



The Great Swamp Watershed Association

# Across the Watershed

Fall-Winter 2014

*Protecting our Waters and our Land for more than 30 Years*

## A Work In Progress: Land Stewardship at the Conservation Management Area

*by Hazel England, Director of Education and Outreach*

As any reader will tell you, at the heart of any great book is a compelling story; so, at the heart of any good land stewardship plan is a clear vision for what the land will become. The unfolding story of ecological restoration at the Great Swamp Watershed Association's (GSWA) Conservation Management Area (CMA) is a saga replete with plot twists, narrative setbacks, and an expansive cast of major and minor characters. Nevertheless, work at the site proceeds apace and is starting to increase a little at a time.

Creating a management plan for 53 acres of land—just like writing the outline for a new bestseller—is relatively easy. A few simple taps at a keyboard and voilà, a plan exists! However, turning a written plan into a reality takes a lot more effort. Ten years on, and thousands of hours of sweat and effort later, our CMA is still very much a work in progress. Here is a little bit more about that stewardship story so far.

When GSWA took ownership of the three parcels of land that became the CMA, our management goals were clear. First, protect the land. Second, work to improve flood storage capacity, increase species diversity, and build public visitation.

*(continued on page 12)*



*GSWA Director of Outreach & Education Hazel England teaches a group of corporate workday volunteers some of the finer points of rain garden installation. 2008. Credit: GSWA.*

# From the Desk of the Executive Director



by Sally Rubin

**O**n August 4, 2014, the New Jersey General Assembly passed a bill to put a state constitutional amendment concerning open space preservation on the ballot for the upcoming general election. The state Senate approved a similar measure in June.

This means that New Jersey voters will finally have the chance this November to approve a permanent, stable source of funding for open space initiatives. The money—an amount totaling about \$70 million per year—will come out of corporate business tax revenues. That represents about 4% of corporate tax revenues the state is projected to collect between July 1, 2015, and June 30, 2019. Under the terms of the

new amendment, the share of revenue taken for open space would increase to 6% (or about \$117 million annually) beginning in July 2019.

Should the new amendment be adopted, associated costs will be offset by a reduction of allocations for programs that, according to officials, no longer require the same levels of funding they once did. This would include current programs focused on the reduction of diesel pollution and brownfield remediation.

Allocations for several specific programs, including Green Acres for open space preservation, Blue Acres for preservation of flood-prone areas, farmland preservation, historic site preservation, contaminated site



*Since 1961, Green Acres, Blue Acres, and other New Jersey open space programs have helped preserve more than 1.2 million acres of land in our state. The 113 acres of land at Primrose Farm in Harding Township (shown here) is one of many properties in the Great Swamp Watershed region benefitting from 53 years of open space funding. Credit: GSWA.*


cleanup, and removal and remediation of underground storage tanks will continue as they have in the past.

Importantly, the new amendment would prohibit the state from using designated open space funds to pay principal or interest on general-obligation bonds.

This is the first time New Jersey has been given the chance to decide on a permanent funding solution for open space. To date, more than 1.2 million acres of land in the state have been preserved. And since 1961, voters have passed 13 out of 13 ballot questions funding preservation through temporary bond measures. With the creation of the Garden State Preservation Trust in 1998, about \$200 million have been devoted to these programs each year. The citizenry has clearly demonstrated its support for open space initiatives for more than 50 years, so it is encouraging to see that policymakers have acted to let voters decide on a way to provide more consistent and stable funds for these activities.

Relying on the reallocation of tax revenues, instead of a tax hike, the provisions contained within this new amendment are both fiscally responsible and good public policy.

We know that open space preservation does not deprive municipalities of ratable growth. We also know that the municipal costs—especially education costs—frequently exceed the tax revenue generated by new development projects. Ultimately, making a more durable and enduring investment in open space preservation makes good economic and environmental sense.

Great Swamp Watershed Association fully supports the ballot measure and we encourage all to vote in favor on November 4. 

## Across the Watershed

is a publication of the **Great Swamp Watershed Association**.

GSWA is a member-supported 501(c)3 nonprofit organization that has been protecting the waters and the land of the Great Swamp Watershed region for more than 30 years.

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## Outdoor Programs

**W**ant to explore the Great Swamp region? Then join the Great Swamp Watershed Association (GSWA) for one of our outdoor exploration events this fall and winter. These programs are fun, informative, and accessible for people of all ages and skill levels. We'll see you outside!

### **Back-to-Swamp Hike Sunday, September 28, 2-4 p.m.**

*Great Swamp National Wildlife Refuge,  
Bluebird Parking Lot, off of Pleasant Plains  
Rd., Harding Township, NJ*

With school back in full swing, there's no better opportunity to venture into the Great Swamp for a little relaxation and some of Mother Nature's best lessons.

Join us to brush up on your bird calls, polish your plant identification, and cogitate on all the critters found in our local forests. Director of Education and Outreach Hazel England will take you behind the scenes at the Great Swamp National Wildlife Refuge to explore water impoundments normally off limits to the general public. Waterfowl and other wildlife abound in these areas, so there should be lots to see!

**Participation is free**, but donations to the Great Swamp Watershed Association are sincerely appreciated. Attendance is capped at 20 people. Registration is strongly recommended. Register online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22..

### **Swamp Explorers Monday, October 13, 10:30 a.m.-Noon** *GSWA Conservation Management Area, 1 Tiger Lily Lane, Harding Township, NJ*

Parents are encouraged to hang back and let the kids lead the way during this kid-centric day hike at GSWA's Conservation Management Area. In the spirit of Columbus Day, staff nature-nut Kelly Martin will be armed with magnifying glasses, binoculars, nets, and more to teach aspiring explorers about the wildlife present in the Great Swamp Watershed, and how to find it! Recommended for kids 6 to 10 year old.

Attendance is capped at 15 people. Registration is strongly recommended. Register online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22.

### **Insider's Tour of the Great Swamp National Wildlife Refuge Sunday, November 16, 3-4:30 p.m.**

*Meeting location to be announced. Please register for more information.*

As the Great Swamp National Wildlife Refuge celebrates the 50th anniversary of the Wilderness Act of 1964, there is no better time to visit one of the Refuge's designated wilderness areas. Your expert guide will be biologist Dave Sagan. Dave is a U.S. Fish & Wildlife Service Ranger and he will be there to help you spot all sorts of wildlife, including frogs, owls, foxes, ducks, and more! He'll also teach you about the

Refuge's wildlife management plans for deer and carnivores in the area. Waterproof footwear—especially hiking boots—are very strongly recommended for this hike.

**Participation is free**, but donations to the Great Swamp Watershed Association are sincerely appreciated. Attendance is capped at 20 people. Registration is strongly recommended. Register online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22.

**Night Hike for Families**  
**Saturday, December 20, 4:30–6 p.m.**

*Morristown National Historical Park, Jockey Hollow Visitor Center, approximately 600 Tempe Wick Rd., Morristown, NJ*

Join GSWA Director of Education and Outreach Hazel England to learn about nature at night on this early evening hike at the Jockey Hollow Unit of Morristown National Historical Park. We may hear any number of the area's wild creatures, including owls, foxes, coyotes, and other critters. Hikers will join in some games to learn more about night senses and revel in being out after dark without a flashlight! Families with younger children are encouraged to attend.

**Participation is free**, but donations to the Great Swamp Watershed Association are sincerely appreciated. Attendance is capped at 30 people. Registration is strongly recommended. Register online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22.

**Night Hike for Adults**  
**Saturday, December 20, 6:30–8 p.m.**

*Morristown National Historical Park, Jockey Hollow Visitor Center, approximately 600 Tempe Wick Rd., Morristown, NJ*

Leave the kids at home and join us for an adults-only night hike! Director of Education and Outreach Hazel England will help you hone your night senses as you watch and listen for nighttime forest dwellers, including owls, foxes, coyotes, and more! Recommended for individuals 12 years of age or older.

**Participation is free**, but donations to the Great Swamp Watershed Association are sincerely appreciated. Attendance is capped at 30 people. Registration is strongly recommended. Register online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22.

**Nature Detectives Hike**  
**Sunday, January 11, 10:30 a.m.–Noon**

*Cross Estate Gardens, 61 Jockey Hollow Road, Bernardsville*

You'll set off in hot pursuit of the region's most-wanted wintertime wildlife on this day hike at Cross Estate Gardens in Jockey Hollow. Learn how to identify animals from the tracks they leave. Spy on secret hideouts used by chipmunks, mice, and other woodland creatures. Unmask the dining preferences of deer, raccoons, and even coyotes by putting the magnifying glass to some scat. All this detective work is easier than you think, plus it's fun and it's outdoors!

*(continued on page 7)*



# Watershed Watch — Environmental Hot Spots

by Sally Rubin, Executive Director

The “environmental hot spots” described below outline some of GSWA’s advocacy activities throughout the Great Swamp Watershed over recent months. Where appropriate, we continue to closely monitor each situation.

## **Morris Township: Seaton Hackney Stables at Loantaka Brook Reservation**

The three-year, \$300,000 New Jersey Department of Environmental Protection (NJDEP) 319 grant for stormwater improvements at Seaton Hackney Stables concluded this summer. Horses have all been moved a significant distance away from Loantaka Brook, and pastures are now drier and more useable. The vegetated area protecting the brook from stormwater runoff has been expanded, and, thanks to an additional \$250,000 investment made by PSE&G, hundreds of trees and bushes now grow within that buffer. Some additional

enhancements will be installed this fall, but have already been designed and approved. GSWA is proud of the improvements made at Seaton Hackney. Stop by and take a look!

We would like to thank our partners in this project—Morris County Park Commission, Rutgers University, Princeton Hydro, and PSE&G.

## **Long Hill Township: Restore Meyersville**

The application to construct a new facility for the Central NJ Volleyball Academy of Flemington at the former Archie’s site in Meyersville has been revised and resubmitted. The application now conforms to existing zoning requirements. The revised site plan must be approved, but no variances will be required. A review of the revised application shows a reduction in the size of the proposed structure. Parking will be relocated behind the structure, and, in lieu



*An aerial photo of Seaton Hackney Stables adjacent to Loantaka Brook Reservation in Morris Township. Hundreds of newly planted trees are clearly visible within the enhanced buffer area at the right of the photo. This vegetation will help protect and improve water quality along Loantaka Brook. Credit: G. Scully*

of a detention or retention basin, stormwater runoff will be channeled underneath the parking area. A new application hearing is scheduled for October 14, 2014.

### **Chatham Township: Giralda Farms**

The Open Space Institute is under contract to purchase 163 acres of open space at Giralda Farms for \$14 million. The property, which was once part of the Geraldine R. Dodge estate, will be owned by Chatham Township and maintained by the Morris County Park Commission (MCPC). This is the largest contiguous undeveloped tract of land left available for preservation in Chatham Township, and perhaps in all of southeast Morris County.

Located within walking distance of two local colleges, plans for preservation will include an expansion of trails for passive recreation.

The property will provide an important corridor connection to MCPC's Loantaka Brook Reservation, and its open meadows and forest will expand and improve wildlife habitat in the area. It will help protect the quality of water flowing into nearby Loantaka Brook, and its value as open space is enhanced by its close proximity to the Great Swamp National Wildlife Refuge.

GSWA is pleased to support this important acquisition and we encourage Morris County to fund the grant request to enable its preservation. 🌲

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### **Outdoor Programs** *(continued from page 5)*

**Participation is free**, but donations to the Great Swamp Watershed Association are sincerely appreciated. Attendance is capped at 30 people. Registration is strongly recommended. Register online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22.

### **Important Information About Events**

Please register as requested for each program listed above (see descriptions). Unless otherwise noted, current GSWA members participate free of charge. Non-members are asked to make a voluntary donation of \$10/adult and \$5/child (6 to 17

years), or \$35/family (includes 4). There is no suggested donation for children five and under.

Please dress for the weather when attending an outdoor program. Conditions may be wet, muddy, hot, or cold.

Event dates, times, and locations are subject to change. Provide your email address or phone number at registration and GSWA will make every effort to inform you about scheduling changes. Updated scheduling information is available via our *Event Information Hotline* at (973) 538-3500 x22. 🌲

# How Much Did it Rain and Why Does it Matter?

by Laura Kelm, Director of Water Quality Programs

As a water quality specialist, past weather, particularly precipitation patterns, have broad implications for my daily work. From a practical perspective, a lot of recent rain may make streams inaccessible for monitoring (referred to as *unwadeable* in my field because the water is too deep or too fast to wade into). Additionally, rain and snow melt lead to stormwater runoff, which can change the quality of the water in streams by carrying pollutants deposited on land into our local waterways.

Rain also causes soil erosion. High flows erode stream banks, depositing the eroded material directly into the stream. Land farther away from streams, such as hiking trails or construction sites, can also be eroded where bare soil is exposed to falling rain. This eroded material is transported to our streams by stormwater runoff.

There is no magic amount of rainfall that causes stormwater runoff; it depends on the intensity of the storm, its duration, how saturated the ground is from recent rains, and the amount of impervious surface cover in the area. Past water quality data analyzed for

the 2013 *State of the Streams* report revealed that even the start of a rain storm can cause runoff and impair water quality. This is called the first flush by water quality professionals.

On the other hand, a lot of rain prior to monitoring can dilute some measurement parameters in streams, such as total dissolved solids from road salt.

These are just some of the ways rain impacts water quality. There are also other aspects of our daily lives influenced by precipitation. Think about that for a moment, and you will get it right away. Do you need to water your garden or your lawn

today? How much rain does it take to cause local flooding?

There are a few sources I turn to for information on past precipitation. For a broader perspective, I often rely on the NJ Weather & Climate Network (*NJWeather.org*), which is run by the Office of the New Jersey State Climatologist at Rutgers University and maintains weather stations around the state. (Unfortunately, there are only two of those in the Great Swamp region; one in Basking Ridge and one in Chatham Township.) When I need data from a specific



When monitored properly, rain gauges like this one can provide valuable data about local trends in precipitation. Credit: [istockphoto.com/Flander](https://www.istockphoto.com/Flander).



## Have You Included GSWA in Your Estate Plans?

If you love the Great Swamp, and have supported our work, you might want to consider designating the Great Swamp Watershed Association as a beneficiary in your will. You can make an outright bequest of cash or assets, establish a gift annuity, charitable lead or remainder trust, make a donation from your retirement account, or make a gift of insurance. Your investment advisor can provide guidance on the best mechanism for your circumstances.

A bequest will ensure that our work will continue long into the future, and it is often a way to make a larger gift than is possible during your lifetime.

Each year we gratefully receive one or more bequests, and in general they are intended to help us in our current work. It is possible, however, to specify support of our endowment or of a specific program such as water quality or education.

Specific language in your will should of course be reviewed by your attorney. For more information on GSWA's policies and priorities, please contact Director of Development Stephen Howard at [showard@greatswamp.org](mailto:showard@greatswamp.org).

location—let's say Jockey Hollow—I turn to data gathered by CoCoRaHS, the Community Collaborative Rain, Hail and Snow Network ([CoCoRaHS.org](http://CoCoRaHS.org)).

CoCoRaHS uses a network of citizen scientists around the country to collect precipitation data. Participants all use the same type of rain gauge and the same techniques to measure precipitation, so the data is as accurate and consistent as possible. Currently, there are 12 stations located in the Great Swamp region; however, only five of them are set up within our watershed's boundaries. Those five stations—including one located near the rain garden at the Great Swamp Watershed Association's offices on Tempe Wick Road—are all maintained by volunteer Ron Weisman and measure precipitation values that directly influence streams flowing into Great Swamp.

The data collected by CoCoRaHS constantly informs GSWA's water quality data. More rain gauges in our region would be helpful for us to better understand how our streams react to precipitation. To find out more about becoming a CoCoRaHS participant, visit [CoCoRaHS.org](http://CoCoRaHS.org) or contact [njcorahs@climate.rutgers.edu](mailto:njcorahs@climate.rutgers.edu).

And, remember to check out the CoCoRaHS station near our rain garden the next time you visit GSWA! 🌿

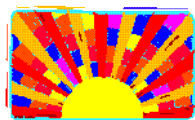
Like GSWA  
and join the cause on

facebook

## Start Your Day with GSWA

**G**reat Swamp Watershed Association's (GSWA) Breakfast Briefing speaker series returns in September!

Our seasonal Breakfast Briefings were developed to help busy professionals stay informed about community environmental



issues without taking valuable time away from work or family life. Presentations are brief, focus on current environmental topics, and minimize overlap with most traditional business hours. Briefings are usually, although not always, held on the second Tuesday of the month from 8 to 9:30 a.m. Scheduling exceptions are noted below, so please read carefully.

### **Recreation Opportunities on the Lower Passaic Tuesday, September 9, 8–9:30 a.m.**

*GSWA Office, 568 Tempe Wick Road.,  
Morristown, NJ*

Water quality issues stemming from legacy contamination have long interfered with public access and recreation on the Lower Passaic. Debbie Mans, Executive Director of NY/NJ Baykeeper, will join us to talk about zoning and other regulations that deal with public access and the installation of new waterfront parks.

Debbie has served as executive director at NY/NJ Baykeeper since 2008. Before that, she served as the environmental and energy policy advisor for Governor Jon S. Corzine. She was also appointed by Governor Corzine to the NJ State Planning Commission. Prior to joining the Corzine administration, Debbie held the position of policy director at NY/NJ Baykeeper. She is a graduate of the University of Michigan and holds a J.D. from Vermont Law School. She is the chair of the New Jersey League of Conservation Voters and on the board of the New Jersey League of Conservation Voters Education Fund.

Seating is limited. Register online at [GreatSwamp.org](http://GreatSwamp.org), or call 973-538-3500 x22.

### **Historical Land Uses and Their Environmental Legacy Tuesday, November 11, 8–9:30 a.m.**

*GSWA Office, 568 Tempe Wick Road.,  
Morristown, NJ*

How can you remedy issues on your property caused by past land-use practices? Thom Almendinger, director of stewardship at the Duke Farm Foundation will stop by to teach us about some of the innovative approaches to land stewardship being implemented at the 2,700-acre Duke Farms property in Hillsborough, NJ. Like many property owners around the state, land managers at Duke Farms must address the effects that historical land use—

particularly agriculture—have had on the current landscape, including heavy metal contamination, non-native invasive species growth, and soil compaction. Learn what Duke Farms is doing to address these issues and take home some ideas for your own property.

Seating is limited. Register online at [GreatSwamp.org](http://GreatSwamp.org), or call 973-538-3500 x22.

### **Are There Drugs in Our Water Supply? Tuesday, December 9, 8–9:30 a.m.**

*GSWA Office, 568 Tempe Wick Road,  
Morristown, NJ*

John Dyksen, special consultant (previously vice president of Capital Planning & Research) at United Water—the water utility company serving much of northeast New Jersey, including parts of Morris County—will visit to discuss the issue of pharmaceuticals in our water supplies. This talk will help participants learn more about the classes and types of pharmaceutical chemicals showing up in our water; understand the potential dangers to human health and the health of wildlife; and learn how water companies, individual homeowners, and nonprofit organizations like GSWA can equip themselves to deal with the issue before it becomes a threat.

Seating is limited. Register online at [GreatSwamp.org](http://GreatSwamp.org), or call 973-538-3500 x22.

### **Important Information About Breakfast Briefings**

Please register as requested for each program listed above (see descriptions). Unless otherwise noted, GSWA members participate free. Non-members are asked to make a voluntary donation of \$10/adult and \$5/child (6 to 17 years old), or \$35/family (includes 4). There is no suggested donation for children five and under. Programs are suitable for all ages.

Event dates, times, and locations are subject to change. Provide your email address or phone number at registration and GSWA will make every effort to inform you about scheduling changes. Updated scheduling information is available via our *Event Information Hotline* at (973) 538-3500 x22. 🌲

### **GSWA Experts Available to Speak to Area Groups**

Do you wonder, “What is in my water?” or “What can I do to ensure clean water for my children?” These and other questions about water quality, land preservation, and local efforts to protect the environment can be answered by GSWA’s Speakers Bureau, who will present interesting, hands-on presentations that will educate and inspire members of your local club or group. Call today for more details: (973) 538-3500 x13.

## Land Stewardship *(continued from page 1)*

We envisioned a property capable of improving the quality of water in nearby waterways. And since good land management upstream improves water quality downstream, we knew we would have to work to improve Silver Brook: that's the small stream that runs through the CMA and empties into nearby Great Brook. All the water flowing through Silver Brook eventually finds its way into the Great Swamp National Wildlife Refuge. So, whatever water quality improvement we could make on this small tributary would not only improve water quality at the Refuge, it would also improve the quality of water passing out of the swamp and into the Passaic River.

In order to change water quality on Silver Brook, we knew we needed to create the right conditions on the land itself. The CMA would require myriad habitat improvements—such as increasing vegetation cover on the forest floor—in order to restore a robust riparian forest and marsh, and that, in turn, would improve the richness of native plant and animal species. Once these key challenges were met, we knew that the stormwater runoff and sedimentation impacting Silver Brook would gradually decline.

Our early efforts got a real boost in 2005 when funding from a U. S. Fish & Wildlife Service grant enabled us to fence off 23 acres of the CMA property. Designed to keep deer out, the fence allowed us to dramatically increase the variety and effectiveness of our restoration efforts. Absent the destructive influence of deer, we began eradicating non-native invasive plants, revitalizing long-beleaguered native plant populations, and slowly healing the multi-layered forest understory.

But how could GSWA, a small nonprofit with a full agenda, really begin the massive, large-scale effort required to see this restoration through to completion? Enter our corporate workday volunteers; saviors of our small, staff-and-cash-strapped stewardship program!

Many area corporations and businesses—especially those in the banking, telecom, and pharmaceutical industries—give back to their communities by organizing an annual day of volunteer work for their employees. Part team-building exercise and part corporate philanthropy, the workdays that GSWA hosts frequently draw employees who happen to reside within the boundaries of the Great Swamp Watershed itself.

As our workday program has grown, Goldman Sachs, Pfizer, Ethicon, Verizon, and Royal Bank of Canada have routinely appeared with groups of 15 to 25 employees. Exhibiting boundless enthusiasm—and often donning colorful team T-shirts—these groups have worked together to help us restore our CMA. It is remarkable to think that with a little careful instruction these volunteers can clear non-native invasive plants from an acre of forest, plant 75 or more native shrubs, and mulch an entire walking trail over the course of a single six-hour period.

Our first corporate workday took place in 2005 and involved 20 employees. Since then, our program has become quite successful. In 2013, more than 95% of all GSWA's stewardship goals for the year were achieved by corporate volunteers. After a little math, that turns out to be more than 2,100 hours of free labor! While those of us caught up in the day-to-day subtleties of management at the



*Volunteers construct part of a wooden boardwalk for installation at GSWA's Conservation Management Area in Harding Township, NJ. 2012. Credit: GSWA/H. England.*

CMA may lose sight of it, successive years of workday visits have wrought some sweeping environmental improvements.

Volunteers attending their fifth or sixth workday in as many years are often struck by how much their efforts have changed the forest. One recent comment from a Goldman Sachs employee really drove this home for me. After a hard day of trail mulching, she mentioned that she had passed by a familiar place. A year ago, she and her teammates had spent time there pulling out invasive multiflora rose and replanting native blueberry, viburnum, and spicebush shrubs. She was incredulous at how much her old work area had changed and grown. And she beamed with pride when she told me that the colored flagging tape she used to mark last year's seedlings still clung to stem and trunk.

Of late, I also overhear repeat workday volunteers laughingly reminisce about years past when they sat roasting in the sun eating their lunches on upturned orange utility

buckets. Apparently, the experience of enjoying a meal seated on our recently installed picnic benches in the shade of our newly cleared and mulched welcome area creates a juxtaposition that cannot go unremarked!

Our restoration work at the CMA is becoming more and more sophisticated, especially as we move beyond the primal hack-and-slash tactics required for invasive plant removal. As a result, our corporate volunteers find themselves engaging in more and more unfamiliar activities. Delicate and technically

challenging interventions often require specialized training, so in order to make the most of each workday visit we have called on a small cadre of longtime GSWA volunteers to serve as skilled group leaders and advisors.

Upon arrival, each large workday group is quickly broken up into several smaller teams. Each team is assigned a different task and, as they sip their morning coffee, one of our trained leaders tells them all they need to know in order to complete it successfully. This approach to volunteer management helps us get more bang for our buck because our teams can spend more time on their activities and less time being trained or waiting to ask questions. It also provides each volunteer team with its own 'technical lead' or 'quality assurance manager' who can spot problems and make corrections independently. At the end of a long day of work we can be confident that the right invasive plants were removed, plastic nursery pots were taken off before our new native

*(continued on next page)*



## Land Stewardship *(continued from previous page)*



*Volunteers construct part of a wooden boardwalk for installation at GSWA's Conservation Management Area in Harding Township, NJ. 2012. Credit: GSWA/H. England*

seedlings went into the ground, and the boardwalks we built got all the right supports, screws, and other hardware that will make them safe and durable for seasons to come.

The evolution of our corporate volunteer model has also helped us find ways to take our stewardship program on the road. Lately, our workday groups have ventured beyond the confines of the CMA to remove non-native invasive plants and replant native species downstream at Great Swamp National Wildlife Refuge. They have helped us push upstream into nearby Jockey Hollow to build rain gardens and rain barrels, and assist with the creation of new deer exclosures. They have even helped us assist our friends at the Harding Land Trust by creating new trail access at the recently preserved Primrose Farm property located off of Brook Drive South in Harding Township.

The primary goal of the corporate workday has always focused on advancing the plotline of environmental restoration at the CMA. Nevertheless, an interesting subplot has developed among the nearly sixteen

hundred employees who have participated in these programs. Our volunteers have started to gain a fuller understanding of why they do what they do at these events. By building rain barrels and rain gardens they have learned why it is so important that we all work together to reduce the flow of stormwater runoff in New Jersey. By identifying and removing non-native invasive plants, they have come to understand why damage done to a forest understory has such a profound impact on water

quality in nearby waterways; and by building bluebird nesting boxes, they have learned why maintaining biological diversity is so important for keeping the landscape healthy and beautiful. As our story approaches its denouement, we have found that our corporate workdays provide opportunities for environmental education as well as opportunities for boots-on-the-ground conservation.

The saga of stewardship at GSWA's CMA property (and beyond) turns out to be complex and multifaceted. Much of it—such as the complications and challenges introduced by Hurricane Irene, Tropical Storm Lee, and Snowtober in 2011, and Superstorm Sandy in 2012—I have not mentioned here. But as we turn the page on the next chapter of our story, what is clear is that our corporate workday volunteers will remain a key and integral part of our success. We all look forward to seeing the role of the corporate workday continue to grow and evolve as our stewardship program moves into new and uncharted territory. 🌲

# Letter to the Editor: Bernards H.S. Student Finds Year-end Inspiration With GSWA Program

Dear Great Swamp Watershed Association,

When June rolls around each year, with the sun blaring through the classroom windows and the birds singing the melodies of summer outside, I know from personal experience that all high school students struggle to stay cooped up in school. As a rising senior at Bernard's High School, I dreaded the last month of school leading up to my summer freedom. When I arrived in my AP Environmental Science class one sunny May morning, however, Hazel England, director of education and outreach at the Great Swamp Watershed Association (GSWA), announced an intriguing opportunity.

To wrap up our year's worth of hard work, Hazel joined forces with my science teacher, Karen DeTrolino, allowing me and my classmates to research topics we wished to learn more about. She explained that our projects would be presented to GSWA and local community leaders; and that they would be used to educate local communities on current environmental issues. For the first time since my AP exam, I was excited to take control of my education and learn more about a subject I was genuinely concerned with.

With an interest in the local watershed and a concern about the effects of Hurricane Sandy and the myriad of fallen trees it created, my group and I conducted surveys, interviewed people from local environmental organizations, and extended our research to help our community finally recuperate from the disaster. With our results, we were able to create an educational

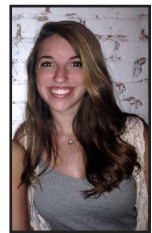
presentation, brochures, and surveys GSWA could use in the future.

Despite the alluring weather awaiting me outside, I thoroughly enjoyed my experience with my final project. And unlike many other students at this time of the year (who were not in as awesome of a class as AP Environmental Science) I enjoyed every hour spent working on our project, and I even wished we had more time to further our research.

Although I may have forgotten the binders full of information I memorized for my AP exam, I am now (almost) an expert when it comes to trees and watersheds thanks to my final project. Working with GSWA gave me the opportunity to leave the school year with a solid understanding of an environmental issue I truly care about. And knowing that GSWA could use my project to educate the community and to make a difference in the environment I love dearly made it all worthwhile.

I am looking forward to working with GSWA in the future and for more opportunities to come,

Sincerely,  
Peri Levine, 17  
Class of 2015  
Bernards High School,  
Bernardsville, NJ



**Editor's Note:** *If you would like to share your thoughts or feelings on an issue that you think might be of interest to the GSWA community, please contact Director of Communications & Membership Steve Reynolds via email at [sreynolds@greatswamp.org](mailto:sreynolds@greatswamp.org).*

## **Build A Refuge Garden For Your Backyard**

### **Thursday, October 2, 7–8:30 p.m.**

*GSWA Office, 568 Tempe Wick Road, Morristown, NJ*

On Thursday, October 2, GSWA is pleased to host well known landscape architect Tony Berardo for a presentation and discussion on creating small-space “refuge” gardens. Tony is the owner of Cross River Design of Annandale, NJ—one of America’s premier design-build landscape architecture firms.

Long before Henry David Thoreau escaped to Walden Pond in search of refuge from the hectic life of industrial Lowell, Massachusetts, people of many cultures have felt the need to calm the mind, awake the senses, and refresh and renew the spirit. Tony will present some ideas on the need to create such small-space gardens and demonstrate how wonderful results can be achieved with modest budgets.

Please come and explore the philosophical, aesthetic, and practical elements of having such refuges in our own backyards. Expect a wide-ranging and humorous look at outdoor places where one can meditate, practice yoga, read, nap, or just revel in the sounds, smells, and visual activity of a well-planned, small-space garden. Topics may range from water and wildlife friendly features, native plant selection, sculptural elements, exposure, maintenance, and water needs. Also, expect some funny stories, and an open discussion of the trials of our overstimulated modern lives and the antidotes to be found in a cultivated natural environment.

This will be an excellent opportunity to benefit from Tony’s broad experience and expertise in all matters related to plants and landscape design, so please feel free to ask questions based on your own interests.

Seating is limited, so advanced registration is recommended. Please register to attend online at *GreatSwamp.org*, or call 973-538-3500 x22. If you are not a current GSWA member, please consider making a donation of \$10/adult when you register.



**Follow us at [www.twitter.com/gswa](http://www.twitter.com/gswa)**

# House Tour Highlights Green Living

by Kelly Martin, Membership and Education Associate

On May 28, GSWA exhibited several unique and beautiful homes within the watershed region during our inaugural Home & Garden tour. More than 125 participants toured seven homes located in Madison, Chatham Township, Green Village, Long Hill, Basking Ridge, New Vernon, and Morris Township. Tour-goers were captivated by the environmental features at several of the homes; including geothermal energy systems, solar panels, locally sourced materials, and even a certified wildlife habitat! Beautiful historic homes and whimsical gardens were also on display, showcasing how truly distinctive and charming our watershed is.

Several local businesses generously sponsored the event, including Better Homes & Gardens Real Estate Coccia Realty, Green Path LandCare, Investors Bank, Mary Horn of Weichert Realtors, MBA Cabinetry, National Contractors, Ryan Inc., Scandic Builders, Steele Kellogg, and Washington House Restaurant. A few sponsors were also on hand during the tour to explain environmental

systems or design features they installed for particular homeowners. Green Path Landcare sent a representative to demonstrate how a problematic drainage area in Chatham Township was converted into a certified wildlife habitat complete with above-ground water feature. Representatives from MBA Cabinetry, National Contractors, Ryan Inc., and Steele Kellogg were stationed at the tour home in Madison to discuss the complexities of LEED-certified building techniques. And Scandic Builders, the developers responsible for constructing the tour homes located in Green Village and Basking Ridge, made themselves available at both properties to discuss the environmentally friendly systems and sustainable building materials they work with on a regular basis.

Participants ended the tour with inspiration for their spring plantings and decorating, and a greater appreciation for all the things that a homeowner can do to create a living space that works with the environment, rather than against it. 🌱



*Half Moon House in downtown Madison, NJ, was one of seven area homes included in GSWA's first-ever home and garden tour in May 2014. This particular home boasts a number of green features, including a geothermal well, a solar panel array, low-VOC interior finishes, and cedar shingles certified by the Forest Stewardship Council. Credit: Courtesy of C. Kellogg*

# GSWA Initiates New Bacteria Monitoring Program for Local Streams

by Laura Kelm, Director of Water Quality Programs

During July and August, the Great Swamp Watershed Association (GSWA) successfully initiated its first watershed-wide *E. coli* monitoring program.

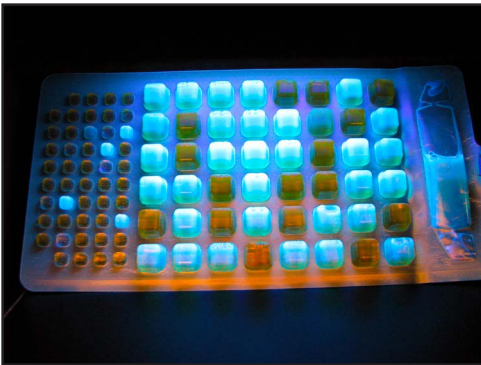
*E. coli* bacteria are found in the guts of warm blooded animals (including people, dogs, and birds). Some strains of it can be harmful, but the varieties that show up in our local streams are not likely to pose a public threat. Nevertheless, the presence of *E. coli* in our waterways also indicates the presence of fecal matter, which could contain harmful viruses. Streams and ponds contaminated with fecal matter might make people or pets sick if they swim, kayak, wade, splash, or otherwise come in contact with the water. Fecal matter also contains nutrients that may

cause algal blooms and other problem for aquatic life.

Because of the potential health implications of high *E. coli* levels, GSWA has chosen to monitor 17 sites where humans or pets commonly make contact with the water. These locations are spread out across all five of the watershed's main streams, and include several minor tributaries as well as a few disconnected ponds. Official swimming beaches were excluded from our program because state regulations already require bacteria monitoring at such sites.

GSWA is using specialized equipment, purchased with grant support from the Norcross Wildlife Foundation and the Hyde and Watson Foundation, to analyze its water samples. The testing method we employ is known as Colilert and was developed by IDEXX Laboratories, Inc. This method has been approved by the U.S. Environmental Protection Agency (EPA), and is used by the New Jersey Department of Environmental Protection (NJDEP) and several other water-quality testing labs. Instead of relying on an outside lab for analysis, this new in-house testing regime offer us the flexibility to collect water samples as needed, and allows us to determine results within 28 hours of sample collection.

New Jersey maintains a two-part standard for the amount of *E. coli* allowable in state streams. In order to meet that standard, bacteria levels (a) must not



A Colilert test reveals the presence of *e. coli* bacteria in a recent water sample. Samples are placed inside a sealed tray, incubated for approximately 24 hours, and then placed under a black light for examination. ourescing wells on this sample tray indicated a positive result for *E. coli*. Credit: GSWA/L. Kelm



exceed a particular maximum value across all water samples, and (b) must not exceed a particular maximum average across five separate water sampling events. When this article was written, GSWA had collected five separate samples at all of its testing sites over the course of five weeks. Of the 85 individual samples taken during that period, 34 exceeded the single-sample maximum (see letter *a* above).

On the other hand, ten of the testing sites fell within the state standard. They included three locations in Jockey Hollow, three at the Somerset County Environmental Education Center in Basking Ridge, two along Loantaka Brook, one along Black Brook in Chatham Township, and one at Bayne Park in Harding Township.

High *E. coli* levels at sites where the state standard was exceeded during our first testing period may be directly attributable to rain events that occurred in advance of sample collection. Stormwater runoff often carries pollutants, such as fecal matter from wildlife and dogs, off of the land and into our streams.

Now that basic *E. coli* information has been gathered for the Great Swamp Watershed, GSWA will do some follow-up testing at sites that showed unexpected results.

To see a map of GSWA's monitoring locations and testing results, visit us online at [GreatSwamp.org](http://GreatSwamp.org) or contact Director of Water Quality Programs Laura Kelm via email at [lkelm@greatswamp.org](mailto:lkelm@greatswamp.org). 📍

### **ACROSS THE WATERSHED** is also available electronically

Help reduce our print and mailing costs by signing up for electronic delivery of future issues of ***Across the Watershed*** at [GreatSwamp.org](http://GreatSwamp.org), or send an e-mail with your name and address (so we can identify you in our member database) to [sreynolds@GreatSwamp.org](mailto:sreynolds@GreatSwamp.org). By giving GSWA your e-mail address, you'll also receive our monthly e-newsletter, which provides

timely information on upcoming programs and events along with news about what's happening in and around the watershed.

Your e-mail address will be used solely for the purpose of sharing information about GSWA-related programs and events. We will not provide your e-mail address to any other person or entity without your permission.

# Reviewing Proposed Cleanup Plans for the Lower Passaic River

by Sally Rubin, Executive Director

The U.S. Environmental Protection Agency (EPA) has announced options and a recommendation for cleaning up contaminated sediment along the last eight miles of the lower Passaic River. The Great Swamp Watershed Association (GSWA) has spent the last few months attending press conferences, information sessions, and public meetings where official comments on the remediation plan have been made.

Two contaminated sites on the lower Passaic have already been remediated. These were the “hottest” of the hot spots. Infamous for manufacturing the herbicide Agent Orange in the 1950s and 1960s, the site of the former Diamond Alkali plant located on Lister Avenue in Newark was remediated in 2001. This location was contaminated with dioxins, pesticides, and volatile organic compounds (VOCs). Another site, known as River Mile 10.9 and located adjacent to Riverside County Park in Lyndhurst, was remediated last year. Contamination at this site included dioxins, polychlorinated biphenyls (PCBs), pesticides, heavy metals, and polyaromatic hydrocarbons (PAHs).

Although the worst of the worst pollution sites along the lower Passaic have been addressed, more needs to be done. Primarily bound to silt and sediment in the river bed, contaminants have been moved away from hot spot areas by tidal influences and storm activity. According to the EPA, 85% to 90% of the legacy pollutants can now be found bank-to-bank along an eight-mile stretch of

the Passaic between Belleville and Newark Bay. Over the past 15 years, the same natural processes that spread the pollution have also failed to reduce its presence. This has resulted in a significant and ongoing threat to the health of both humans and wildlife. Consumption of contaminated fish and shellfish from these waters is particularly dangerous. And, unfortunately, during a recent motorboat tour of the area, I saw at least a dozen people fishing.

The EPA has identified four clean up options for the lower Passaic. Those options include variable approaches to the disposal of contaminated sediments, and each one comes with a different price tag attached.

Cleanup option number one is to take no action. The EPA has a mandate to protect human health and the environment, and to comply with federal and state standards. Since cleanup activities are considered protective as long as the current and potential risks of exposure to contamination are reduced, this option is not viable.

Cleanup option number two is a deep-dredging action with backfill. Under this approach, the EPA would initiate bank-to-bank dredging of all 9.7 million cubic yards of contaminated sediment along the lower eight miles of the Passaic. (Note: A cubic yard is about the size of your dishwasher.) Upon completion of dredging, a two-foot thick layer of backfill would be installed. This backfill would not be maintained after installation. It is worth noting that in addition to dredging for remediation



*GSWA Executive Director Sally Rubin (right) chats with Congressman Bill Pascrell (left) at a press conference announcing EPA Region 2's plan for cleaning up the last eight miles of the lower Passaic River. The event took place on April 11 along the Passaic River at Newark Riverfront Park. Credit: GSWA/S. Reynolds.*

purposes, this approach includes additional dredging of a federally authorized navigation channel for ships along the entire eight-mile stretch. This approach would take about 11 years to complete after final approval of the project design. The design would take approximately three years to complete.

Cleanup option number three is an extensive capping and dredging project. This approach also includes bank-to-bank dredging, but would remove only 4.3 million cubic yards of contaminated sediment. The remaining 5.4 million cubic yards of contaminated sediment would remain in the river bottom under a two-foot cap of sand and stone. According to the EPA, this engineered sand cap would be maintained in perpetuity, and would effectively prevent the movement of the contaminated sediment

that remains. The EPA has also assured residents that the cap-and-dredge plan will move enough material out of the river to ensure that the sand cap will not increase flooding issues. As with the deep-dredge option, this plan includes dredging for a federally authorized navigation channel, however the length of that channel would include only the last 2.2 miles of the river. Capping and dredging would take about five years from design to completion.

Cleanup option number four is a targeted dredging and capping project. Under this scenario, dredging would not be bank to bank, but would focus on targeted pollution hot spots. Approximately 1 million cubic yards of contaminated sediment would be dredged out of the river, and a two-foot sand cap would be installed over each hot spot identified. Dredging for a federally authorized navigation channel is not included in this option. The EPA has already stated publicly that this option will not be adequately protective because it is unlikely to lead to a meaningful decrease in contamination levels. This means that a significant health risk would remain for humans and wildlife. The targeted capping-and-dredging plan would take two years from design to completion.

Options for disposing of contaminated sediment removed from the river include the following approaches.

Disposal option number one would create a contained aquatic disposal (CAD)

*(continued on next page)*

**Lower Passaic Cleanup** (continued from previous page)

in Newark Bay. Under this scenario, an engineered pit would be dug into the clay bottom of Newark Bay. Dredge materials from the Passaic would be dumped into the pit and sealed under a cap to keep it in place. None of the contaminated dredge materials would be treated prior to disposal, so this plan does not involve a land-based processing facility. The state of New Jersey, which owns Newark Bay, opposes this approach.

Disposal option number two calls for the removal of dredge materials to an out-of-state landfill. Contaminated sediment would be transported to a local land-based facility for a treatment known as *dewatering*. This treatment removes water from the sediment, and then sends the water through a treatment plant where it must meet New Jersey water quality standards before being discharged back into the river. Under this plan up to 10% of the remaining highly contaminated, dewatered sediment would be incinerated and the remainder would be shipped to an approved out-of-state landfill.

Disposal option number three would involve the separation of contamination from dredge materials and creation of a cleaner sediment that would be safe for beneficial re-use. As with disposal option number two, dredge materials would be transported to a local facility for dewatering. After dewatering, additional treatments would be applied to the sediment in order to separate out contaminants. Any remaining contaminated material would be moved to an approved landfill, while the cleaned material would be salvaged for use in other applications.

Costs associated with each combination of cleanup and disposal plan are outlined in the table below.

The EPA has publicly recommended the cap-and-dredge cleanup (cleanup option number three) in conjunction with the plan for out-of-state disposal of dredge materials (disposal option number 2). According to the Agency, a bank-to-bank dredging approach will be the most effective method because of the wide distribution of contaminated

<b>Disposal Options</b>	<b>Deep Dredge</b> <i>Cleanup Option 2</i>	<b>Cap-and-Dredge</b> <i>Cleanup Option 3*</i>	<b>Targeted</b> <b>Cap-and-Dredge</b> <i>Cleanup Option 4</i>
<b>CAD</b> <i>Disposal Option 1</i>	\$1.34 billion	\$0.95 billion	\$0.37 billion
<b>Out-of-State</b> <b>Landfill</b> <i>Disposal Option 2*</i>	\$3.25 billion	\$1.73 billion	\$0.61 billion
<b>Decontamination</b> <i>Disposal Option 3</i>	\$2.62 billion	\$1.59 billion	\$0.61 billion

*\*options recommended by the EPA*

sediment in the lower Passaic. The same reasoning has ruled out the targeted cap-and-dredge cleanup because that approach will not achieve a sufficient reduction of risk from contaminated materials. While the deep-dredge cleanup would be protective, the EPA has noted that this plan will be more disruptive to local communities and the environment. Capping is also faster and considerably less expensive than deep dredging.

It is worth re-iterating that the plan for removing dredge materials to a submerged CAD (disposal option number one) is widely opposed. Cap or no cap, placement of untreated contaminated sediments into Newark Bay is likely to have social and environmental ramifications.

The New Jersey Department of Environmental Protection (NJDEP) has publicly endorsed the EPA's recommendation. They have also stated that lower Passaic River communities deserve a speedy remedy, and have reminded the EPA not to lose sight of a larger 17 mile stretch of the Passaic River that requires attention. A focused feasibility study of this larger area of concern is ongoing.

As mentioned earlier, the state of New Jersey, through NJDEP, has rejected the CAD disposal plan. Since the state also owns the land at the bottom of Newark Bay, further development of the CAD approach is unlikely. The Department has also rejected the targeted cap-and-dredge cleanup plan, indicating that the approach leaves behind too much contaminated sediment and poses an unacceptable health risk to communities along the river.

In addition to weighing in on the EPA's recommendations, the state has voiced considerable support for creating a navigation channel as part the remediation effort. Such a channel would likely encourage economic revitalization in the region.

The Lower Passaic Study Area Cooperating Parties Group (CPG)—a coalition of 67 companies deemed legally responsible for contaminating the lower Passaic—has not yet agreed to fund any of the remedies that the EPA has proposed. The group has indicated a desire to wait for completion of the aforementioned feasibility study that focuses on the entire 17-mile area of concern. The CPG has come out in opposition to all bank-to-bank clean up approaches citing a belief that remediation of clearly targeted contamination hot spots would be sufficient. They also support the CAD disposal option.

GSWA concurs with both the recommendation of the EPA and NJDEP, and will continue to monitor issues associated with the lower Passaic River cleanup as they develop. 🌿

### **Know Someone Who Would Like to Become a Member?**

GSWA relies on members like you to help protect our watershed's natural resources. So please pass this newsletter along, and encourage your friends and neighbors to join us! Visit [GreatSwamp.org](http://GreatSwamp.org) for more information.





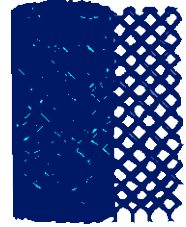
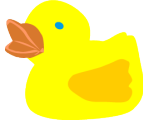
GSWA's Director of Water Quality Programs Laura Kelm, and the Americorps WMA 6 Watershed Ambassador Peggy Monkmeier, led a volunteer cleanup of the trails in Chatham Township's Green Village Pond Conservation Area on July 8, 2014. Eight volunteers braved the heat and removed approximately 25 bags of trash from the trails. The Conservation Area, located off Green Village Rd. east of Shunpike, is home to wetlands, a tributary of Black Brook, and hiking trails open to the public. Left to right: GSWA Intern Guy Leland, Joe Balwierczak, GSWA Membership & Education Associate Kelly Martin, NJ Watershed Ambassador Peggy Monkmeier, GSWA Advisory Council Member Frank Stillinger. Credit: GSWA/L. Kelm.

Please be sure to let us know if you change your e-mail address. Send a note with your name, address, and old e-mail address to [sreynolds@GreatSwamp.org](mailto:sreynolds@GreatSwamp.org) so you don't miss out on our monthly e-newsletters.

## GSWA Invites You to Support our “Wish List”

If you're wondering how member support is making a difference, here are just a few examples:

- \$25 buys a pond study kit for one classroom
- \$50 buys a stream flow kit — including “rubber duckies” for stream monitoring
- \$100 helps buy native shrubs for restoration of the Conservation Management Area
- \$250 sponsors community outreach and education presentations and teacher workshops
- \$500 helps fund advocacy programs that educate citizens of all ages about the importance of preserving and protecting our limited natural resources
- \$1,000 buys deer exclosure fencing for three acres at the Conservation Management Area



If you would like to make a donation, or encourage your friends and neighbors to become members of GSWA, visit [GreatSwamp.org](http://GreatSwamp.org) or call Steve Reynolds at 973-538-3500, x21.



GSWA volunteer Mike Duffy and Membership & Education Associate Kelly Martin pose with dip nets. The duo offered an educational stream seining program during the Great Swamp National Wildlife Refuge's 2014 Fall Festival on September 6, 2014. Credit: GSWA/S. Rubin

## GSWA To Honor Great Swamp Refuge Manager, October 29

Put it on your calendar, and please join us for GSWA's annual Gala Celebration—a dinner and silent auction to be held on Friday, October 29, at the Westin Governor Morris Hotel in Morristown. The gala, which is a friendly and energetic gathering of GSWA's good friends, is also our biggest fundraiser of the year.

We will honor **Bill Koch** at this year's gala. Bill recently retired after a 43-year career with the U.S. Fish and Wildlife Service, 34 of which he spent as refuge manager at the Great Swamp National Wildlife Refuge.

Those of us who love the Great Swamp owe a lot to Bill. Under his leadership, the Refuge became a national model and won an Achievement Award from the Department of the Interior. Bill also led the effort to build the Helen C. Fenske Visitor Center, and the effort to expand Refuge boundaries by acquiring appropriate adjacent properties.



GSWA selected the eastern bluebird (*Sialia sialis*) as the wildlife mascot for this year's gala celebration. Credit: A. Kaufman.



Bill Koch, longtime manager of the Great Swamp National Wildlife Refuge, will be honored at GSWA's 2014 Gala Celebration this October. Bill recently retired from a successful 43-year career with the U.S. Fish & Wildlife Service. Credit: GSWA.

The visual theme of this year's celebration is the eastern bluebird (*Sialia sialis*). One of Bill's major objectives was to increase and manage the open field and meadow habitat that bluebirds require. This effort, plus the establishment of nesting boxes, led to a resurgence that has made these songbirds a common and distinctive sight at the Refuge.

Bill's devotion and steady leadership over so many years has ensured that this treasured centerpiece of our region has continued to grow and improve, and become a magnet for wildlife and people alike.

You can help us honor Bill by attending the gala! To ensure that you receive an invitation to this spectacular evening event, please send an email message to [drice@greatswamp.org](mailto:drice@greatswamp.org)! 🌲



## Annual Membership Meeting Wednesday, October 29, 5:30–6 p.m.

*Westin Governor Morris, 2 Whippany Road, Morristown, NJ*

Whether you are attending our annual Gala Celebration later the same evening, or just interested in catching up with all that has happened at the Great Swamp Watershed Association over the past year, please join us for our annual membership meeting on October 29 at the Westin Governor Morris in Morristown. Executive Director Sally Rubin will offer some short remarks and field any questions you might have during this short 30-minute get together.

Advanced registration is **not** required for attendance at the meeting. All attendees should hold a current membership with Great Swamp Watershed Association. To check your membership status, please call us at (973) 538-3500.



*GSWA volunteers use paint to add color and personality to a rain barrel during a corporate workday visit in June 2014. These recycled, food-grade barrels were washed and primed with a special primer before decorations were added. Want a rain barrel of your own? Sign up for GSWA's next rain barrel workshop on October 16, 2014. Visit [GreatSwamp.org](http://GreatSwamp.org) for details.*

*Credit: GSWA/H. England*

# Got Some Time? Volunteer!

**T**here are lots of ways to help GSWA protect the waters and the land of the Great Swamp Watershed region. Here is an upcoming volunteer opportunity for you, your family, and your friends to consider.

## **Visual Stream Assessment Training for Volunteers**

### **Date & time to be announced.**

*GSWA Office, 568 Tempe Wick Road, Morristown, NJ*

If you are interested in becoming a stream monitoring volunteer or just want to learn more about stream health, this training is for you! An early indoor classroom session helps you learn how to conduct a visual stream assessment and recognize environmental factors that may impact stream health. A late-morning outdoor session helps you practice your new-found skills at a local stream site. By afternoon, you will be a fully trained visual stream assessment volunteer ready to conduct a new assessment next spring!


This training may be conducted in partnership with the AmeriCorps New Jersey Watershed Ambassador Program. Date and time will be announced later this fall. Please visit our website or call for updated information.

Register online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22. New volunteers will be asked to sign a waiver before beginning work.

## **Important Information for Volunteers**

Volunteer events usually take place outdoors, so please dress for the weather. Conditions may be wet, muddy, hot, or cold. Long pants and sturdy shoes or boots are strongly recommended. Long sleeves are optional. Feel free to bring your own water in a reusable water bottle, and your own snacks. All other tools and supplies will be provided. Preferred volunteers are 15 or older.

Event dates, times, and locations are subject to change. Provide your email address or phone number at registration and GSWA will make every effort to inform you about scheduling changes. Updated scheduling information is available via our *Event Information Hotline* at (973) 538-3500 x22.

From time to time, GSWA calls on volunteers to assist with other land stewardship, water quality testing, and fundraising tasks. Calls for volunteers are distributed via email on an “as needed” basis. If you would like to be added to our email list, or need more information, please send an email message to [volunteer@GreatSwamp.org](mailto:volunteer@GreatSwamp.org) 

### **Interested in volunteering?**

Fill out our volunteer profile at [GreatSwamp.org/VolProfile.htm](http://GreatSwamp.org/VolProfile.htm), or e-mail [volunteer@GreatSwamp.org](mailto:volunteer@GreatSwamp.org).



## When it Pours, it Stores! Rain Barrel Building Workshop

Thursday, October 16, 6–8 p.m.

GSWA Headquarters, 568 Tempe Wick Road, Morristown, NJ

Why should you get a rain barrel? Use it to capture and store the rain running through your home's downspout and you'll routinely have 55 gallons of free water to use around your property. Your barrel will also help slow the flow of stormwater running through your neighborhood and entering local streams. In turn, this works to reduce flooding and water pollution. Sounds like a good idea, right?



Volunteers at one of GSWA's recent corporate workday events designed and painted the images seen on these three functional rain barrels. Credit: GSWA/H. England.

GSWA will help you build your own water-saving rain barrel at a special workshop on October 16. Using a recycled, food-grade barrel and a spigot adaptor kit, we will walk you through the simple construction process. Each registered participant will leave with the workshop with their very own handcrafted rain barrel that is ready to be hooked up to a household downspout.

The cost for participation is \$75 per barrel kit. Workshop size is extremely limited, so advanced registration and payment is required. Register and pay online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22. There are only 16 rain barrel kits available for this workshop.

*Please note: Participants will be responsible for transporting their rain barrel home at the end of the workshop. GSWA is unable to deliver finished barrels to your home.*

If you do not wish to build your own rain barrel at the workshop, you may purchase finished (ready-to-install) barrels for \$100 each. Purchase your finished rain barrel(s) online at [GreatSwamp.org](http://GreatSwamp.org) or call (973) 538-3500 x22. Please arrange a convenient time to retrieve your finished barrel(s) from GSWA's headquarters located at 568 Tempe Wick Road in Morristown, NJ. (Sorry, home delivery service is not available.)

## Deer & Deer Management in New Jersey Thursday, November 20, 7–8:30 p.m.

*GSWA Office, 568 Tempe Wick Road, Morristown, NJ*

If deer are eating your favorite bushes, annuals, and more, then you are already aware of the effects of deer overpopulation in your yard. What you may not be aware of are the many other ecological and socio-economic impacts caused by the high number of deer here in New Jersey. Join Dr. Michael Van Clef as he discusses the ramifications of deer overpopulation on a large scale.

Ecologist **Michael Van Clef**, Ph.D., is the founder of Ecological Solutions, LLC, an environmental conservation consulting firm located in Great Meadows, NJ. Michael has more than 20 years of experience working on the stewardship of rare and invasive plant species, white-tailed deer management, forest and grassland restorations, ecological health monitoring, and natural resource policy. He prepared the New Jersey Invasive Species Council's *New Jersey Strategic Management Plan for Invasive Species*, serves on the Hopewell Township Deer Management Advisory Committee, and acts as science director for the New Jersey Invasive Species Strike Team. He also serves as a volunteer on other conservation committees.

Seating is limited, so advanced registration is recommended. Please register to attend online at [GreatSwamp.org](http://GreatSwamp.org), or call 973-538-3500 x22. If you are not a current GSWA member, please consider making a donation of \$10/adult when you register.



*On Tuesday, August 12, 2014, Community Involvement Coordinators Pat Seppi (left) and David Kluesner (right) from the U.S. Environmental Protection Agency's Region 2 office in New York City met with GSWA Executive Director Sally Rubin, Acting Manager of the Great Swamp National Wildlife Refuge Steve Henry, and former Refuge Manager Bill Koch to visit several remediated Superfund sites located within the boundaries of the Great Swamp National Wildlife Refuge. Credit: GSWA/S. Rubin*

## Remembering Len Soucy

On Wednesday, June 11, 2014, our extended Great Swamp family said goodbye to Len Soucy, founder of The Raptor Trust and a true visionary of the conservation movement here in New Jersey.

As a defender and healer of birds of prey, and indeed all wildlife, Len's reputation has stretched to legendary proportions. Originally trained as an engraver, his life changed dramatically one day in the late 1960s when he and his wife Diane stumbled upon a red-tailed hawk with a broken wing. This encounter sparked what would become a lifelong passion for understanding wild birds—raptors in particular—and finding ways to help them recover when they became sick or injured.

Len's passion eventually led him to found The Raptor Trust with his wife in 1982. Headquartered on White Bridge Road in Long Hill Township, the Trust has since become one of the nation's premier bird rehabilitation centers. More than 90,000 animals have received treatment at the

facility, and about half of them have been made well enough to be released back into the wild.

Several chronicles of Len's many achievements on behalf of the natural world have appeared since his passing. They paint a portrait of a man deeply committed to his cause whose example will serve as an inspiration and ideal for aspiring conservationists for generations to come. We offer our profound thanks to Len for his forty-plus years of service to our wild neighbors. We grieve his loss and extend our deepest sympathies to his family, his friends, his co-workers, and the many others who loved him.

If you have never been to The Raptor Trust or have not visited in a long time, we encourage you to stop by and witness Len Soucy's legacy for yourself. The Trust is located at 1390 White Bridge Road, Millington, NJ 07946, and is open seven days a week. Visiting hours vary by season. For more information, please visit [TheRaptorTrust.org](http://TheRaptorTrust.org). 🦅



*Len Soucy (right) acquaints Congressman Rodney Frelinghuysen (left) with one of his feathered friends at GSWA's Do The Swamp Thing event in 2002. This barn owl (Tyto alba) is one of the many wild birds Soucy helped through his work at The Raptor Trust. Credit: GSWA.*




GSWA is blogging at  
<http://greatswamp.org/blog>



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