

# FLOWPA FUNDAMENTALS

FINGER LAKES - LAKE ONTARIO WATERSHED PROTECTION ALLIANCE  
FROM STREAMS, TO LAKES, TO GREAT LAKES  
PROTECTING OUR WATER RESOURCES BEGINNING AT THE LOCAL LEVEL

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The Finger Lakes - Lake Ontario Watershed Protection Alliance (FLOWPA) is an alliance of 25 counties, represented by County Health Departments, County Planning Departments, Soil and Water Conservation Districts, Environmental Management Councils, and Water Quality Management Agencies. By sharing information, data and ideas, FLOWPA has, and continues to address water quality issues, identify solutions, and complete projects at the local level in order to keep the watersheds in New York's Lake Ontario drainage basin clean.

## NYS ENVIRONMENTAL PROTECTION FUND ASSISTS FLOWPA

A major portion of FLOWPA's funding comes from an annual appropriation in New York's Environmental Fund (EPF). Over 95% is used for actual projects with a small percentage of funding used for administration (the Water Resources Board (WRB)). In addition, funds are leveraged through local match, including landowner contributions, and in-kind services. That way, program dollars can be better utilized and have a greater impact on the Lake Ontario drainage basin. FLOWPA projects and programs involve many partners including federal, state and local officials, landowners, and concerned citizens who share FLOWPA's goal of protecting and enhancing water quality. Individual county projects are based on local needs and address a variety of water quality concerns relating to watershed management and planning; nonpoint source pollution from agriculture, erosion, and storm water; habitat protection; public education; septic systems; and drinking water. Each member county develops an annual work plan which is reviewed by the NYS Department of Environmental Conservation (DEC) Division of Water (DOW) and regional water engineers to make sure it is consistent with state water quality objectives. Listed below is the amount of State funding allocated by year from 2008 through 2014.

State Fiscal Year (SFY) 2008-09 \$2.3 million dollars disbursed to 25 Counties, the Special Project Fund and the WRB

SFY 2009-10 \$1.151 million dollars disbursed to same 25 Counties and the WRB

SFY 2010-11 SFY 2011-12, SFY 2012-13 \$1 million dollars each year to same 25 Counties and the WRB

SFY 2013-14 \$1.3 million dollars disbursed to same 25 Counties and the WRB

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## FLOWPA AWARDED FEDERAL FUNDING



The Great Lakes Restoration Initiative (GLRI) is the investment by the federal government to protect, maintain, and restore the chemical, biological, and physical integrity of the Great Lakes. In 2010 (Federal Fiscal Year 2011) FLOWPA was awarded \$998,749 in federal funding administered through the US Environmental Protection Agency. The funding was granted to 8 counties for agricultural best management practices.

The principle objective of these projects was to improve the water quality in the Lake Ontario water basin through reduction of soil erosion, priority nutrient loading and pollutant loading, especially agrichemicals and petroleum-based products, from farm operations. The projects are scheduled to be completed by December 31, 2013.

Additionally, FLOWPA was awarded \$207,790 in October 2012 (Federal Fiscal Year 2013) through the Great Lakes Commission's Great Lakes Basin Project Program for Soil Erosion and Sediment Control. These funds will be used by three counties (Cayuga, Onondaga, and Wayne) to implement hydroseeding and streambank stabilization programs in order to reduce sediment loading and soil erosion.



## FLOWPA UTILIZES ENFORCEMENT ACTION FINE MONEY

In May 2013, FLOWPA was awarded \$20,000 for environmental benefits projects as the result of an enforcement action by the NYS DEC and the State Attorney General's Office against a private agricultural engineering firm. The settlement agreement requires that FLOWPA must use the funds for the design and implementation of Best Management Practices (BMPs) in accordance with the proper NYS Agricultural Environmental Management (AEM) protocols and Natural Resource Conservation Service standards at Concentrated Animal Feeding Operations (CAFO) permitted farms and smaller non-CAFOs. Of the 7 proposals received for use of the funding, two were selected due to limited funding. Onondaga County's Environmental Benefit Project involves clay lining in Amber Creek to prevent manure contaminated water from infiltrating the ground and polluting three residential wells. Madison County's Environmental Benefit Project involves installation of animal exclusionary fencing and watering systems which provides cleaner water for the animals and keeps manure and urine in the pasture, reducing the impact to streams. Details of those projects for Onondaga and Madison Counties are described below.

### **MADISON COUNTY** Oneida Lake Watershed Streamside Buffer and Pasture Enhancement Initiative.

These projects address Madison County's desire to implement more water quality conservation measures at agricultural operations and further the Water Quality Conservation Committee and AEM Strategic Plans by reducing animal impact to streams, reducing erosion, keeping nutrients on the land; while improving a farm's ability to adhere to their land management obligations.

The projects will take place in the Upper Chittenango Creek, Cowaselon Creek and Upper Chittenango Creek/Tuscarora Lake Watersheds at equine, dairy and beef facilities. The proposed practices will protect the stream corridors from animal intrusion (currently unabated) and emphasize the importance of planned grazing systems. Nearly 14,500 feet of animal exclusionary fencing will be installed including 4,000 feet of perimeter fencing to facilitate rotational grazing. A pond berm will be reconstructed and a new 20' x 2' culvert pipe will be installed. The Madison County Project also

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includes the purchase and installation of 6 portable water tubs, 2,400 feet of 1 inch plastic pipe, and 3 gravity flow watering systems. These practices are cost effective, easy to operate and maintain by the landowner, and fit the goals of the farmers.

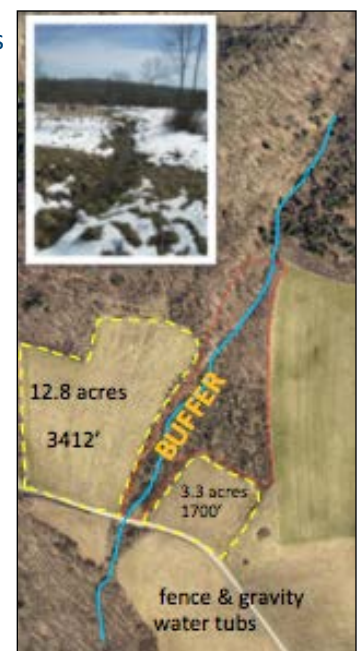
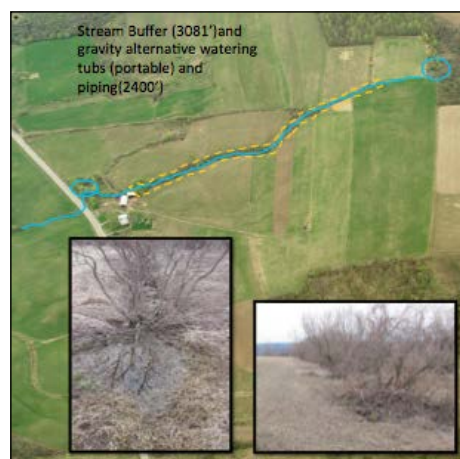
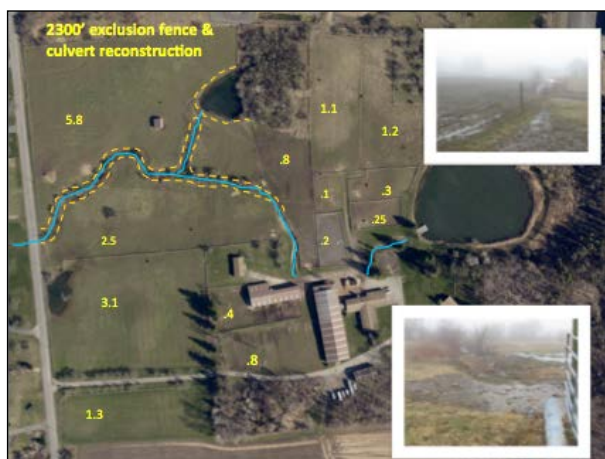
This project will result in cleaner water for the watershed and for the animals drinking it; while keeping manure and urine in the pasture where it can benefit plants and biological life and reduce the farmer's fertilizer budget. In keeping with the whole farm system approach, water quality improvements from grazing/buffer system implementation also addresses the economic component on these farms by saving them money on purchased feed, fertilizer, and fuel, as well as, farm labor issues and animal health. The social side of water quality through grazing management reflects upon having more time with family, building diverse wildlife and endangered grassland bird habitats, and scientifically justified carbon sequestration from pasture root structures.

These grazing BMPs have been quantified to protect water quality and enhance the farm's profitability by countless nationally known researchers. Because of the District's extensive planning, passion and experience, coupled with this research of managed grazing systems, they are confident that initiating this buffer project will meet or exceed the goals of the watershed. In addition to all of the above benefits, there is a significant opportunity to support farms that produce local grass - based farm products from this same watershed area. This mission of promoting environmentally friendly, sound practices while keeping local agriculture viable and protecting working lands for future generations is also paramount to Madison County and the AEM long range range strategic plan.

This funding will allow the Madison County Soil and Water Conservation District staff to partner with the 3 farms to plan, implement, monitor, and follow-up on the systems installed. The District has the technical expertise and tools to design and install fencing and watering systems which will cut down on the overall cost of the project. These three farms would like to improve conditions for their livestock and become better stewards of the land – so this is a great project for the watershed.

As of November 2013, two of the three projects have been completed. The equine operation that had a stream buffer constructed offered this : "Troy gave us the idea of creating a buffer for our stream and the 2013 FLOWPA/DEC award for the Oneida Lake Watershed Streamside Buffer and Pasture Enhancement

Initiative provided funding for fencing in concert with the District's post pounder and Troy's labor through the AEM program. This project helped us achieve our goals to increase pasture usage with better management and helped preserve water through limiting access in ways that work for us and our horses."



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## ONONDAGA COUNTY A Farm, Drinking-Water Wells with *E. coli* Contamination, and Proposed Remedial Activities in the Otisco Lake Watershed

In early spring 2013, the bacteriological contamination of several private drinking-water wells was confirmed by Onondaga County and the New York State Departments of Health. The likely source of contamination was manure applied to fields several thousands of feet away from the wells. The baffling part of this story is that an inspection team verified that the farmer did an excellent job applying manure at half the rate of what was prescribed in his CAFO plan, as well as maintaining a 1,000-foot buffer from the tributary streams. Despite these commendable efforts on the part of the farmer, three residential wells became contaminated with *E. coli* bacteria.

The wells became contaminated because there are two tributaries (designated “north” and “south”) to Amber Brook that were found to be “losing” water (surface water that infiltrates the streambed and enters the groundwater system). Flow measurements determined that the northern tributary measured a 52 gallon per minute (gpm) loss between the upper reaches of the tributary and Amber Road. The southern tributary was losing only a small amount of water. These water “losses” were happening because naturally occurring gravel material that formerly lined the tributaries

had been eroded over time down to shale due to normal runoff activity, remnants of Hurricane Irene, and very little maintenance. This material was transported down to the losing section of the northern stream channel and filled the channel with debris. This forced surface water to flow into the adjacent field where some of that flow entered the groundwater system.

In the upper field, where manure was applied, there were sections where shale bedrock was fairly close to the land surface. New field tile drains were installed in these fields

four years prior to this event, with some tiles very near these shallow soils over bedrock. This combination of shallow soils and nearby field tiles likely allowed manure-contaminated water to infiltrate the tile lines. The tile lines drained into the “losing” tributaries several hundreds of feet down gradient from where the fields received manure. Although yet to be determined, it has also been suggested that some of the drinking-water wells may not have been properly constructed and/or used questionable well-casing techniques to maximize water supply.

As this situation unfolded, a collaborative partnership of 10 federal, state, local, and private partners began an investigation of the cause and effect and generated a list of remedial alternatives for consideration in order to

reduce the potential of another occurrence. The initial proposal to address the “losing water” was to line the bottom of the north tributary with clay and place rock rip-rap in the channel to prevent erosion of the clay liner and the adjacent stream bank. However, lining the entire 630 foot tributary was estimated to cost \$43,000, and there are concerns that the clay liner could dry, crack and ultimately fail if flows are only seasonal.

More recent conservation measures have been discussed and include: 1) dye tracer studies of the drainage system, 2) strip cropping the 75 acre

field, 3) limiting manure application to spring application and incorporation with a chisel plow and /or Aerway technique, 4) determine areas of shallow bedrock to limit manure application, 5) install a break in the tile drainage system to monitor flow and bring flow back to the surface to manage water throughout the system, 6) installation of a 20 to 30 foot basin to hold the drain tile flows, and 7) possible removal of the lower portion of tile to revert the system to an open ditch or swale within the field to observe and manage the flows. Overall, the latter measure is the most sustainable approach because it



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would allow monitoring and positive intervention should manure flow into the tile system. This will require surveying and engineering to lay out a workable system. Restricting manure spreading on the field in question was considered but determined not to be a viable option because the farm needs to be able to satisfy CAFO permit requirements by having sufficient land available to spread manure for nutrient recycling.

The grant money from FLOWPA will allow the Onondaga County Soil and Water District to work with the collaborative partnership to implement the most efficient, cost-effective BMP to reduce the potential for

future groundwater contamination. Protecting well water from contamination, regardless of the source, relies on a multiple barrier approach. It starts with properly designed and maintained best management practices. Improving well construction practices and management of all potential contamination sources is in the best interest for all who live and work in our shared watersheds.

For more information regarding either of these Environmental Benefits Projects, please contact Troy Bishopp at Madison County SWCD or Mark Burger at Onondaga County SWCD.

## AQUATIC NUISANCE SPECIES GRANT NEARS COMPLETION

Aquatic invasive species threaten the survival and diversity of our native plants and animals as they rapidly multiply and dominate food supplies and habitat. Since the year 2000, FLOWPA funds have enhanced programs that minimize the risk of introduction, establishment and impacts of Aquatic Nuisance Species (ANS). In 2010, the NYS DEC requested that FLOWPA administer \$792,000.00 in ANS funds, New York State's portion of Federal Aquatic Nuisance Species Plan Implementation funding from the Great Lakes Restoration Initiative and the U.S. Fish and Wildlife Service. The following 2010 awards were granted for ANS Management Plan Implementation.

NY Sea Grant awarded \$39,327 for educational activities and publications that increase public awareness on aquatic invasive species.

Onondaga, Oswego, Wayne Counties and the NYS Bass Chapter Federation awarded \$237,500 for a water chestnut control program.

The Nature Conservancy awarded \$160,500 to implement an early detection/rapid response (ED/RR) to prevent and eradicate invasive species.

Paul Smith's College (Upper watershed Watercraft Inspection) \$224,211 awarded for watercraft inspection within waterways located in the Adirondack Park.

Paul Smith's College AIS Response \$100,000 awarded to control existing infestations and newly discovered infestations of aquatic invasive plants, primarily by hand-harvesting.

All projects are scheduled for completion by December 31, 2013. For more information on these projects and their accomplishments, visit [www.flowpa.org](http://www.flowpa.org).

Additional funds for ANS Management Plan Implementation have been awarded as follows:

ANS Federal Fiscal Year (FFY) 2011 \$ 1,043,866.83 to Cayuga County, Tompkins County, Paul Smith's Upper Watershed Watercraft Inspection, Paul Smith's College AIS Response, NY Sea Grant and the Finger Lakes Institute

ANS FFY 2012 \$901,092 awarded to Onondaga, Oswego, Tompkins Counties, Paul Smith's Upper Watershed Watercraft Inspection, NY Sea Grant and the Finger Lakes Institute

ANS FFY 2013 Competitive \$445,692 to Onondaga, Oswego and Tompkins Counties

ANS FFY 2013 Noncompetitive \$250,000 to NY Sea Grant and Paul Smith's College (Upper watershed AIS response Team)



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## FLOWPA POLO SHIRTS ARE AVAILABLE

Shirts are \$31.20 each, plus shipping, and are available in green or blue in sizes S - XL. Other sizes available, for an additional cost. The logo is fully embroidered. Contact the WRB at (315) 592-9663 to place your order.

Please visit our website at [www.flowpa.org](http://www.flowpa.org) for more information about the Finger Lakes - Lake Ontario Watershed Protection Alliance.



### FLOWPA Member Counties

FLOWPA Membership includes the following New York State counties wholly or partially in the Lake Ontario drainage basin:

Allegany, Cayuga, Chemung, Cortland, Genesee, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Schuyler, Seneca, Steuben, Tompkins, Wayne, Wyoming, Yates

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