



# Great Swamp Watershed Association

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*Protecting our waters and our land for 30 years*

## **Report to Donors Accomplishments in FY 2012-2013**

Your generous membership contributions have made it possible for GSWA to pursue its mission of protecting our water and our land. Support from individuals provides **more than half** of our operating income each year. Thank you for being among those individuals and for making our work possible.

We are pleased to provide this overview of our recent accomplishments.

### **1. Stream Monitoring and Water Quality**

At the core of GSWA's mission is our work to protect and improve the five streams in the watershed: Black Brook, Great Brook, Loantaka Brook, Primrose Brook, and the Upper Passaic. GSWA does this in large part by engaging volunteers in conducting chemical and visual assessments of the watershed's streams and offering area students, as well as the general public, opportunities to learn about water pollutants and their sources.

- **State of the Streams.** The inaugural *State of the Streams Report*, which evaluated the overall health of the Great Swamp watershed's five streams, was completed last spring. It analyzed over a decade of past water quality data across the chemical and biological monitoring spectrum for all streams, confirming that road salt and phosphorus are significant local pollutants. The report can be read at [www.greatswamp.org](http://www.greatswamp.org), under the Publications section.

The trends confirmed by the report help guide our educational outreach and advocacy efforts as well as future monitoring and restoration initiatives. For example, as a result of the high phosphorous trend during summer months, GSWA will begin to reach out to golf clubs and municipalities to determine if their fertilizing practices impact local streams.

GSWA's Director of Water Quality Programs Laura Kelm has presented the *State of the Streams Report* at NJDEP's annual New Jersey Water Monitoring Summit; the Passaic River Institute at Montclair State University's annual Passaic River Symposium, and at GSWA's June 2013 Breakfast Briefing. The report also encouraged a remarkable day-long visit from EPA's Region II Administrator and her associates.

- **Chemical Sampling.** GSWA is in the final year of a 3-year intensive study of the Upper Passaic River. GSWA is closely monitoring one of the Upper Passaic's tributaries, Penns Brook, which is already noted for its compromised environmental health.
- **Streambank buffers.** In collaboration with the Morris County Park Commission, GSWA improved a section of riparian buffer at Kitchell Pond and monitored the year-old buffers planted at Bayne Park and on Bayne Brook in Harding.
- **Macroinvertebrate studies.** We continue our macroinvertebrate studies at 17 sites on the five streams throughout the watershed, a longstanding project that from 2000 to 2011 had been run by the now-defunct Ten Towns Committee.

- **Seaton Hackney.** We completed a \$300,000 remediation plan, funded by EPA, at Seaton Hackney stables. A new paddock has been created, detention basins constructed, and water has been rerouted. Working with PSEG, over 450 trees and hundreds of shrubs have been planted helping filter the animal waste and other contaminants before they reach the stream. Other partners in this project include the Morris County Park Commission, Princeton Hydro as environmental stormwater consultants, Rutgers Equine Science Center, and the Seaton Hackney Stables concessioner.

## 2. Advocacy

The Great Swamp Watershed Association generally conducts its advocacy opportunistically, responding when proposals have any aspects that would create a negative impact to the streams of our watershed, to the Great Swamp National Wildlife Refuge itself, or to open space. These are some of the issues with which we are currently engaged:

- **Cell tower proposal.** Last year we reported that a new cell tower was proposed on a highly sensitive location within the protected vegetated buffer of a C-1 stream, Primrose Brook in Harding. The project has since been denied by Harding Township. It is believed the project will be reconsidered with modifications with respect to location and reduced impervious cover.
- **Copper Springs.** A large expansion of Copper Springs Tennis and Swim Club was proposed in Long Hill, adjacent to the Refuge. It includes filling in the large existing pond on the property and significantly increasing the lot coverage. For the time being, and thanks to our intervention, the proposal has been withdrawn.
- **Chase Bank, Bernardsville.** In July 2012, the Bernardsville Borough Planning Board approved the development of a new Chase Bank building on Route 202 just south of Bernardsville Centre. At GSWA's request, final approval of the plan included the addition of more drainage to reduce stormwater runoff and retain it on site.

## 3. Stewardship & Land Management

Thanks to volunteers from corporations and from GSWA's dedicated volunteer ranks, we have made significant improvements while simultaneously recovering from damages sustained from Hurricane Sandy to our Conservation Management Area (CMA) and Jockey Hollow education (JHE) site.

- **Conservation Management Area.** With the help of many corporate counters. GSWA made notable progress at our 53-acre Conservation Management Area, a wetland forest restoration project in Harding Township. The ongoing restoration work included:
  - Removal of 4 acres of invasive woody plants and installation of 250 native shrub plantings
  - Restoration of two vernal pools for improved amphibious habitat
  - Dismantling and removal abandoned deer hunting tree stands and other debris
  - Installation of nest boxes, creation of brush piles and other nesting structures and habitat enhancements
- **Primrose Farms.** The preservation of Primrose Farms, one of the last remaining large tracts of open space available in Harding, was finalized at the end of 2012. We initiated and pursued the project, working with the Trust for Public Land, Morris County, Harding Township and the Harding Land Trust.

#### 4. Education and Outreach

GSWA's many educational programs – including in-school presentations, public family-oriented programs, community outreach events, and on-request talks to civic groups and clubs – introduce participants to environmental issues in a fresh, hands-on way.

##### School Education:

- **Teacher Workshops.** GSWA offered workshops in collaboration with the Great Swamp National Wildlife Refuge and Friends of Great Swamp National Wildlife Refuge. These workshops had a local focus and utilized the Great Swamp as a living laboratory.
- **Watershed Model.** We presented our Watershed Model program to several hundred students in eight schools, including several where we trained the parents to give the presentation and thus leverage the impact of our program.
- **SWaMP.** GSWA's School Water Monitoring on the Passaic (SWaMP) program attracted participation from new schools. The program introduced students to hands-on water testing on the Passaic comparing notes with students from other schools. The program develops a sense of the impact we have on the water we depend upon.
- **Watershed Friendly School Projects.** An example of our education program's impact can be measured by the recent success with students in the AP Environmental Studies class at Bernards High School. Working in teams of three or four, the students examined their own relationships with water and turned their discoveries into practical information everyone can use to avoid pollution and conserve natural resources. Students were asked to present their final projects over the course of two days to an audience made up of their peers, GSWA staff and other local community groups. Visiting experts were asked to assess each group's presentation and choose their favorites. One group went above and beyond their requirements and submitted their project to The Nature Conservancy for consideration in the environmental organization's *Show Us Your H2O* competition for school groups from Hunterdon, Mercer, Middlesex, Morris, and Somerset counties. Their hard work was repaid in full when they took top honors for their submission. As a reward, the group will be acknowledged for their integral role in the placement of a new rain garden that The Nature Conservancy of New Jersey will construct free of charge on the grounds of Bernards High.

##### Public Education:

- **Watershed Friendly Homes.** The implementation of this new web-based program, which seeks to alter individual behavior in ways that are complementary to the watershed's preservation, is underway. Participants can sign up, find support and rich information, and report and compare progress with others on the new Watershed-Friendly Homes website which is set to debut in September. Workshops such as *Reduce your Use* and *UltraSmart Gardening* will assist families in making choices that help reduce their impact on water supply, water pollution, and stormwater runoff. Residents can become more watershed-friendly by starting with easy steps like installing low-flow showerheads to save water, to taking more expensive steps like replacing sidewalks and driveways with permeable pavements that allow rainwater to percolate into the ground rather than run down a storm drain.
- **Educational Events.** On an annual basis, GSWA offers roughly two dozen events. During the course of our 2012-2013 fiscal year, the following public events were offered:

- **Seven Breakfast Briefings** on environmental issues of special local interest.
- **Eight Outdoor Events** such as hikes and nature explorations that introduce people to the superb local natural resources that we work to protect.
- **Six Evening Educational Events & Presentations.**
- **Five Children Events** that introduce children to the wonders and workings of nature.
- **Two Annual Events**, our Scavenger Hunt and Spooky Swamp Walk, designed as family activities that teach about our surroundings and introduce participants to GSWA,

## 5. Organizational

GSWA has made several notable improvements in the past year including:

- **Advisory Council.** GSWA formed an Advisory Council which will assist in achieving our organizational goals and objectives consistent with our mission by being advocates for the organization, and by providing expertise, contacts and financial support.
- **Annual Gala.** Our annual gala, which was held on October 3, 2013 honored all former chairs of the GSWA board. Thanks to the generosity of our members and supporters, the event netted more than \$90,000 for GSWA's operational expenses.
- **Volunteers.** GSWA volunteers continue to serve as the backbone of our organization. Through their work on land stewardship, water quality monitoring, committee and board service, volunteers have logged more than 1,500 hours.
- **Collaboration.** GSWA has long-established relationships with local schools, environmental commissions, municipalities and local civic organizations such as Rotary Clubs, Kiwanis Clubs, Garden Clubs and other community groups. Staff and volunteers actively participate in many community-sponsored environmental events and green fairs throughout the watershed.

GSWA achieves its goals through well-founded collaborative relations with the Great Swamp National Wildlife Refuge and Friends of Great Swamp; the Harding Land Trust; Somerset County Park Commission, Morris County Park Commission, Musconetcong Watershed, Stony Brook-Millstone Watershed Association, Raptor Trust, New Jersey Audubon Scherman Hoffman Wildlife Sanctuary, Morristown National Historical Park, Rutgers University, Drew University, Fairleigh Dickinson University, the College of Saint Elizabeth, Montclair State University and the Sustainable Jersey Green Teams in watershed towns that have obtained or are seeking certification.