

10

year showcase

Environmental Stewardship Award



Message from Victor Oulton

For the last 10 years we have celebrated some of Nova Scotia's environmental stewards, recognizing their dedication and commitment to protecting our environment; through the Environmental Stewardship Award. This award was established to highlight Nova Scotia farmers who make soil, water and habitat stewardship a significant part of their farm operations.

Environmental stewardship is not only essential to the success and sustainability of our industry but it is our social responsibility to ensure our practices have a positive impact on the place we call home. The NSFA has been a strong supporter of environmental stewardship for decades – we have supported the enhancement of environmental practices through various projects and programs over the years including, the delivery of the Environmental

Farm Plan.

We are, however, especially proud of the Environmental Stewardship Award because it is the work of the farmers that truly contributes to the success and sustainability of our industry. Our hope is that this booklet will spark your interest, that a project done by one of the farms in this book is something you'd like to see replicated on your own farm. Have a look at the initial practices recognized in this booklet and you will see how far our industry has progressed in just one decade.

In Nova Scotia and across Canada, environmental stewardship is something we all strive towards on our farms.

We welcome you to join us in celebrating 10 of our dedicated environmental stewards in this showcase year.



*Victor Oulton, President
Nova Scotia Federation of Agriculture*

Message from Minister Colwell

I extend my sincere congratulations to the NSFA for 10 years of celebrating Nova Scotia's environmental stewards and supporting the Nova Scotia Environmental Farm Plan Program.

I join in the celebration of these stewards. They are models to follow, as Nova Scotia farmers who make sound environmental practices part of the way they run their farms.

Nova Scotia's farms have a good environmental record. Our registered farmers have the highest participation rate in the EFP program in Canada; almost three quarters of our registered farms have an EFP. And we are committed to supporting and enhancing this effort as we look to the future.

The Department of Agriculture is pleased to have joined a 3- way partnership with the Nova Scotia Federation of Agriculture and Perennia, to move the EFP program forward even further and to continue to expand environmental stewardship by Nova Scotia farms.

To that end, I hope that the stewardship example shown by the ten farms depicted in this booklet will inspire more Nova Scotia farmers to adopt environmental practices in their operations.

Thank-you to the outstanding farms in this booklet and to the NSFA.



*Honourable Keith Colwell
Minister of Agriculture*

Nova Scotia Environmental Farm Plan Program



The Nova Scotia Environmental Farm Plan Program began in 1999. The Nova Scotia EFP is one of only a few EFP programs in Canada in which coordinators accompany the farmer to assess the potential environmental impact of their farming activities. Presently, 70% of all registered farms in the province have an EFP, which is among the highest participation rates in Canada– a statistic we are very proud of.

In addition to the on-farm EFP delivery, we have supported a number of other projects that further enhance the EFP Program including: Water Use Project, Recycling of Farm Waste, Agricultural Biodiversity Conversation Plans, Species at Risk Projects, Sprayer Calibration Workshops, among many others. The EFP Team has also been involved in a number of agri-environmental committees, supporting the advancement of environmental practices on-farm.

As in the past, the program continues to evolve. With a newly formed 3-way partnership with Perennia, Nova Scotia Department of Agriculture and the Nova Scotia

Federation of Agriculture, we are excited to continue the advancement of this program to align with the needs of industry, striving to be the leader in agri-environmental stewardship.

The EFP is funded through the Canadian Agricultural Partnership, a five-year, \$3 billion investment by federal, provincial and territorial governments to strengthen the agriculture and agri-food sector.

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VanOostrum Farms - 2009

Our first stewardship award was presented to Andrew and Teressa VanOostrum who operated VanOostrum Farms in Grafton, Kings County. The farm raised beef cattle and produced corn, soybean, wheat and forage crops along the North Mountain.

The farm protected fields from damage and soil loss caused by erosion, compaction and runoff by practicing minimum tillage and no-till cultivation on farm fields. While also rotating forage, corn and grain crops to help maintain soil health. The farm maintained a Nutrient Management Plan to balance crop inputs and used GPS technology to further improve crop management. Although these practices are now more common, vanOostrum's were early adopters.

Several brooks, headwaters of the Cornwallis River, flow through the farm property. Raising livestock on pasture meant providing reliable sources of water.

The farm built engineered livestock crossings (culverts and bridges) and did extensive fencing to keep cattle out of the waterways. Wind and solar-powered watering systems for ponds were established and a winterized solar watering system was installed.

The farm was one of the first in Nova Scotia to complete an Agricultural Biodiversity Conservation Plan and also partnered with Ducks Unlimited to implement improvements on the farm.

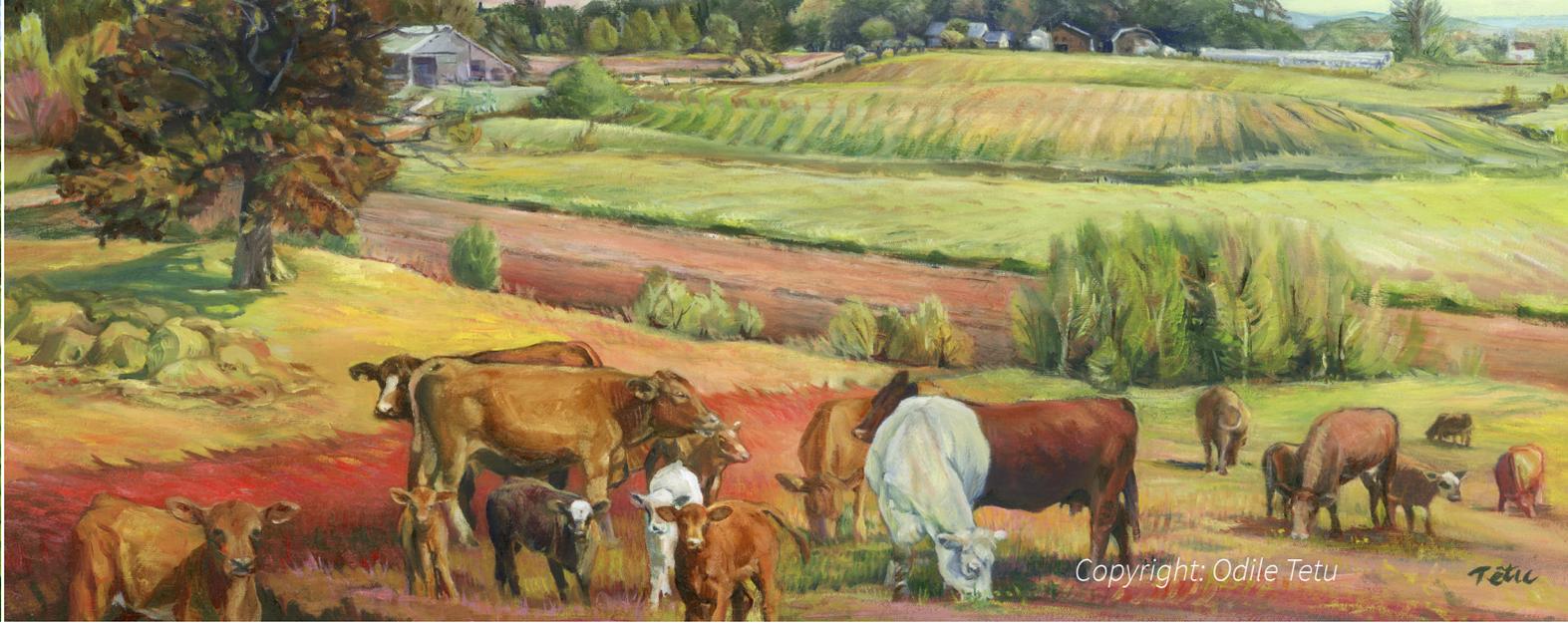
About the painter:

Growing up in the south shore of Nova Scotia in Chester, Dijon has been surrounded by the natural beauty of the region and by art his entire life. He draws inspiration from the local landscape. Growing up along the ocean coast, he was exposed to rural life and the beauty and simplicity of the area. Executed by a heartfelt response to his environment, his deep appreciation for the landscape is obvious to the viewer, whether it is a field of golden wheat or a coastal scene of deep blue.

He now resides in Peterborough, Ontario, Canada.

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Copyright: Odile Têtu

Têtu

Manning Family Farm - 2010

Our second stewardship award was presented to Dean and Catherine Manning, in Falmouth. Their mixed farm consists of a cow-calf beef herd, grain crops and a variety of greenhouse crops, bedding plants, and other vegetables, most of which they sold directly through their seasonal on-site farm market.

With housing developments in close proximity and a popular golf course bordering their lands, the farm has always recognized the importance of environmental stewardship. They have maintained some native woodlands around their farm to serve as natural buffers and shelterbelts. These also serve as winter pastures for cattle and provide additional habitat for wildlife.

Greenhouse vegetable crops were managed using biological control methods as much as possible. Soil conservation practices included establishing winter cover crops after harvest each autumn to return nutrients to the soil and help prevent erosion. The

farm routinely tested their soils and used cover crops and livestock manure instead of fertilizers to maintain soil fertility.

The various watercourses that cross the farm were also fenced out to restrict livestock access and the buffer areas established allowed wildlife to flourish.

About the painter:

Odile Têtu attended Ottawa University and l'Université de Montréal. Têtu now lives in Georgeville, Antigonish County, Nova Scotia, from where she paints Atlantic Canada's landscape in oils and watercolours. She now teaches drawing and printmaking at St Francis Xavier University. She owns a small art gallery, located on the Sunrise Trail, on Cape George. She is inspired by the beauty of nature in the midst of human endeavours.

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Cell: 902-318-9126



Copyright: Carol Morrison

W.G. Oulton & Sons Ltd. - 2011

Our third winner was W.G. Oulton & Sons Ltd. in Martock, Hants Co. In addition to beef cattle, sheep, free-range turkeys and chickens, the farm also has other poultry including quail and partridge, several types of deer and elk, and other exotic animal species including emu and yak.

The farm also consists of a provincially inspected abattoir and poultry processing plant. The Oultons have worked with the Nova Scotia Department of Agriculture and Department of Environment to develop a compost pilot project. They have been successful in composting farm waste and offal generated from the abattoir and meat processing facility.

The Oulton family had effectively reduced their fertilizer inputs through nutrient management

and regular soil fertility and tissue analysis in their fields and orchards. They have also developed an Agricultural Biodiversity Conservation Plan with the Nova Scotia Department of Lands and Forestry and worked cooperatively with the Canadian Wildlife service.

About the painter:

As a biologist and an artist, Carol feels that we are very much part of nature, and she is very aware of the wonder of the world around us. She finds that nature is always unexpected, and is fascinated by the constantly changing appearance of lakes, woods, brooks and fields. After a fulfilling career as a research scientist, Carol pursued a lifetime love of painting, and graduated from NSCAD with a major in Fine Art.

To contact the artist: carolsfineart@ns.sympatico.ca, (902) 860-0101



Copyright: Megan Smith

Upperbrook Farm - 2012

Our fourth winner was Upperbrook Farm, nestled in the hills above the North River Valley. The farm was managed by Ruth Matthewson and her mother Greta and is best known for their North Country Cheviot breeding stock and wool products. They also harvested Christmas trees from a two acre lot and managed their woodlot under a forestry plan developed by Nova Scotia Woodlot Owners and Operators Association.

With rocky, rugged fields, they relied heavily on pasture and forage to feed their flock. The grass-fed system is good for the animals and even better for the environment. They were careful not to damage the areas beside brooks and streams to protect fish and wildlife habitat and conserve watershed function. Upperbrook Farm also had a woolen mill and a wool washer, which allowed Greta and Ruth to make use of wool that would commonly be a waste product of lamb production. Instead, the wool was cleaned and crafted into comforters and other wool gift items. But Ruth wanted to take this initiative even further as

it is estimated that half of the wool clippings in Nova Scotia are sent to the landfill. She partnered with the Dalhousie Faculty of Agriculture to investigate the feasibility of using wool for insulation. Ruth had also partnered with the Atlantic Natural Fibre and Natural Dye Industry Association to look into the possibility of establishing an animal fibre industry in Atlantic Canada.

When faced with unforeseen challenges around the safe disposal of wool wash water, Ruth remained optimistic. Because wool contains lanolin, a natural oil that can clog septic systems, an alternate disposal method was needed so Ruth started working with researchers at Dalhousie's Agricultural Campus to determine a solution.

About the painter:

Landscapes have always been a favorite subject matter for this Nova Scotian artist who was introduced to oil painting through 4-H. Megan's creative mind lead her to become a biomedical engineer and she now uses her artistic passions to design innovative medical imaging equipment. Although her work has taken her many places, she has returned to Nova Scotia to contribute to the neurotechnology field in Halifax. To contact the artist: smith.mmegan@gmail.com



Copyright: Lindsey Brown

Wild Rose Farm - 2013

Our fifth winners were Gilberte and Siegmar Doelle who operate Wild Rose Farm. The farm is a certified organic mixed vegetable, flower, herb and livestock farm in the small community of Gilberts Cove, just outside of Digby. They marketed their farm products through an on-farm market, a farmer's market and one of the province's longest running CSA programs.

Composted manure from the farm's small beef herd was used as a nutrient source in the garden, as well as compost teas and kelp. Green manures also played an important role; using buckwheat, oats, winter rye and other cover crop mixtures to add more diversity both above ground and in the soil.

The Doelle's crop rotations and interplanting are a natural means of pest control. Selected flowers were planted between crops and at row ends in spaces called "insectarium rows" to attract beneficial bugs and pollinators. Hay mulch was

placed along all the garden paths to protect the soil and provided a home for many beneficial beetles. On Wild Rose Farm, water is conserved and recognized as a valuable resource. The farm installed drip irrigation to be more efficient with their water use for market garden crops.

Reducing farm waste is an important part of the business. All organic wastes were composted, plant pots, trays and containers were reused, and all CSA members were given reusable bags.

About the painter:

Lindsay was born and raised on a dairy farm in Shubenacadie, NS with her parents, John and Angela van de Riet and two brothers. She and her husband, Alex Brown, operate Browntown Farms in Shubenacadie. With agricultural subjects being her passion, she is often asked to do custom works of farms, cows and exhibitor signs for exhibitions.

To contact the artist: 902-751-1322



Copyright: Pamela Swainson

Out to Pasture Farm - 2014

Our sixth winner, Out to Pasture Farm, is a seventh-generation farm that has seen a lot of changes over the years. The farm has a herd of beef cattle, sheep and free-range chickens. A truly diverse operation, Out to Pasture Farm also managed Forest Stewardship Council (FSC) certified woodland and maintained 17 acres of ponds, wetlands and areas dedicated for wildlife habitat.

Although not certified, the farm followed organic practices in the management of their Christmas trees and livestock. Rotational grazing, frost seeding and applying the farm's manure based on soil fertility tests and a nutrient management plan helped ensure productive pastures and forage fields.

The family worked hard to protect water quality and provide wildlife habitat on the farm. Large buffers and riparian zones were left along the streams and the farm worked closely with the Adopt-a-Stream Project to continuously improve stream bank health and fish habitat. The farm developed an Agricultural

Biodiversity Conservation (ABC) Plan and worked with Ducks Unlimited to construct a large wetland in the middle of the farm. The wetland not only provided significant habitat for numerous types of wildlife, it also helped treat runoff from farm fields.

Nest boxes were placed around the wetland to encourage nesting ducks and bird boxes are located along the edges of the fields and through the woodlot and Christmas trees. When hay is harvested, a raised cutter bar helps to avoid harming nesting birds.

About the painter:

Pamela was born in Manitoba to parents who were children of Icelandic immigrants. She now lives on an organic farm in the Cobequid Mountains with her partner and an assortment of furred and feathered creatures. She celebrates the environment around her on a daily basis and is passionate about local living and sustainability. Caring for the earth is a kind of subtext in her work whether literally or as inspiration.

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Copyright: Virginia Houston

Winding River Farms Ltd. - 2015

Our seventh award winners, the Vissers and Harbers families, operate a 825 acre dairy farm along the banks of the Stewiacke River. The farm milks 165 cows and they grow corn, soybeans, winter wheat and legume forages for sustainable feed production for their farm.

The farm has long recognized the importance of soil health. The farm has followed a Nutrient Management Plan for the past decade, which included soil and manure analysis every 3 years and worked closely with their nutrient management planner to make the best economic and environmental decisions on the farm. Organic fertilizers were used on the farm and long-term forage was incorporated into the crop rotation. Fields with slope were kept in grass forage to help with erosion. Manure was applied to fields in the spring and fall by a low clearance delivery application system, which reduced environmental risks by having better control of the manure.

Winding River Farms also recognized the importance in protecting water quality. Farming next to the Stewiacke River, cattle were fenced from the watercourse and riparian zones were established along the river. A constructed wetland was created to collect and filter excess nutrients/runoff from the farm property.

Additional efforts have been made on the farm to protect the local environment by having appropriate fuel and pesticide storage areas.

About the painter:

Virginia was raised in St. Vincent's, in St. Mary's Bay in Newfoundland and moved to Nova Scotia in 2003. Virginia is currently a member of Winding River Art Gallery in Stewiacke, NS. The natural beauty of the coastal shoreline has always intrigued her. Virginia began painting rural and urban vistas throughout the Maritimes and her art revolves around coastal scenery as well as rural and urban landscapes, sunsets and wildlife.

To contact the artist: vhouston@eastlink.ca or www.virginiahouston.com



Copyright: Susan Sweet

Hillsdale Fur Farm

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Hillsdale Fur Farm - 2016

Our eighth winner, Hillsdale Fur Farm, owned and operated by Lindon and Charlene Mullen, is located in Hilltown, Digby County. As the farm grew over the years, runoff from the manure and yard became a growing concern. The farm installed ditches, drains and eaves troughs to divert clean surface and roof water around the farm. An extensive drainage and treatment system was also designed and installed, to carry wastewater from the farmyard to a settling pond and a constructed wetland. In addition to improving water quality, the pond and wetland provide a new habitat for ducks, muskrats, frogs and a number of other aquatic species.

Water from the wetland was used to trickle irrigate a hybrid willow plantation. The aim of this innovative system was to have no impacted water leaving the farm site. Another goal was to use these quick growing willows as a source of woodchips, which are used under mink cages to absorb manure runoff.

The Mullen's were early adopters of these environmental practices before they became industry regulations.

Manure was routinely collected from under the cages with an auger system and taken to a newly constructed storage building. The manure was removed from the farm and taken to a local composting facility or a bio-gas generation facility, where it was used to produce electricity for Nova Scotia Power.

About the painter:

Susan Sweet lives and paints in rural Nova Scotia. Most of her work evolves through a continuing journey of visual observation of domestic livestock and the rural landscape including the ever changing coastlines of Atlantic Canada. She currently works with acrylic paint on canvas and soft pastel on paper. Much of her work reflects her connections and interest in rural life and her youth spent living on a farm and growing up with horses.

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Copyright: Darlene Watters

Willow Pond Farm - 2017

Our ninth winner, Willow Pond Farm in Higginsville, Halifax County is owned and operated by Larry and Pat Ward. Having a great herd of Hereford cattle was one of the Ward's main goals and raising them in a healthy, natural way was important to them.

One major contribution was the farm's impact on wildlife habitat. Over 35 years ago, the Wards cooperated with Ducks Unlimited to create a very large wetland at the back of the farm property. This wetland provided habitat for numerous water fowl, shorebirds, raptors, fish, amphibians, turtles and small mammals. Over the years, the Wards have also planted shrubs, trees and plants around the farm that encourage many different wildlife species. The farm recently completed an Agricultural Biodiversity Conservation (ABC) plan through the Department of Lands and Forestry, which identified wildlife habitat on the farm and provided recommendations on how to make enhancements.

The farm has a Nutrient Management Plan, which included soil and manure testing every three years. Cattle were rotationally grazed, which improved pasture productivity and reduced over-grazing. The pastured cattle accessed water from a water tub which was gravity fed from a large dug pond. This low input method provided good quality water to the cattle when they were pastured away from the barn and allowed the Wards to fence cattle from watercourses. The farm used a no-till seeder to renovate pastures. This improved the health and productivity of the fields and helped prevent soil erosion.

About the painter:

Born from Nova Scotian roots, raised in south-western Ontario but now home in Nova Scotia, Darlene pursues her artwork, creating original works and commissions. While natural settings and wildlife are her main subjects, she loves delving into life drawing and portraiture. All of her art has a focus on detail and expression. With the goal of uncovering the wonder and light in every-day surroundings, she never lacks for inspiration.

To contact the artist: <http://creativewatters.com/>



Copyright: Kelly Mitchelmore

Lightfoot & Wolfville Vineyards - 2018

Our tenth winners were Michael and Jocelyn Lightfoot, who own and manage D&M Lightfoot Poultry Farm, as well as Lightfoot and Wolfville Vineyards in Wolfville. Lightfoot & Wolfville is certified both organic and biodynamic, a process that takes a holistic ecosystem approach to the entire farm.

Soil and crop management is achieved through petiole and soil analysis, and an extensive composting program. Custom compost teas, as part of the biodynamic mentality were used on the farm to enhance soil fertility and control weeds. Michael's approach to soil health is extensively planned and far from conventional and it works for their operation. The farm also used a no-tillage system and controlled weeds with a new finger weeder implement.

Livestock, including sheep, highland cattle, and pastured pigs were fenced away from water sources, and managed to play a role in the farm ecosystem as the pastured pigs were used to clear land and the sheep are used as weed control under the vines in the vineyard.

In the poultry facility, they upgraded the exhaust fans to low-energy models, changed the incandescent lightbulbs over to LEDs, as well as upgraded the insulation to conserve heating oil in the winter months. The winery's hospitality building was designed with energy saving in mind, with the use of air to air heat pumps, as well as the use of wood to heat the outdoor oven on the patio.

About the painter:

Kelly Mitchelmore is known for her bold luminous paintings that are thick in texture and bright in colour. Painting in both acrylic and oil, she uses brushes and knives, using multiple layers of rich saturated hues, and is known best for her love of red and her signature paintings of poppies. Native to Nova Scotia, Kelly does a fan of "support local", believe that your community is only as good as you make it – as such she participates in many local events through her art. Residing in Windsor, Kelly enjoys creating to loud music in her home studio, which also hosts the Phoenix Hollow Gallery. Whether painting or teaching, or showing, Kelly enjoys a holistic art approach and encourages all art on all levels. You can find Her work in galleries across Canada and at kellymitchelmore.ca

Reference Material

Agricultural Biodiversity Conservation Plans

Many of our previous winners had completed an Agricultural Biodiversity Conservation Plan for their farm. Peter Austin-Smith, a Biodiversity Stewardship Coordinator with Nova Scotia Lands and Forestry, is currently providing Agricultural Biodiversity Conservation Plans for individual farms.

These plans identify current and potential activities that support biodiversity within the farm operation. They include a biodiversity assessment and a riparian health assessment of the farm. Participation is voluntary and there is no cost for the plan. For more information, please contact Peter, in Kentville, at 902-679-6733 or by email: Peter.Austin-Smith@novascotia.ca



Pollinator Conservation

Impacts of climate change and other stressors on populations of managed and native bees and other pollinators have raised concerns as to the potential impacts on agricultural crop production.

The EFP program, and the Nova Scotia Beekeepers Association, are asking industry and individuals to consider implementing pollinator conservation practices from the Xerces Society for Invertebrate Conservation.

The website has various resources available: <https://xerces.org/>.



Biodiversity Guide

Wildlife nuisance issues along with biodiversity are important issue on many farms. The School for Resource and Environmental Studies (Dalhousie University), with support and input from the Nova Scotia Federation of Agriculture and many other partners, has created a Biodiversity Landowners Guide website (farmbiodiversity.ca). The website provides information, resources, and guidance to landowners benefits both agricultural production and biodiversity. It also provides strategies to deal with nuisance issues related to many wildlife species.

Energy Efficiency

Efficiency Nova Scotia, in partnership with the Nova Scotia Department of Agriculture, appointed Kraig Porter as the On-site Energy Manager for the agriculture industry to help encourage Nova Scotian farmers to save energy and lower operating costs. As the On-site Energy Manager, Kraig can help:

- Identify energy efficiency opportunities
- Perform energy saving analysis on equipment throughout the farm
- Provide technical support related to energy efficiency systems and equipment
- Serve as the single point of contact to facilitate and support farmer decision making
- Navigate Efficiency Nova Scotia programs and services, and address farmer questions or concerns
- Complete measurement of improvements and ensure that energy savings are quantified

Across the province, farmers are learning how they can save energy, lower operating costs and realize the non-energy benefits of energy efficiency. If you are interested in booking a free on-site energy assessment or to chat about how you can save energy on your farm, contact Kraig Porter, On-site Energy Manager at (902) 470-3590, (902) 872-1191 or by email: kporter@efficiencyns.ca or agriculture@efficiencyns.ca.

EFP Factsheets and Resources

The Environmental Farm Plan program has numerous information sheets and publications on various environmental topics. If you are looking for information on riparian zones, shelterbelts, biodiversity, cover crops, soil conservation, water quality, nutrient or pest management, manure storage and handling or alternative livestock watering systems, check out the resources available on our website: <https://www.nsfa-fane.ca/efp/>.

If you have a certain topic and cannot find it, contact our office with your request: 902-893-2293 or info@nsfa-fane.ca.



NOVA SCOTIA
EFP
ENVIRONMENTAL
FARM PLAN

FARM PLANS BOOK VISIT WATER

Factsheets

Below are links to many information sheets and literature on various environmental topics to your request.

GENERAL

- A Guide to Agricultural Best Management Practices Within Municipal Drinking Water
- Siting and Management of Hog Farms in Nova Scotia – 2000
- Where to Find Your Property's Parcel ID Number (PID)
- Environmental Regulations Handbook for NS Agriculture
- ATTRA Website
- Minimum Separation Distances and Riparian Zones
- Engineers
- Managing Pasture for Profit

A Decade of Environmental Leaders

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| 2009 | VanOostrum Farms |
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| 2013 | Wild Rose Farm |
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