to check with your local authorities to ensure that these tools or techniques are legal to use in your area.
- The unlawful act of feeding geese or other waterfowl by the public should be actively enforced. Signs stating that feeding of waterfowl is prohibited have been posted in public and common areas. With posted signs already in place, it is recommended that enforcement be pursued especially with repeat offenders until feeding is discontinued. If feeding is not discontinued it should be expected that large numbers of geese will reestablish in a short period of time causing additional damage.
- Egg addling/nest destruction of Canada goose nests should be continued and pursued aggressively. Although nesting success was low and depredation was high in the Wildlife Sanctuary where no treatments occurred, predators cannot be relied upon to find and destroy all nests, while treatment of eggs will ensure that eggs found in the management areas will be unsuccessful. In Ohio, geese begin to nest as early as late February and can continue through May 31, so MCMP staff should be vigilant during these times and nests should be treated during the entire nesting season to prevent hatching. Permits for egg addling/nest destruction can be obtained through the Ohio Division of Wildlife.

Additional information for managing waterfowl damage may be found on our web page at: <http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/wildlifedamage> and at the Ohio Division of Wildlife's web page at: <http://wildlife.ohiodnr.gov/species-and-habitats/nuisance-wildlife>. If you have any questions or need additional assistance, please contact our office at 330-726-3386.

Table 1. A comparison of the number of active Canada goose nests located and the number of eggs treated on MCMP owned and managed property, 2013-2019.

Year	2013-2018 AVG		2018		2019	
Site	Nest	Eggs	Nest	Eggs	Nest	Eggs
Newport Wetlands	33.17	165.08	34	208	32	162
Lily Pond	0.42	2.5	0	0	0	0
Lake Cohasset	1.42	6.67	1	5	0	0
Lake Glacier	1.17	7.42	2	12	2	11
Wildlife Sanctuary	14.25	74.75	18	111	21*	111*
Other**	0.58	3.50	1	6	0	0
Total Located	51.01	259.92	56	342	55	284
Total Treated	51.01	259.92	56	342	34*	173*

*Nest treatments did not occur at the Wildlife Sanctuary for the 2019 season, figures are presented here for comparative purposes only.



Figure 1. Canada goose nest locations (red dots) at the Newport Wetlands site, 2019



Figure 2. Canada goose nest locations (red dots) at the Glacier Lake site, 2019.

Attachment 1. Locations (Latitude and Longitude) of Canada goose nests treated by Wildlife Services, 27 March-4 June 2019. (N=Newport Wetlands; S=Wildlife Sanctuary; GL=Glacier Lake)

Nest ID	Latitude	Longitude	# Eggs in Nest	Status
GL01	41.08901	-80.67466	7	Active
GL02	41.09070	-80.67549	0	Inactive
GL03	41.09781	-80.67442	4	Active
N01	41.05074	-80.67773	7	Active
N02	41.05349	-80.67597	6	Active
N03	41.05297	-80.67603	1	Active
N04	41.05438	-80.67740	5	Active
N05	41.05356	-80.67709	6	Active
N06	41.05394	-80.67866	5	Active
N07	41.05458	-80.67855	0	Inactive
N08	41.05309	-80.67724	5	Active
N09	41.05332	-80.67680	7	Active
N10	41.05308	-80.67644	13	Active
N11	41.05405	-80.67735	6	Active
N12	41.05406	-80.67670	5	Active
N13	41.05454	-80.67673	4	Active
N14	41.05420	-80.67705	6	Active
N15	41.05443	-80.67706	5	Active
N16	41.05460	-80.67700	7	Active
N17	41.05412	-80.67887	5	Active
N18	41.05429	-80.67876	5	Active
N19	41.05442	-80.67844	6	Active
N20	41.05413	-80.67843	6	Active
N21	41.05398	-80.67822	6	Active
N22	41.05371	-80.67695	2	Active
N23	41.05436	-80.67690	3	Active
N24	41.05453	-80.67855	6	Active
N25	41.05215	-80.67555	4	Active
N26	41.05275	-80.67677	0	Inactive
N27	41.05332	-80.67672	3	Active
N28	41.05408	-80.67744	5	Active
N29	41.05439	-80.67670	6	Active
N30	41.05433	-80.67735	4	Active
N31	41.05422	-80.67715	6	Active
N32	41.05294	-80.67606	1	Active
N33	41.05387	-80.67778	1	Active
N34	41.05452	-80.67854	5	Active

Attachment 1 (cont'd). Locations (Latitude and Longitude) of Canada goose nests treated by Wildlife Services, 27 March-4 June 2019. (N=Newport Wetlands; S=Wildlife Sanctuary; GL=Glacier Lake)

Nest ID	Latitude	Longitude	# Eggs in Nest	Status
S01	40.97715	-80.68961	6	Active
S02	40.97777	-80.68967	4	Active
S03	40.97839	-80.69285	5	Active
S04	40.97612	-80.69604	7	Active
S05	40.97743	-80.69634	6	Active
S06	40.97722	-80.69598	6	Active
S07	40.98000	-80.69328	5	Active
S08	40.97960	-80.69328	7	Active
S09	40.97838	-80.68970	1	Inactive
S10	40.97762	-80.68969	3	Active
S11	40.97752	-80.69201	7	Active
S12	40.9775	-80.69180	6	Active
S13	40.97836	-80.69264	5	Active
S14	40.97466	-80.69165	7	Active
S15	40.97441	-80.68998	5	Active
S16	40.97734	-80.69658	5	Active
S17	40.97811	-80.68968	0	Inactive
S18	40.97786	-80.68964	0	Inactive
S19	40.97551	-80.69249	6	Active
S20	40.97702	-81.68962	0	Inactive
S21	40.97747	-80.69189	4	Active
S22	40.97747	-80.69176	4	Active
S23	40.97787	-80.68965	4	Active
S24	40.97784	-80.68965	0	Inactive
S25	40.97725	-80.68964	4	Active
S26	40.97681	-80.68963	0	Inactive
S27	40.97848	-80.69267	5	Active