



Re-naturalizing Marginal Farmland in Peterborough and Kawartha Lakes

Ontario Wildlife Foundation
2021 Final Report
ALUS Peterborough

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Project Activity

With the support of the Ontario Wildlife Foundation (OWF), seven ALUS Peterborough projects were established in 2021, creating a total of 32 acres of new wildlife habitat from otherwise marginal farmland. These projects include three riparian buffers, two new hedgerows, and two delayed haying projects. We would like to thank you very much for your generous contribution.

RIPARIAN PROJECTS

Project A

This project was located on a farm just northeast of Peterborough. The farming activity occurs on about half of the property, which is 100 acres mixed with pasture, pumpkin field, hayfield, red fife wheat, maple syrup woodlot, fallow field, and mixed bush.

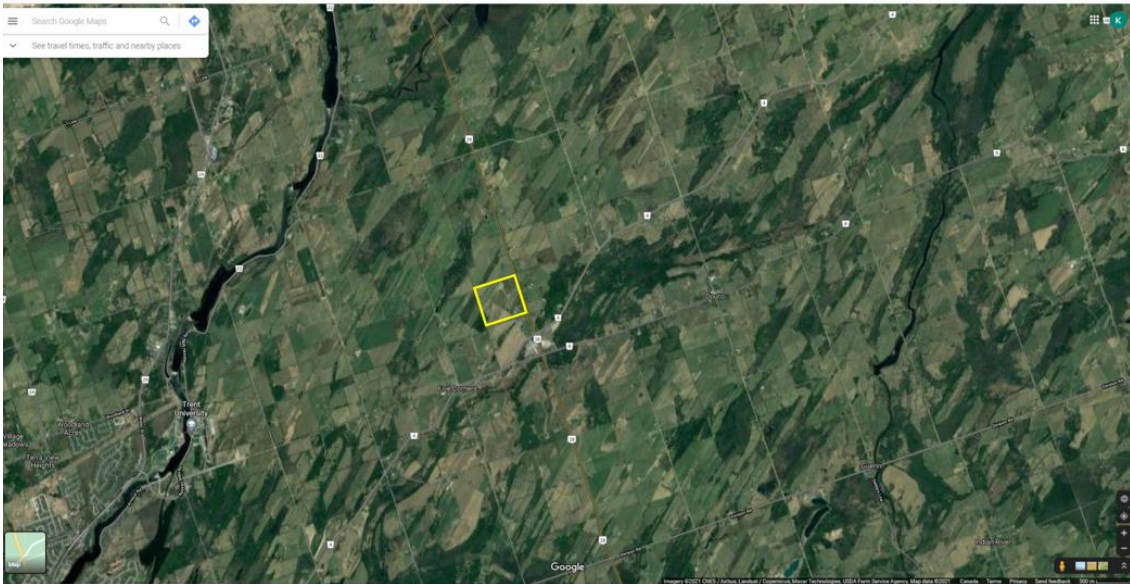


Figure 1. Project A is located on a farm property east of Peterborough and just west of a wetland complex.

In early 2021, the farmer gained support from other local partners to excavate a small low-lying area on the property and create a new pond. The farmer then installed cattle exclusion fencing around the perimeter of the pond, and planned for the establishment of trees and shrubs in the new riparian buffer.

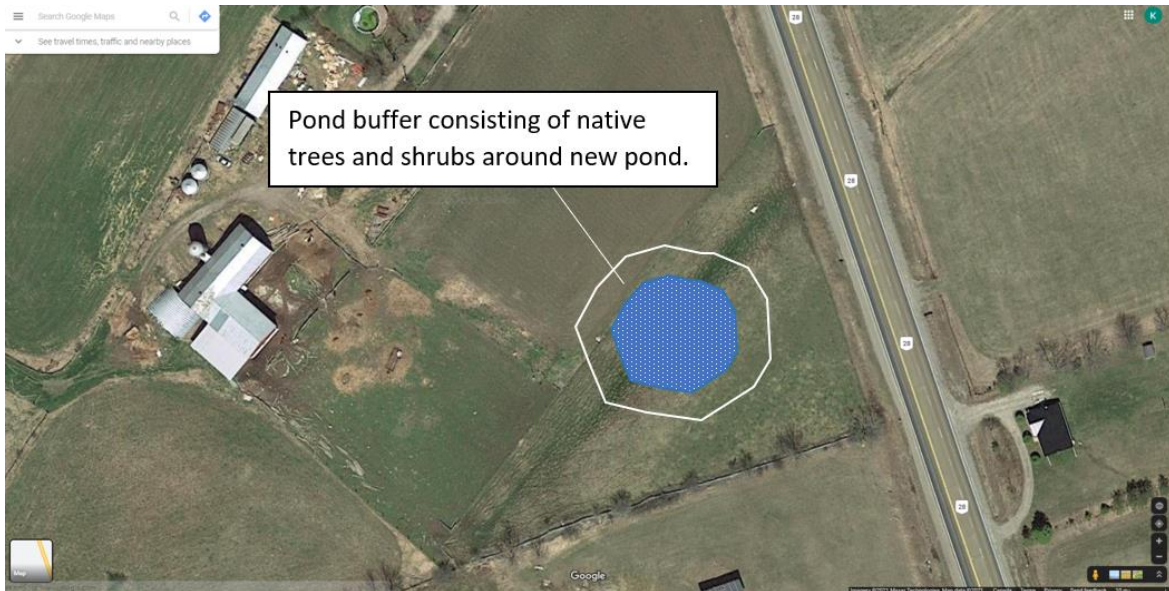


Figure 2. Low-lying area which was excavated to create a pond. Cattle exclusion fencing was installed by the farmer's hand along the white line.

In September 2021, the ALUS Peterborough coordinator, a volunteer, and the Ontario Federation of Anglers and Hunters/BrokerLink Fish and Wildlife Conservation Intern, planted a total of 100 trees and shrubs along the ponds bare 0.5 acre perimeter. Cedar, silver maple, serviceberry, dogwood, swamp rose, willow, and elderberry were planted in the clay-rich riparian area, which will provide bank stability, filter agricultural run-off, and support biodiversity.



Figure 3. The OFAH/Brokerlink Fish and Wildlife Conservation Intern prepares to remove an invasive purple loosestrife plant discovered along the new bank (left). A volunteer prepares to plant a cedar tree (right).

Project B

The second riparian reforestation project occurred on a farm northwest of Hastings. The property (100 acres) is comprised of woodlot, pasture, cultivated areas, and barnyard. For the past two years, the farmer has been working the land to create a small-scale organic market vegetable, fruit, and seed farm, and re-naturalize marginal hayfield along a creek which runs through the property.

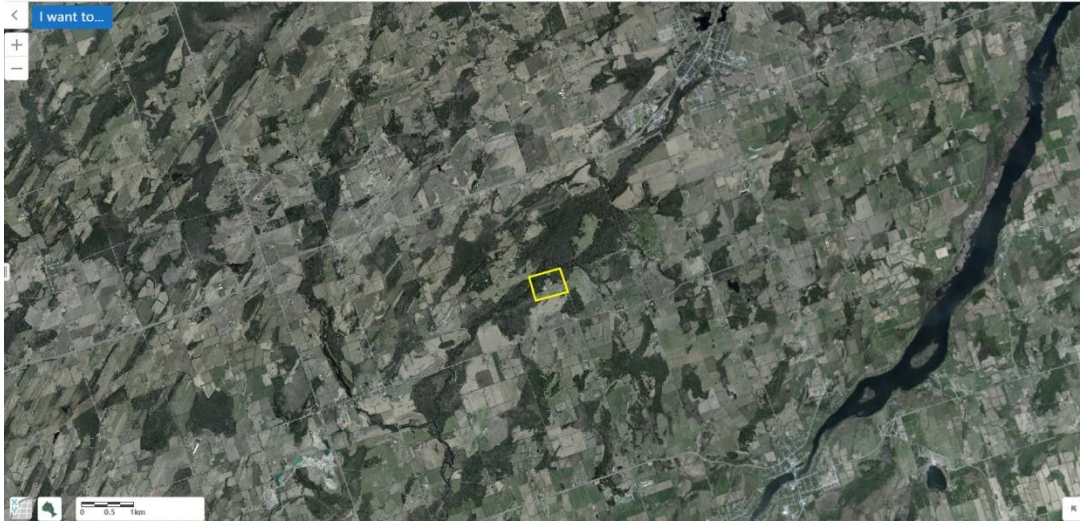


Figure 4. This farm property is surrounded by a large wetland complex.

In 2021, with the support of ALUS Peterborough, three Trent student volunteers and the farmer planted 75 trees and shrubs along the edge of the creek which transects the property. The adjacent hayfield becomes too wet for equipment, and the addition of water-loving trees and shrubs will help to retain and filter water.



Figure 5. The farmer converted marginal edges of hayfield into a diverse tree and shrub riparian buffer.

The one-acre area was planted with a mix of white pine, white birch, white spruce, Bebb's willow, buttonbush, chokeberry, nannyberry, ninebark, red osier dogwood, silky dogwood, sweet gale, and spicebush. These trees and shrubs will provide habitat for a variety of wildlife, including local species at risk songbirds such as Bobolink and Eastern Meadowlark, which nest among the farm's fallow fields.



Figure 6. Trent student volunteer plants a tree in the riparian buffer (left) and receive a gift of Brussels sprouts from the farmer for their hard work (right).

Project C

Located just east of Peterborough, Project C occurred on a property in Indian River, Ontario. The farmland (100 acres) is comprised of a mix of woodlot, pasture, wetland, and some cultivated areas. The property joins to adjacent forest areas to the northeast and southwest, therefore reforestation on the property supports habitat connectivity across the greater landscape.

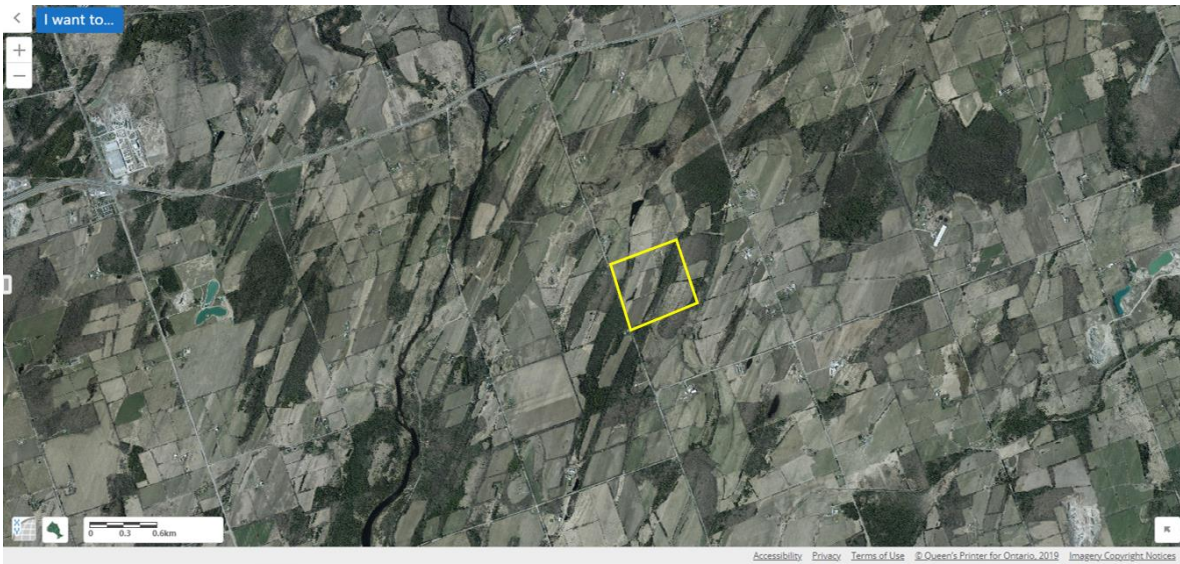


Figure 7. Property where project C occurred located east of Indian River, south of Highway 7.

The farmer wished to diversify the riparian buffer of a creek which transects the property through actively farmed hay and clover fields, with the addition of tree and shrubs to support more water filtration, carbon storage, and biodiversity.

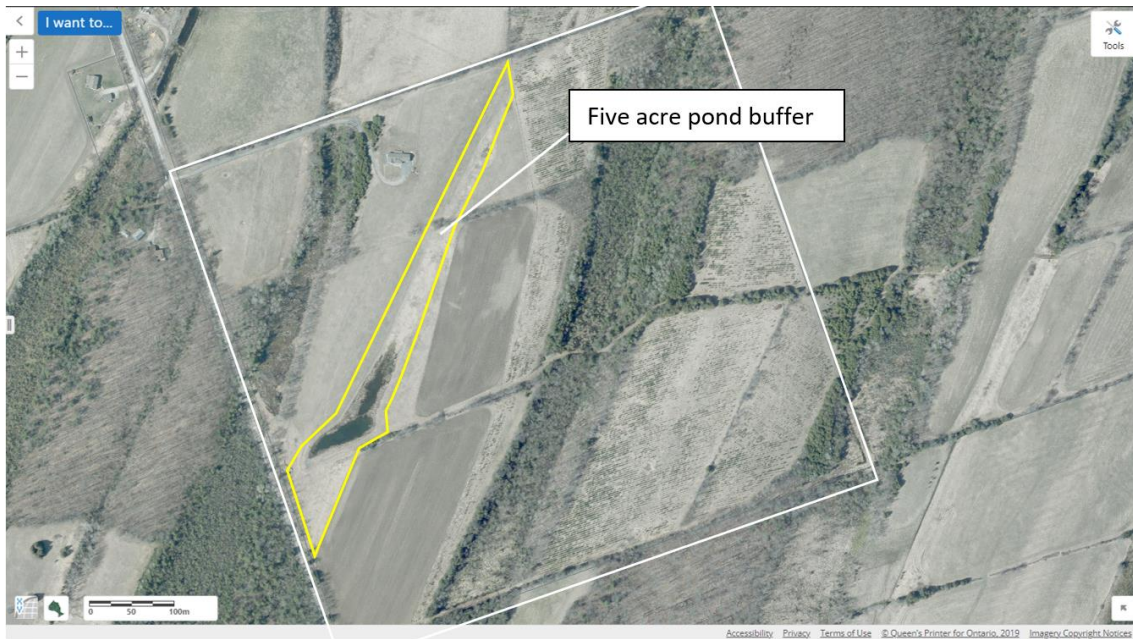


Figure 8. Five acre project area adjacent to hay and clover fields, along a low-lying strip of the property.

In the fall 2021, and with the help of 60 Fleming College Ecosystem Management students, 600 trees and shrubs were planted. These included a mix of silver maple, spicebush, yellow birch, white cedar, hackberry, elderberry, buttonbush, meadowsweet, sweet gale, swamp rose and red osier dogwood. This species composition will create edge habitat for a variety of wildlife including pollinators, birds (species at risk, upland gamebirds), mammals, and more. Edge habitat results in more predatory species feeding on crop pests, as well.



Figure 9. Nearly 60 volunteers planted trees and shrubs for six hours, totaling over 360 hours of work in only four hours' time.

TREE AND SHRUB PROJECTS

Project D

This project occurred on a farm property southwest of Peterborough, in Cavan-Monaghan, near the town of Millbrook, Ontario. The total farm property (136 acres) consists of a relatively even distribution of woodlot, wetland, pasture, crop, and yard.

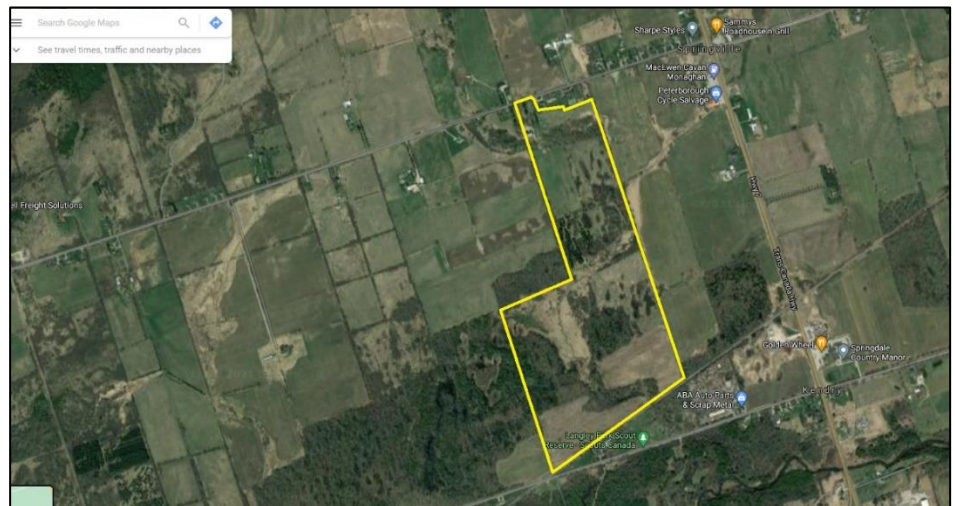


Figure 10. The first reforestation project occurred on a farm property which abuts a large forest area to the west.

The farming activity (i.e., pasture and crop) occurs on 40% of the property. This farmer has been re-naturalizing fallow, un-productive fields for many years, as well as managing the invasive wild parsnip which occurs on the property. For this project, the farmer wished to plant a hedgerow along the northern perimeter of a hayfield to create habitat and develop a windbreak to reduce soil erosion.



Figure 11. The location of the single row windbreak along the northern perimeter of the hayfield.



Figure 12. A volunteer and farmer plant trees along the new hedgerow, with the hayfield towards the right of the photograph.

In fall 2021, with the help of four volunteers, 100 trees and shrubs were planted to create the windbreak.

A mix of sugar maple, oak, white pine, white cedar, Bebb's willow, and ninebark were selected based on site suitability and landowner preference.

The total benefits of this hedgerow will continue to maximize overtime as the trees and shrubs mature, their ability to provide habitat, store carbon, and more grows with time.

Project E

The second reforestation project occurred on a farm northeast of Peterborough on a busy highway. The total property (200 acres) consists of pasture, woodland, swamp, crops, and barn yard. This farmer wished to protect the fields from wind and other impacts from the open road with the installation of a single row windbreak.



Figure 13. Property where Project E occurred along a busy highway along its eastern perimeter.

Along the eastern perimeter of the property, a mix of 300 red oak, black oak, red maple, willow, serviceberry, spruce, highbush cranberry, and elderberry were planted to become the new single row windbreak. These species will be tolerant to roadside conditions and provide a range of wildlife benefits and ecological services. The farmer also installed cattle exclusion fencing along the stretch where rotational grazing occurs.

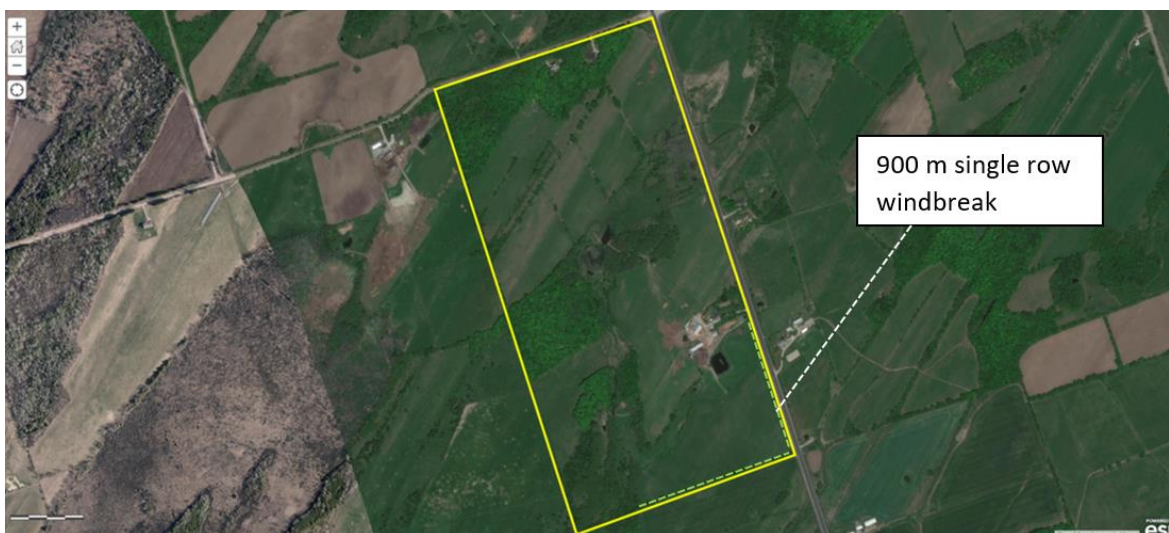


Figure 14. The new single row windbreak was installed along the southeastern corner of the property.

DELAYED HAYING PROJECTS

Projects F and G

Loss of grassland habitat in southern Ontario has resulted in the decline of several species, including Species at Risk birds such as the Eastern Meadowlark and Bobolink. The farmers of both properties have enrolled into the delayed hay program for a five-year period, where they delay the cut of hay until July 15th. This allows a large enough time window for young birds to fledge.

F) Located on Scugog Island, just west of Lake Scugog and northeast of Port Perry, the farm property (48 acres) is a mix of woodlot, pasture, hay, bee yard, and yard. The total area enrolled in the delayed haying program is 16 acres.



Figure 15. The first delayed haying project location near Scugog Lake.

G) The farm property for the second delayed haying project is in Omeme, along the eastern bank of the Pigeon River. This farm is a mix of woodlot, pasture, and wetland. The area enrolled as a delayed haying project totals 8 acres.



Figure 16. The second delayed haying project location on the east of the Pigeon River in Omeme.

Budget

The activities funded by the Ontario Wildlife Foundation for each project are outlined below. We would like to thank you for your generous contribution.

Project Expenses					
Project	Annual Payments	Establishment Materials	Details	Contributions (Cash and In-Kind)	OWF Contribution
Project A 1 acre Riparian Reforestation	\$100/year for 5 years (@\$100/acre): \$500	100 trees and shrubs and materials: \$1,190	A mix of water-loving shrubs, planted by volunteers.	Landowner contribution to preparation: \$500 Weston contribution towards annual payments: \$150 Ministry of Environment, Conservation, and Parks Species At Risk Stewardship (MECP SAR) towards annual payments: \$200 Eco Action contribution towards establishment: \$1,190	\$150 (Towards annual payments).
Total Project Value (annual payments, cash and in-kind):				\$2,190	
Project B 1 acre Riparian Reforestation	\$100/year for 5 years (@\$100/acre): \$500	75 trees and shrubs and 50 deer guards: \$3,012	Mix of water-loving shrubs planted by volunteers and landowner.	Landowner contribution: \$500 (cash, deer guards), and \$1,000 (in-kind planting trees and shrubs). Natural Resources Canada (NRC) 2 Billion Tree contribution	\$969 (Towards materials).

				towards materials: \$982	
				Eco Action contribution towards materials: \$500	
				NRC contribution towards annual payments: \$500	
Total Project Value (annual payments, cash and in-kind):				\$4,451	
Project C 5 acre Riparian Reforestation	\$500/year for 5 years (@\$100/acre): \$2,500	600 trees and shrubs.	Trees and shrubs were planted in one day by the landowner and 60 Fleming students.	Landowner contribution (in-kind prep and establishment): \$1,500 Weston contribution towards materials: \$247 Aurora contribution towards materials: \$448 NRC contribution towards materials: \$1,490 Eco Action contribution towards materials: \$2,684 MECP SAR contribution towards annual payments: \$1,360 Weston contribution towards annual payments: \$1,140	\$597 (Towards materials).
Total Project Value (annual payments, cash and in-kind):				\$8,683.85	

Project D 0.5 acre Single Row Windbreak	\$50/year for five years (@\$100/acre): \$250	150 trees and shrubs.	Trees and shrubs were planted in one morning by volunteers and the landowner.	NRC contribution towards materials: \$142 Eco Action contribution towards materials: \$196 Aurora contribution towards annual payments: \$50 NRC contribution towards annual payments: \$200	\$2,061 (Towards materials).
Total Project Value (annual payments, cash and in-kind):				\$3,648.87	
Project E 0.5 acre Single Row Windbreak	\$50/year for five years (@\$100/acre): \$250	300 trees and shrubs.	Trees and shrubs were planted by a local contractor.	Landowner contribution to prep (in-kind): \$1,000 Eco Action contribution towards materials: \$2,849 MECP SAR contribution towards materials: \$90 MECP SAR contribution towards annual payments: \$100	\$410 (Towards materials). \$150 (Towards annual payments).
Total Project Value (annual payments, cash and in-kind):				\$4,597.5	
Project F 16 acre Delayed Hay	\$800/acre for five years (@\$50/acre): \$4,000	Farmers delay cut of hay until July 15 th .	NA	MECP SAR contribution to annual payments: \$1,900	\$2,100 (Towards annual payments).

Project G 8 acre Delayed Hay	\$400/acre for five years (@\$50/acre): \$2,000	Farmers delay cut of hay until July 15 th .	NA	MECP SAR contribution to annual payments: \$800	\$1,200 (Towards annual payments).
Total Projects Value (annual payments):				\$6,000	
Total Project Expenses (annual payments, establishment, cash, and in-kind):				\$29,571.22	\$7,485
Operational Expenses					
Ontario Federation of Anglers and Hunters Administration 15%				NA	\$1,348
Total OWF Contribution (Project and Operational)					\$8,985

Conclusion

It is with support and collaboration from organizations like the Ontario Wildlife Foundation that these restoration projects are possible, which help us achieve our broader, collective conservation-based goals. In 2021 ALUS Peterborough was able to support seven farm families restore 32 acres of marginal farmland. Through our freshwater focus, these land-use changes will lead to more water filtration and retention, biodiversity, carbon storage, and other ecological services which benefit our communities and wildlife for years to come.