Goose Management Report
Pearly Pond, Rindge, NH
Dec. 2018

Objective 1: Waterfowl management: Structural controls and Education/outreach (Sections 7.4 and 7.16 in PPWRP) Measures of Success: Reduction in goose population (resident and migrant).

As part of our efforts to implement this objective of the Pearly Pond Watershed Restoration Plan (2014), Franklin Pierce University and the Pearly Pond Lake Association, comprised of residents of the Pearly Pond watershed, have implemented a number of actions to reduce the population of Canada geese.

Residential Volunteers

From 2016 - 2017, more than 22 lake residents volunteered close to 90 hours of time implementing various methods of discouraging the geese from using their property, with varying results. FPU and a subset committee of the Pearly Pond Lake Association monitored the efforts and collected factual and anecdotal results during this time (Table 1). As the goose population on Pearly Pond has grown, the residents have become more frustrated with these unwelcome guests. The waterfowl management component of the grant allowed them to better understand different options for deterring the geese on their property and the lake in general. This in turn has resulted in a new mindset among residents that goose mitigation is a way of life now and they can help keep the population in check by continuing to apply various techniques. Note that many of these efforts were repeated in the summer of 2018, although documentation is not available.

Border Collie Services

FPU also employed Rob Drummond, owner of Border Collie Services, Antrim NH, from April-October of 2016 and March to October of 2018 (Figure 1; Appendix A). The population of Canada geese on the FPU property was greatly diminished through the season with the use of two trained border collies. The resident population dropped, and fewer geese from other local ponds visited Pearly Pond and its shoreline as well. The migratory population also decreased ed relative to earlier years.The average maximum number of geese seen on any day in 2016 was 19.3, 10.7 in 2017 and 7.1 in 2018. Border collies are well known for their "prey drive and control". We chose this method because the collies are not interested in harming the geese and the geese are intimidated by their tenacity to chase them – even into the water. They have been extremely effective in mitigating the use of FPU property by the resident families, and because migrants are attracted to areas which already have geese, this has the added effect of reducing the use of the lake by geese from other local ponds and by migrant geese as well.

Goose Egg elimination

In 2017, FPU applied for and received a federal permit to addle Canada goose eggs (Goose Addling registration permit RG-11303A), which was conducted on 5/11/17 by Rob Drummond; 2 eggs were addled and pithed. We are working with Mr. Drummond to help teach residents how to identify possible nesting areas for continued addling in the future.

University Land Management

In spring of 2018, native trees and bushes were planted on University-owned property along a key point at the lake edge, to discourage goose crossing and to reduce erosion. Eight red chokeberry (*Photina purifolia)* and eight sweet pepperbush (*Clethra alnifolia*) were planted (see Figure 2). In 2018, FPU made some changes to their mowing regime to let the lawn grow in the area north of the lake (Figures 3a and 3b).

Conclusion

These efforts were all extremely successful, resulting in a roughly 75% decrease in both the resident and migratory Canada goose populations. In 2015 and years earlier, flocks of up to 80 geese had been seen on the lake and on FPU property during migration, and as many as 7 families of geese were noted on the lake in 2011 (Grey 2012); by 2018, this was reduced to less than 10. Mr. Drummond and lake residents noted three families of geese on the lake or on FPU property in 2016, three in 2017 and two in 2018. Table 1 shows the different techniques employed by the local residents to discourage the use of the lake and its shorefronts. While most of the techniques were judged to be relatively effective at some point, the overwhelming conclusion is that goose fencing is the most effective.

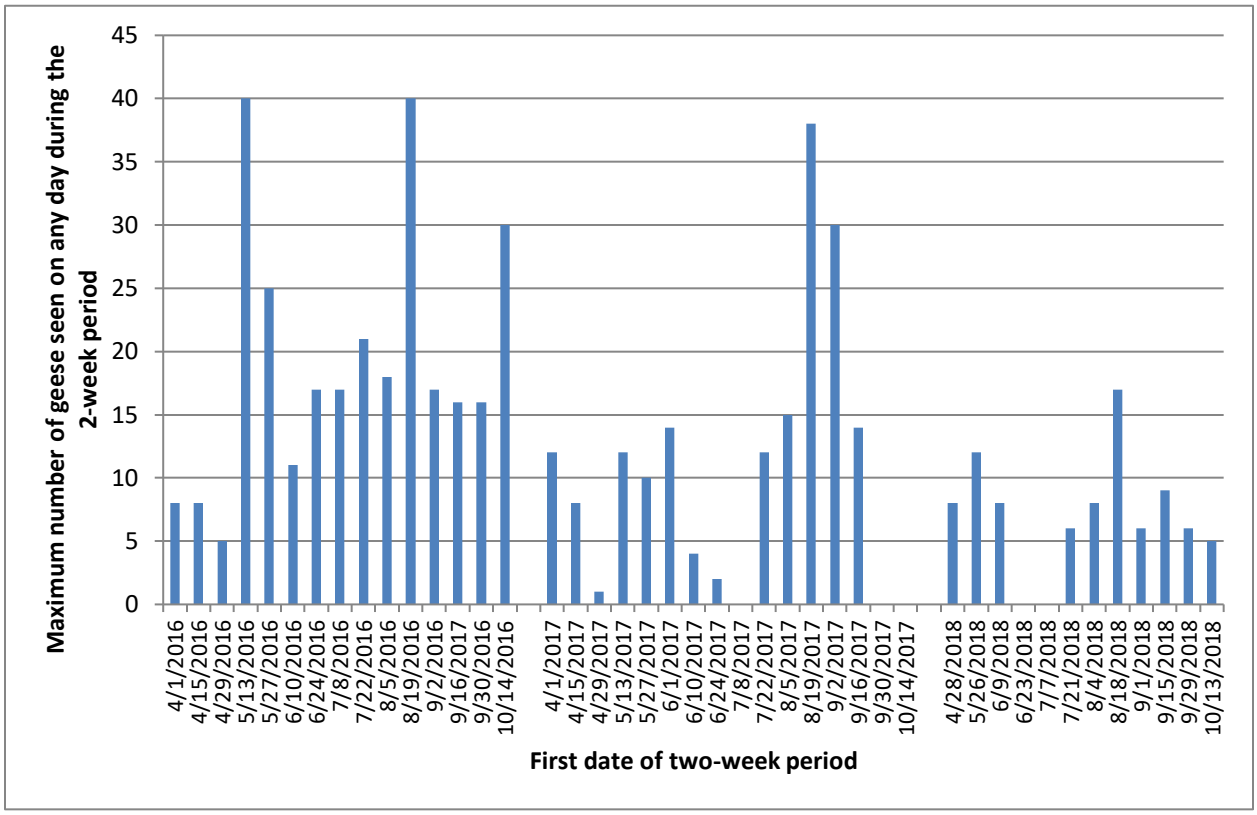

Figure 1. Observed goose population, 2016-2018, Rob Drummond, Border Collie Services.

Figure 2. Planting along east shoreline of Pearly Pond. 4/25/2018 and 5/1/2018.

Figure 3a. Reduced mowing on north shore of Pearly Pond, June 6, 2018.

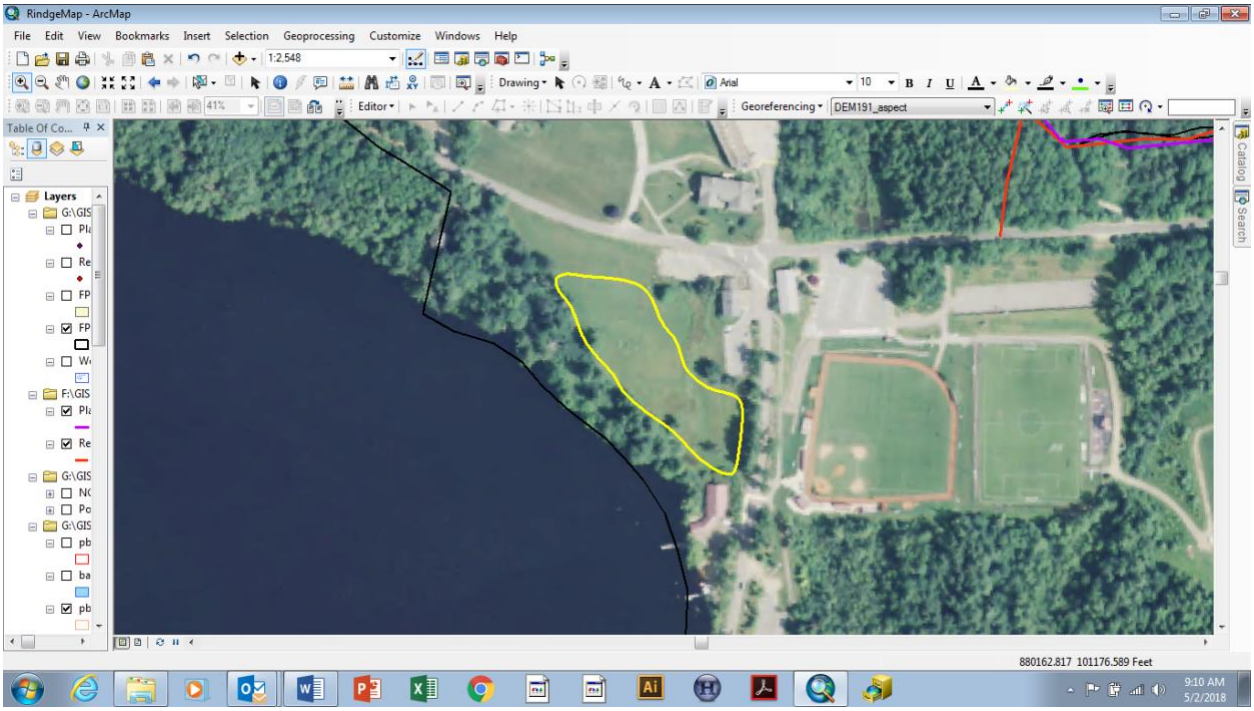

Figure 3b. Reduced mowing plan.

Table 1. Summary of Goose Management Efforts by Lake residents.
Compiled by Stacey Spkowski

2016 Activity					
Name	**Date**	**Activity**	**Time**	**Cost**	**Effectiveness?**
Al & Karen Columbus	3Q 2016	disrupted goose feeding	4 hours		Medium
		Installed fence on shoreline (includes purchase time / install)	3 hours	$150	High
Andy & Stacey Pskowski	3Q 2016	answered emails	4 hours	NA	NA
		scaring, chasing geese	3 hours	NA	Medium
		counting the geese	1 hour	NA	
June Wallace	3Q 2016	Chased Geese	3 hours	NA	Medium
Mark & Kathy Winter	3Q 2016	Cutting and staking mylar strips	2 hours	NA	Medium
Monty & Maripaz Shaw	3Q 2016	Installing monofilament and aluminized mylar film barrier	2 hours	NA	High
Sharon Rasku	3Q 2016	Scaring, chasing geese	2 hours	NA	Medium
Shaun & Lisa Savard	3Q2016	counting and scaring	3 hours	NA	Medium
Lynn Morin	3Q 2016	Counting and scaring	3 hours	NA	Medium
Bob Scribner	3Q 2016	Counting and scaring; installing fishing line fencing, deterrents, and signs on sandbar island	13 hours	NA	High
Bill & Michelle McNeil	3Q 2016	Installing/removing shoreline fence & re securing poles/fish line on island	13 hours	NA	High
Dave & Anna King	3Q 2016	installed Decoy, counting and scaring	3.5 hours	NA	Low
Gary & Linda Reed	3Q 2016	Counting and scaring	2 hours	NA	Medium
Mary Kay Riordan &Teresa Machmer	2Q 2016 3Q 2016	Counting and scaring Fencing and debris	8.25 hours 20 hours	NA $10	High
		TOTAL	89.75		

High Medium Low NA

2017 Activity*					
Name	**Date**	**Activity**	**Time**	**Cost**	**Effectiveness?**
Al & Karen Columbus	2Q/3Q 17	counting and scaring	4 hours	NA	Medium
Andy & Stacey Pskowski	2Q/3Q 17	Counting and scaring	4 hours	NA	Medium
		Fixing fencing	3 hours	NA	High
June Wallace	2Q/3Q 17	Chased and counted Geese	5 hours	NA	Medium
Mark & Kathy Winter	2Q/3Q 17	Counting and scaring	2 hours	NA	Medium
Mary Kay Riordan &Teresa Machmer	2Q/3Q17	Counting and scaring	3 hours	NA	Medium
Gary & Linda Reed	2Q/3Q17	Scaring, chasing geese	4hours	NA	Medium
Bill & Michelle McNeil	2Q/3Q17	counting and scaring	5 hours	NA	Medium
Dick Isakson	2Q/3Q17	Counting and scaring	2 hours	NA	Medium
Bob Scribner	2Q/3Q17	Counting and scaring;	5 hours	NA	Medium
Bill & Pam Friend	2Q/3Q17	Counting and scaring	3		Medium
Karl & Deb Wolpert	2Q/3Q17	Counting and scaring	2		Medium
Mark & Ann Evans	2Q/3Q17	Counting and scaring	1		Medium
Steve Venning	2Q/3Q17	Counting and scaring	4		Medium

*2017 activities are based on anecdotal feedback. Note that the level of bladderwort was at peak in the summer of 2017 so many residents did double duty cleaning the bladderwort out of their swimming areas and chasing and counting the geese daily.