

# The Great Swamp Watershed Association ACROSS THE WATERSHED

Winter 2009

## A Thanksgiving Bounty

by Hazel England, GSWA Director of Education and Outreach

When GSWA was offered a chance to obtain several thousand dollars worth of native plants to be used in the ongoing restoration of the Conservation Management Area, we couldn't turn it down! The only caveat was that the plants had to be ordered before year's end, and October was quickly coming to a close.

Undaunted, we placed an order for 250 native shrubs, including red osier dogwood and high bush blueberry which are native to the wetland forests being restored. We also ordered 4,500 two-foot long live stakes of native shrubs that could be planted directly into the stream banks to stabilize and hold them

(continued on page 5)



Donning hip boots with rebar in hand, volunteers turned out on short notice to help Great Swamp Watershed Association plant 1,000 native shrub cuttings provided by the Great Swamp National Wildlife Refuge to revegetate the Silver Brook stream bank in GSWA's Conservation Management Area. Pictured from left are Frank Stillinger, Michael Achey, Jim MacDonald, Steve Gruber, Wes Boyce, Lisa Stevens, and Hazel England, GSWA's CMA land steward.

## And a Good Time was Had by All!



Mark and Virginia Beutnagel arrive at the gala ready for fun. More about the gala on page 10.

## Winter Educational Programs

Join friends and members of GSWA for one or more of these educational programs to learn more about what's going on in and around the swamp! We ask that you pre-register for these programs to learn meeting locations and other information. Wear sturdy footwear and bring a snack for the walks. Bring binoculars or wildlife guides if you have them. These programs are free for members. For non-members, the fee is \$10 per adult, \$5 for each child five and over, and \$30 per family. Pre-registration is required. Visit [www.greatswamp.org](http://www.greatswamp.org) and click on our secure Event Registration page, or contact Hazel England, [hengland@greatswamp.org](mailto:hengland@greatswamp.org).

### Moonlight Hike

Sunday, February 8, 6 - 7:30 p.m.

Jockey Hollow, Morristown National Historical Park

While we don't guarantee the moonlight, there will be plenty of nature to learn about on these night hikes around the watershed. Winter nights, though cold, can be crisp and clear and a joy to experience. Listen for owls, flying squirrels or other night noises, perhaps even coyotes calling! Play some games to learn more about night senses, and revel in being out after dark without a flashlight!

### Secret Places of the Watershed Hike

Wednesday, March 25, 6 - 7:30 p.m.

GSWA Conservation Management Area, Tiger Lily Lane, Harding Township

The Great Swamp Watershed Association owns 50 acres in Harding Township that we maintain as the Conservation Management Area. This forested wetland contains vernal pools, streams and woodland with wildflowers and wildlife aplenty. We will take an early evening stroll along the boardwalk trails, listening for the spring peepers and wood frogs that are performing their

(more Educational Programs on page 5)

# Want Guaranteed Returns on Your Investment?

by Hazel England, Director of Education and Outreach

Though the title may be light-hearted, in another successful GSWA breakfast briefing entitled “Climate Change and You...Perfect Together?”, Dr. Michael Kennish of Rutgers University Institute of Marine and Coastal Sciences delivered a powerful message in making the connection between the thorny issues of climate change and the ramifications residents of the Great Swamp watershed and New Jersey as a whole may encounter in coming years. His presentation made it clear that investing time and energy in this issue now will reap dividends moving forward as we deal with climate change.

The arguments around climate change have moved from the arena of, “**Is it or isn’t it?**”, to “**It is, now what are we going to do about it!**”

Organizations local and international, small and large, are trying to contend with planning for change on issues so large, complex, and over arching they can almost seem easier to ignore than to struggle to incorporate into work plans.

The bottom line is that a huge and increasing body of science agrees on the effects of climate change. From ecologists conducting breeding animal surveys, botanists exploring plant range changes, geologists conducting polar ice cap research, and beleaguered climatologists modeling changing weather patterns, results all give a picture of a world slowly warming beyond that which we can explain away by natural causes. The Intergovernmental Panel on Climate Change (IPCC) concludes that: “Emissions of greenhouse gases and aerosols due to human activities continue to alter the atmosphere in ways that are expected to affect the climate throughout the 21st century.”

If science class wasn’t always your strongpoint, you might be confused about just what the link is between greenhouse gases, global warming, climate change and the other terms cropping up on a daily basis in the media. Simply put, greenhouse gases such as CO<sub>2</sub>, Methane,

Ozone, and CFCs — the refrigerant and spray can gases, when released into the atmosphere, rise to the upper layers of the atmospheric envelope, then help to trap solar energy that is reflected off the earth’s surfaces — think of a giant insulating sleeve around the earth, keeping heat in that is supposed to escape. Warmer temperatures are expected to lead to more intense rain events, since warm air holds more water vapor. However, warmer temperatures also are likely to lead to greater evaporation and transpiration of moisture, which could cause drier conditions in soils.

As a shore-front heavy state, NJ residents see the link between rising sea levels and loss of land and function at the shore, but climate change imposes impacts on every aspect of life. Farmers, for example, must respond to longer, drier growing seasons, modified frost zones and the pest and disease changes that even slight variations in temperatures can cause to crop yields. NJ crops that require colder winters than will occur can’t simply be replanted elsewhere in a state where land is at a premium.

Likewise, species composition changes in forests will occur, meaning certain species will disappear from NJ forests, while others march north or south in expanding ranges. Species moves can only occur if there are connections between preserved forestlands to allow species to migrate naturally. Habitats, particularly those rare to begin with, will likely see species become locally extinct. Consider what will happen to wetland species such as those temporary or ephemeral pool dwellers like the Blue Spotted salamander (a Great Swamp resident) if the ephemeral pools where these endangered amphibians breed stop forming in future warmer, drier winters. Other new, possibly pest species may well move in to fill the vacuum. These changes are coming. All we can control is how we plan for and adapt our management and other plans to meet them.

The concern for GSWA, with our focus on water resources, is that we will see precipitation and weather patterns change in the future. Reduced winter snowfall in the NJ Highlands leads to reduced snow melt and river flow in the spring and summer. Drinking water reservoir levels may be hard to sustain. Precipitation may occur in more concentrated cloudbursts, impacting both quality and quantity of water. Flooding may occur more regularly, exacerbated by impervious cover as well as habitat changes. Wetlands, with their sponge-like capacity to hold and slowly release water, will lose some of that ability if they alternately toast and flood. In a thirsty state such as NJ, we need to plan for these contingencies, and accept that competition for limited water will become an increasingly messy, political issue. These scenarios could be repeated with any health, land or resource issue considered.

On average, the U.S. warmed ½ - 1° C in the past hundred years. That may not sound like much, but the warming rate is increasing as we pump more of those insulating gases into the atmosphere. New Jersey might be the nation’s 46<sup>th</sup> smallest state, but it ranks 16<sup>th</sup> on carbon volume being pumped into the atmosphere — over 123 million metric tons a year. That equates to 37,000 lbs of greenhouse gases per NJ resident. These substances make all the climate problems we are incurring worse, at an increasingly rapid rate. Think, too, that those carbon emissions grew over 8.5% in the period from 1990-2003. So, Houston... we have a problem.

Becoming aware of your carbon footprint or going ‘carbon lite’ is one

(continued on page 6)



Photo by Blaine Rothauser



## Great Swamp Watershed Association

GSWA is a membership-supported non-profit organization that protects the water you drink and the places you love. We preserve the natural beauty and promote the health of the local environment now and for the future.

### Board of Trustees

#### Officers

David Budd, Chairman  
Ben Wolkowitz, Vice Chairman  
Frank Stillinger, Secretary  
Paul Hackett, Treasurer

#### Trustees

Debra Apruzzese  
Edmund DeVeaux  
Edward Kirby, Ph.D.  
James MacDonald  
Patricia Moody  
Dorothea Stillinger  
Mark Strickland  
Steven A. Tasher

#### Staff

Sally S. Rubin, Executive Director  
Kelley Curran, Director of Water Quality Programs  
Marysue DePaola, Director of Development  
Debra Dolan, Manager of Communications and Member Services  
Hazel England, Director of Education and Outreach  
Sharon McCann, Finance Director  
Lisa Testa, Membership Associate

## ACROSS THE WATERSHED

is a publication of the Great Swamp Watershed Association.

**Editor:** Debra Dolan

**Designer:** Ann Campbell

#### Contributors:

Kelley Curran  
Marysue DePaola  
Debra Dolan  
Hazel England  
Jim Northrop  
Sally Rubin

## From the Desk of the Executive Director

by Sally Rubin



Oh, the weather outside is frightful, but that hasn't stopped the staff and volunteers at GSWA. The Saturday after Thanksgiving was our last outdoor volunteer workday until spring. But, oh, what a workday it was. About a dozen people came out to our Conservation Management Area to plant 1,000 stakes of live native shrubs along the stream bank for stabilization and restoration. Standing in hip waders pounding rebar into the stream bank with a sledge hammer (to make the hole), might sound like hard work, but these dedicated volunteers actually seemed to have had a good time! Don't worry, we have 3,500 more plants coming this spring, so you can still come out and join us.

We're also very pleased to be starting a new educational program. We are working with Rotary Clubs and their high school counterparts, Interact Clubs, all along the Passaic River. We will be utilizing World Water Monitoring Kits and creating a database of the results. We will be able to accumulate basic data both across the entire Passaic and over time. We are looking forward to engaging teenagers in hands-on environmental analyses.

Our recent breakfast briefings have also been very successful. September was presented by Hazel England, Director of Education and Outreach, and focused on rain gardens. The garden Goldman Sachs volunteers helped us plant at our offices at 568 Tempe Wick Road in Harding is a great demonstration project. I encourage everyone to stop by in the spring to get inspired.

October's breakfast presentation was made by Penny Jones from Morris County Recycling. We learned a lot of things, including that we should not recycle pizza boxes because of the grease and that we should remove all tops/lids of bottles and plastic containers — the tops are not recyclable. Check out [www.mcmua.com](http://www.mcmua.com) for more information.

The November briefing brought us Professor Mike Kennish from Rutgers to talk about climate change. In addition to warming temperatures, precipitation patterns are changing. There is less snow, more rain, heavier downpours, and drought conditions. Visit GSWA's website to see Dr. Kennish's presentation.

December's meeting focused on road salt and was presented by Raymond J. Cywinski, Manager - Watershed & Environmental Resources, United Water. One of the recommendations he made to reduce road salt is to use a brine solution that freezes at a lower temperature. Of course, salt truck drivers need to be educated to focus on the center of the roadways, not the shoulders, and to turn off the salt spreaders at red lights, among other things. Perhaps the silver lining in the cloud is that climate changes may lead to less road salt! Let's hope for a mild winter!

Since Marysue DePaola joined GSWA as Director of Development in 2008, we received a number of grants, and there are several more funding requests pending. In particular, two grants were awarded by The Watershed Institute (see related article on page 7), and Hyde & Watson provided funding to improve the driveway and add some additional parking at our headquarters location. We are also pleased to report that Hazel England wrote a successful grant proposal to the EPA — no easy feat — to help fund GSWA's innovative new program, One River One Community. Kudos to Hazel and Marysue for these critical accomplishments.

On a more personal note, I'd like to thank departing board chairman Anne Essner for her dedication and commitment to GSWA during her term. In 2008 alone, Anne was faced with the challenge of hiring both an Executive Director and Director of Development, while spearheading completion of the organization's five year strategic plan. Despite Anne's leaving, I am looking forward to a great year working with David Budd who has taken the helm as board chair in 2009. 🌱

## Watershed Watch – Environmental Hot Spots

As part of our mission to protect the water you drink and the places you love, GSWA advocates for responsible development practices and promotes intelligent land use. We work to ensure compliance with environmental regulations and legislation at all levels of the government. Here are some areas we are currently focusing on:

### Bernards Township

**Millington Quarry** — The parties participated in court ordered mediation on December 2<sup>nd</sup>. While we have no specific information regarding the mediation, the parties met with the mediator all day and a follow up appointment will be scheduled. Our motion to intervene remains undecided. The judge will not decide the motion to intervene as long as the parties seem to be making some progress in mediation. The good news is that the judge hasn't decided against us either. Our attorney and soil geologist expert spoke extensively and our attorney sent a letter to all parties' attorneys with some recommendations regarding the fill that has already been delivered to the quarry. The attorneys obviously do not have to even read our letter let alone utilize our suggestions. However, we felt it was worth the effort to try to offer some positive guidance. We remain optimistic that we will be able to have an impact on the resolution.

### Morris Township

**Delbarton/Abbey Woods** — The Trust for Public Land is hopeful that an early spring closing will be possible for the preservation of the property. We are cautiously optimistic that we will receive a Green Acres grant to participate in this preservation effort.

### Harding/Morris Township

**Mt. Kemble Fields** — We believe that Harding is going to rezone this property for public use and allow Morris Township to build natural grass fields.

### Bernardsville

The Shop Rite has an application in front of the planning board to tear down the Thirsty Turtle building and increase parking by approximately 26 spaces. There will be a net reduction in impervious surface by 2000 sq. ft. This property drains its storm water into the already severely impaired Penns Brook. In order to improve the drainage, we would like Shop Rite to create bioretention (rain gardens) with their new landscaping and install drywells to capture some of the stormwater and hold it on site instead of draining it into Penns Brook. Additionally, when they take down the building, there is a partial basement that may be utilized for stormwater detention. While we do not expect Shop Rite to single-handedly remediate the Penns Brook problems, this is an opportunity for us to work collaboratively to make some improvements. The next planning board meeting for this application is January 29. 🌱

## GSWA's Land Use Committee Needs You!

Are you up-to-date on your town's environmental issues? Join a group that makes this their business, GSWA's Land Use Committee. This group meets monthly to review land use development projects proposed by developers and landowners in the ten towns of the Great Swamp Watershed. GSWA's Executive Director Sally Rubin is staff liaison to this committee, and Dot Stillinger is the committee chair.

Ideally, the committee is composed of at least one volunteer from each watershed town — Bernards Township, Bernardsville, Chatham Township, Harding Township, Long Hill Township, Madison, Mendham, Mendham Township, Morristown and Morris Township — who can consistently review planning board agendas and attend planning board meetings when possible, recognize and save relevant articles from local newspapers, and generally look for deviations from township land use ordinances that negatively impact the environment. In some cases, GSWA will actively participate at planning board meetings or participate in lawsuits aimed at strict enforcement of local land use ordinances.

The GSWA Land Use Committee also offers the Citizen Advocacy Program (CAP) in three to four townships a year. CAP is an educational program designed to coach local citizens on how to become an effective advocate for improvement in their community. Two CAP workshops were held in 2008, and more are planned for 2009 (see below).

This is your opportunity to learn from others with a similar interest in intelligent land use regulation. Attend a committee meeting and decide if this is a good opportunity for you. For more information, please contact Sally Rubin at 973-538-3500 x13 or [srubin@greatswamp.org](mailto:srubin@greatswamp.org). 🌱

## GSWA's Citizen Advocacy Program Dates Set

Plan to attend one or more of these CAP presentations, "Be Heard!" Each program begins at 7 p.m. with a talk, followed by a Q&A.

**Thursday, January 22, 2009**, Long Hill Township Library.

**Wednesday, February 25, 2009**, Bernardsville Library.

**Thursday, March 26, 2009**, Harding Township Municipal Building.

**Thursday, April 30, 2009**, Bernards Township Library (Basking Ridge).

## Winter Educational Programs

(continued from page 1)

mating calls on warmer evenings. Wear your boots, as we explore this important restoration area.

### Restoration Planting

**Sunday, April 5, 9 a.m. - 1 p.m.**

Conservation Management Area, Tiger Lily Lane, Harding Township

Don your hip waders, and come on in to help us plant more than 2,000 native shrub "live stakes" as we re-vegetate the banks of the GSWA Conservation Management Area's Silver Brook. We will teach you how to plant into the banks of the stream and supply all the tools you need. So come volunteer to be a part of the solution in GSWA's restoration plans for our 23-acre deer enclosure. Community service credit can be arranged. There's no charge and we will provide the coffee and donuts! 🌲

### Watershed Fun Scout Night Friday, March 13, 6:30-8:00 p.m.

GSWA Headquarters, 568 Tempe Wick Rd., Harding Township

Join us at GSWA headquarters to learn some amazing stuff about the watershed you live in. Through hands-on activities and games we will learn what we can do to keep the water and land of Great Swamp safe for all its inhabitants. Make your very own water treatment set up, and learn about the life of a drop of water from cloud to stream. \$10 per scout (adults free) includes refreshments. Best suited for ages 7-10 year old boy and girl scouts with an adult for every three scouts.

### Thanksgiving Bounty (continued from page 1)

in place. Then we set about trying to get a labor force together to plant this free bounty, which came courtesy of Great Swamp National Wildlife Refuge.

A lucky phone call from the Land Conservancy of New Jersey matched us with a small workgroup looking for a late-season volunteer day. That group turned out to be the staff of the Geraldine R. Dodge Foundation, one of GSWA's long-standing financial supporters. Not only did the group plant all 250 stream bank shrubs, but GSWA was able to give the Dodge Foundation a first-hand look at how their support contributes to the work we do protecting water and land in the watershed. Every plant was flagged in neon pink to allow easy identification and track any mortality. If you take a hike at the CMA (and we hope you will) you can easily spot their handiwork.

**Volunteers from the Geraldine R. Dodge Foundation recently turned out to plant 250 native shrubs at the CMA for re-vegetation of the Silver Brook stream bank.**



Of the 4,500 live stakes we ordered, 1,000 arrived just before Thanksgiving. A chain e-mail and some enticing Dunkin' Donuts goodies brought a hardy group of about a dozen volunteers together over the holiday weekend to get all 1,000 stakes planted along the stream bank. So thanks to those who donned their waders and answered the call.

See Winter Educational Programs above for information on future volunteer planting days. 🌲

## Winter Workshop for Educators

Great Swamp Watershed Association facilitates a number of interesting and useful workshops for K-12 formal and non-formal educators, who will experience activities they can use back in the classroom or Nature Center to teach across the educational curriculum. The workshops are hands-on, led by Hazel England, an experienced naturalist educator, and provide participants with activity guides for each workshop. The 6-hour workshops are offered at little or minimal cost, and often include breakfast. They confer six NJDOE professional development credits too! For more information call Hazel, Director of Education and Outreach, (973) 538-3500 ext 20, email her at [hengland@greatswamp.org](mailto:hengland@greatswamp.org) or contact workshop locations directly to register.

### Healthy Waters Healthy People Workshop

**Wednesday, February 25, 2009, 9 a.m. - 3 p.m.**

Morris County Great Swamp Outdoor Education Center, Chatham, (973) 635-9391

This workshop encourages investigation of the connections between water quality, the environment and human health. This is an advanced workshop best suited for educators of grades 6-12, who have basic water chemistry background. Participants receive six NJDOE professional development credits. Morning refreshments served. Cost \$15, including curriculum guide. Program will spend time outside; please dress appropriately. 🌲

### Hot Breakfast, Cool Discussion

GSWA's successful Breakfast Briefings series will return in March. They'll again be held on the second Tuesday of each month from 8:00 - 9:30 a.m. Watch your mail for details.



## 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 questions and dozens more about water quality, land preservation and local efforts to protect the environment can be answered by GSWA's Speakers' Bureau. Experts from the Great Swamp Watershed Association 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.

## Be a Good Steward of Your Own Land

by Sally Rubin, Executive Director

Whether you own a quarter of an acre or ten acres, there are simple things you can do to be a good steward of your land. Though it's winter now, you can start thinking about how you can be more water-friendly when spring arrives.


To reduce the need for fertilizers, maintain a mowing height of 3+ inches. Keep mower blades sharp to prevent tearing and injuring grass. Aerating lawn (de-thatching) promotes healthy grass and infiltration of water. Leave the grass clippings as natural fertilizers.

Water lawns and gardens less often but for longer periods of time to promote deep and healthy root growth. Hand watering or drip irrigation early in the

morning is best to minimize wasted water and evaporation.

Direct gutters away from pavement and onto gardens and lawns to reduce runoff and increase infiltration. Rain barrels help reduce runoff and are great for collecting water for gardening. To increase water filtration, reduce lawn coverage and create naturalized native plant gardens using low-nitrogen, drought-tolerant grasses. Native plants require less water and maintenance.

Finally, pick up pet waste. This prevents nitrogen and bacteria from entering waterways.

Spring will be here sooner than you think and these are just some simple things that you can do to make a difference. 

### Guaranteed Returns *(continued from page 2)*


way to begin to address your personal contribution to this global problem. Thinking globally and acting locally on the issue took on new meaning at Peapack Gladstone's community Green Fest event this past November. Participants pledged to reduce their carbon footprint by undertaking specific practices and learned about sustainable living alternatives from exhibitors. Attendees cumulatively pledged a million pounds of carbon reduction...not too shabby. Now if you could only take that concept and replicate it municipality by municipality across the state, across the nation, and across the world, you have the beginnings of a plan.

Check out [www.stopglobalwarming.org](http://www.stopglobalwarming.org) for a list of personal actions you can take as a homeowner and individual. NJ universities such as Rutgers are addressing the nuts and bolts effects of global warming on the state, from researching impacts on coastal communities to assessing the budgetary costs of having more catastrophic weather events affect our state on a regular basis. Rutgers Climate and Environmental Change Initiative helps analyze these environmental and

economic impacts and create manageable actions.

The State has a plan too. Visit [www.nj.gov/globalwarming](http://www.nj.gov/globalwarming) to see how New Jersey is addressing global warming initiative by initiative, from cool cities initiatives to carbon reduction programs.

Given today's economic conditions, when many non-profit organizations are struggling to deal with daily operations, it makes it hard to think long term and strategically, the kind of big picture thinking so critical for successful climate change planning.

However, in the last quarter century there have been more than ten catastrophic weather related events impacting NJ that cost a billion dollars or more to address. It seems like investing in workable solutions for climate change will turn out to be a wise and critical investment, even in these tough economic times. 

*Dr. Kennish has generously allowed GSWA to post his full presentation on climate change, from which this article was adapted, on our website. Find it at <http://www.greatswamp.org/PDFs/KennishClimateChange.pdf>*

### Top 10 Things You Can Do to Make a Difference

1. Know your carbon footprint. Understand what personal choices make the biggest difference in fighting global warming.
2. Drive an energy efficient vehicle.
3. Buy Energy Star appliances.
4. Choose clean power.
5. Unplug unused appliances.
6. Buy foods grown locally. This reduces the costs of production, transportation, processing and distribution.
7. Use a programmable thermostat.
8. Use compact fluorescent light (CFL) bulbs
9. Reduce, reuse, recycle.
10. Urge public officials to support policies that will accelerate the shift to a low-emissions future.

For more information, go to <http://nj.gov/globalwarming>.

## Great Swamp Watershed Association Awarded Funds from The Watershed Institute

The Watershed Institute recently awarded the Great Swamp Watershed Association grants for two important projects. The first grant, in the amount of \$5,000 supports the Citizen Advocacy Program (CAP), and the second, in the amount of \$6,480 provides funding for the creation of a plan for the restoration of the Silver Brook Subwatershed.

The goal of the Citizen Advocacy Program is to help empower citizens to become advocates for environmentally responsible land use decisions in their communities. The pilot program was launched last year in Chatham Township and Harding Township with funds also provided by The Watershed Institute Grant Program. Renewed funding will enable GSWA to expand the program in 2009 to four additional towns in our watershed.



Funds from The Watershed Institute for the second project will enable the Great Swamp Watershed Association to conduct a formal evaluation of the Silver Brook subwatershed to determine the sources and nature of adverse stream conditions and develop a restoration plan for significantly improving the stream flow, water quality and channel habitat within the subwatershed. Restoration of the Silver Brook subwatershed directly relates to the mission of the organization, which is to protect water and land in the ten towns served by the Great Swamp Watershed Association.

You can learn more about The Watershed Institute by visiting their website at [www.thewatershedinstitute.org](http://www.thewatershedinstitute.org). 🌱

## GSWA Volunteers Recognized by Volunteer Management Centers

Volunteer Management Centers (VMC), a non-profit organization that salutes volunteers from all across our region, recently honored two of GSWA's most dedicated volunteers at their 35<sup>th</sup> Annual Outstanding Volunteer Recognition awards dinner at The Meadow Wood Manor in Randolph. **Steve Gruber** (left), a retired chemist, was recognized for his tireless work in preserving GSWA's 50-acre Conservation Management Area, even offering a challenge grant to secure funding to complete the CMA's boardwalk. **Frank Stillinger**, a scientist and GSWA trustee, was honored for his deep commitment to advancing environmental awareness



— whether it be sharing his intellect or rolling up his sleeves for manual labor.

Congratulations to Steve and Frank. And hats off to all who volunteer their time to help GSWA in its water protection and land preservation efforts. You're the best! 🌱

### Tips You Can Use: Disposing of Hazardous Waste

Morris County has a household hazardous waste disposal facility available throughout the year. They publish a list of acceptable materials, including: pesticides and fertilizers, oil paint, automobile fluids, batteries, pool chemicals, and fluorescent light bulbs.

Chemicals must be disposed of properly to avoid risks to homeowners, children and pets. As we know, some chemicals are incompatible and may form deadly substances if combined. Hazardous chemicals may also ruin septic fields and pollute groundwater. If improperly disposed of in the trash, chemicals may contribute to groundwater contamination in landfills.

What else can you do to reduce household hazardous waste? Buy small quantities, share leftover materials with neighbors, use safer substitutes and avoid buying aerosols.

The Morris County Municipal Utilities Authority website has a page of Frequently Asked Questions at [www.mcmua.com/hazardous-waste/FAQ.htm](http://www.mcmua.com/hazardous-waste/FAQ.htm).

### In Memoriam

The staff and board of trustees of the Great Swamp Watershed Association extend their condolences to former trustee Jean Rich on the loss in November, 2008, of her husband Aaron, a true friend and long-time supporter of GSWA.

# Great Swamp Water Quality Sampling Report (1999-2007)

by GSWA Stream Team

Water samples are collected from each of the five primary streams entering Great Swamp Wildlife Refuge and from the outlet of Great Swamp at Millington Gorge. Samples are collected both during dry baseflow conditions and following storm events.

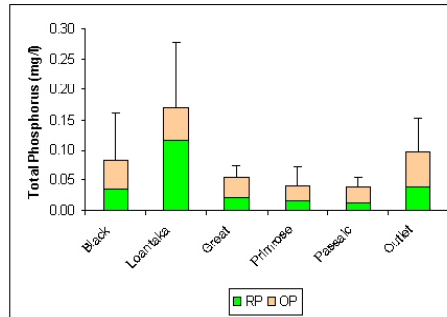
The samples are analyzed for Dissolved Reactive Phosphorus, Total Phosphorus, Nitrates+Nitrites, Total Kjeldahl Nitrogen, and Suspended Solids. The graphs below show the mean baseflow concentrations (mg/l) of each substance based on 43 baseflow samples collected over nine years.

Over-enrichment of phosphorus (too much) can lead to excess growth of algae and aquatic plants, altered composition and diversity of the aquatic community, and potential human health problems.

Phosphorus can enter a water body from soil erosion, fertilizers and wastewater treatment facilities.

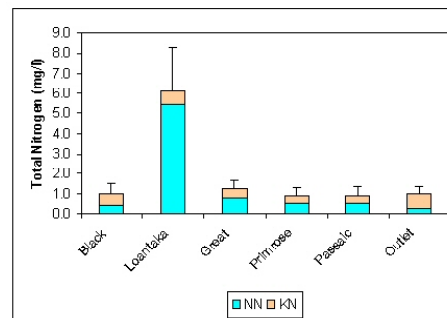
Phosphorus quickly binds to soil particles and plant roots but then can be released from bottom sediments during anoxic (without oxygen) conditions or from decaying plants. The concentration of dissolved reactive phosphorus provides an estimate of the amount of phosphorus in a form readily usable by plants and algae.

Nitrogen can enter a water body from acid rain, fertilizers, animal waste, and wastewater treatment facilities.



**Loantaka and the Millington Gorge outlet contain very high levels of phosphorus with moderately high levels found in Black Brook.**

Nitrogen moves easily through soil into the groundwater. Some algae and plants convert gaseous nitrogen to usable forms (nitrogen fixation) while some bacteria convert usable forms into gaseous nitrogen (denitrification). Although the concentration of nitrates + nitrites provides one estimate of the amount of nitrogen readily available for

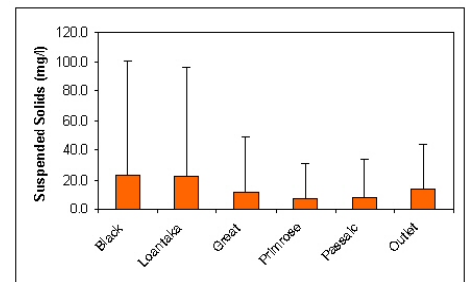


**Loantaka Brook contains very high levels of nitrogen while the Millington Gorge outlet contains moderately high levels.**

use by plants and algae, rapid changes in form make all of the nitrogen easily available for use.

Surface soil erosion and stream channel erosion increase sediments (suspended solids) in surface water.

Increased sediment causes turbidity, which can have a detrimental effect on aquatic life. Sediment is also important as it transports phosphorus and other compounds, including toxic substances.

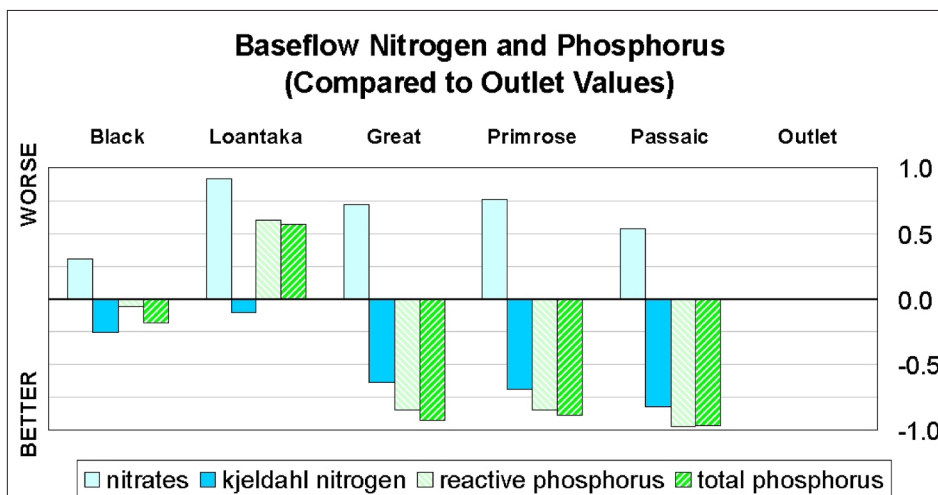


**Black and Loantaka Brooks contain particularly high levels of suspended solids. The Millington Gorge outlet contains moderately high levels of suspended solids.**

So, what can you do to help improve the water quality of these streams? Here are a few suggestions:

1. Before you decide to fertilize your lawn, have your soil tested at the Rutgers Cooperative Research and Extension office (<http://njaes.rutgers.edu/soiltestinglab/>) to determine if you need to fertilize and, if so, which elements of fertilizer your soil requires. If possible, use natural and slow-release nitrogen fertilizers and make sure to follow the manufacturer's directions. Never apply to your lawn or garden if the weather calls for rain.
2. Always pick up pet waste! Not only is this a source of nutrients but it also contains bacteria that can contaminate your drinking water as well as kill fish, wildlife, and plants
3. Shop for nonhazardous, biodegradable and phosphorous-free household cleaning products. Don't wash your car at home because the cleaning products you use go directly into the

(continued on opposite page)



**This graph compares baseflow concentrations to the Millington Gorge outlet. All of the streams have a higher concentration of nitrogen than the outlet but only Loantaka Brook is worse than the outlet for phosphorus.**



## GSWA Announces Changes to its Board of Trustees

Sadly, some of GSWA's trustees left the board at the end of 2008 for various reasons — relocation, time constraints, term expirations. We bid a fond farewell to Cathy Hackett, Sue Hoag, Chris MacDonald, Board Secretary John McNamara, Board Treasurer Linda Wilson, and Board Chairman Anne Essner. Their commitment and dedication to our organization is greatly appreciated. We certainly hope that they will continue to stay involved with GSWA.

On a positive note, GSWA recently welcomed two new board members: Steven Tasher, former Vice President and Associate General Counsel with Wyeth, and Edmund DeVeaux, Vice President of External Affairs for United Water.

The new officers of the board in 2009 are: Paul Hackett, Treasurer, Frank Stillinger, Secretary, Ben Wolkowitz, Vice Chairman, and David Budd, Chairman. David has been a member of GSWA since 1985 and a trustee on and off (mostly on) since 1987. He was Chairman of the Board in 2001 and 2002, and has chaired or served on GSWA's Finance Committee, Executive Committee, Development Committee and Land Use Committee. David and his wife Susan currently reside in Morris Township. Previously, David resided in Harding where he served on both the Planning Board and Environmental Commission. 🌿

### Water Quality Sampling

(continued from opposite page)

storm sewer system and eventually into our streams..

4. Divert rain from paved surfaces onto grass to permit gradual infiltration.

Should you have any questions or concerns regarding this report, please contact GSWA's Director of Water Quality Programs, Kelley Curran at [kcurran@greatswamp.org](mailto:kcurran@greatswamp.org) or 973-538-3500 x16. 🌿

## GSWA Has Strong Presence at 6<sup>th</sup> Annual Volunteer Monitoring & Education Summit

by Kelley Curran, Director of Water Quality Programs

On November 17-18, 2008, GSWA executive director, Sally Rubin and staffers Kelley Curran (Director of Water Quality Programs) and Hazel England (Director of Outreach & Education), attended the 6th Annual Volunteer Monitoring and Education Summit. Also in attendance was one of GSWA's active Stream Team volunteers, Roger Edwards, and Board member Ben Wolkowitz.

This event is organized by the Watershed Watch Network (WWN), an umbrella program for all monitoring programs within New Jersey. WWN has two advisory committees: Data Users and Water Resource Managers make up the Internal Advisory Committee and Volunteer Monitoring Program Managers throughout New Jersey make up the Watershed Watch Network Council. Kelley is an active Council member on behalf of GSWA.

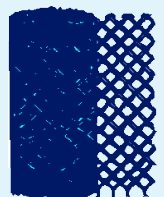
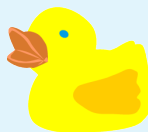
Held at the Frelinghuysen Arboretum in Whippany, our neighboring watershed, the 2008 summit showcased projects, protocols, and tools that have been developed to complement restoration efforts and sustainable management practices, bringing together volunteer watershed monitors, watershed associations, and state, local, and federal agencies from across the state and around the nation. New in 2008 was the invitation of watershed educators to participate and share their work.

The only drawback to the summit is that you often have to choose between three different presentations when you really want to see them all! Fortunately, the presentations from all sessions are available online. Check them out at: [http://www.state.nj.us/dep/wms/bfbm/vm/volunteer\\_monitoring\\_summit08\\_presentations.html](http://www.state.nj.us/dep/wms/bfbm/vm/volunteer_monitoring_summit08_presentations.html). 🌿

## GSWA Invites You to Support our 2009 "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 [www.greatswamp.org](http://www.greatswamp.org) or call Debra Dolan at 973-538-3500, x21.

## Welcome New Members

Special thanks to the following people who became members of GSWA between August 13 and December 19, 2008:

Mr. Jack Ackerman, Princeton  
Ms. Maryjo Agosta, Chatham  
Mr. & Mrs. Alfred Aho, Chatham  
Mr. Joseph Amatelli, Milford  
Ms. Ginger Barrett, Basking Ridge  
Mr. Harry Beldon, Basking Ridge  
Ms. Diane Bonar, Morristown  
Ms. Barbara Brennan, Morristown  
Mr. & Mrs. Bob Brown, Millington  
Mr. & Mrs. Philip Burrows, New Vernon  
Ms. Susan Jane Chlebove, Basking Ridge  
Ms. Gail Cross, Basking Ridge  
Mr. Andrew Davis, Basking Ridge  
Ms. Barbara M. Doane, Basking Ridge  
Ms. Arline Dodge, Morristown  
Ms. Barbara Jean Donzeiser, Basking Ridge  
R.S. Draper, Basking Ridge  
Mr. & Mrs. Kevin Drumbore, Basking Ridge  
Mr. & Mrs. Brian Enslow, Chatham  
Mr. Michal Fineman, Madison  
Mr. & Mrs. Charles Fritz, Basking Ridge

Mrs. Jeremy Gordon, Morristown  
Ms. Catherine Halse, Mendham  
Ms. Katherine W. Hagen, Bernardsville  
Mr. David Hogan, Liberty Corner  
Mr. & Mrs. Harold Imperatore, Basking Ridge  
Ms. Carol Jones, Basking Ridge  
Ms. Madeline Kaminski, Basking Ridge  
Mr. & Mrs. David Kaplan, Gillette  
Ms. Nathalie Kirkwood, Basking Ridge  
Mr. & Mrs. Neil Klingenburg, Basking Ridge  
Mrs. Karen Kneafsey, Basking Ridge  
Mr. & Mrs. Thaddeus Kobylarz, Morristown  
Mr. & Mrs. John Kumpf, Basking Ridge  
Dana Magliola, Charlotte, NC  
John and Alicia Martine, Basking Ridge  
Mr. & Mrs. Charles J. McCarthy, Basking Ridge  
Mr. Peter McCoy, Gillette  
Mr. Donald McLellan, Berkeley Heights  
Ms. Jeane McLellan, Berkeley Heights

Dr. Antoinette J. Messina-Pagano, Gillette  
Mr. Henry Miller, Basking Ridge  
Mr. Jeffrey Miller, Bernardsville  
Ms. Margaret Mooney, Basking Ridge  
Ms. Vivian C. Morrison, Basking Ridge  
Ms. Lorraine Novinski, Brookside  
Ms. Joyce B. Possien, Stirling  
Mr. & Mrs. James Rice, Chatham  
Mrs. Mary Roselle, Basking Ridge  
Ms. Michelle Segal, Morristown  
Ms. Joan Sloan, Basking Ridge  
Mr. Hank Snyder, Basking Ridge  
Ms. Pat Sodolak, Basking Ridge  
Muriel & Hugues Thibaud, Basking Ridge  
Mr. Joseph Van Acker, New Vernon  
Ms. Linda Van Wert, Cedar Knolls  
Ms. Gwen VanVolkenburgh, Califon  
Ms. Nancy T. Viola, Stirling  
Mrs. Ellen Waldstein, Warren  
Hsiu Jun Wang, Gillette  
Ms. Charlotte Wei, Warren

## 2008 Gala – It's a Wrap!

GSWA held its “Green Acres”-themed gala on Wednesday, October 22, 2008 at the Basking Ridge Country Club. Over 150 members and friends enjoyed cocktails and hors d'oeuvres during the silent auction, followed by a seated dinner, a keynote address by

Michael Catania, founder and president of Conservation Resources, Inc., and dancing to the music of MamaLuke. The 2008 Gala Sponsor was Wachovia, with additional sponsorships by Wyeth, Peapack-Gladstone Bank and Pfizer. Guests were encouraged to be creative

in their attire, and wore everything from blue jeans to boas.

Net proceeds from the gala support the ongoing programs and activities of the Great Swamp Watershed Association, including education, responsible land use advocacy and stream monitoring. 🌿



**Christine MacDonald, in boa, catches up with Sally Rubin.**



**Cathie Coultas surprised everyone by donning a blond wig and coming “dressed to the nines” as Eva Gabor’s character in the 1960’s TV show, “Green Acres.” Pictured with Cathie are Charles Straniero and Carla Barone.**



**David Budd gets some special attention from wife Susan.**

# Financial Report: Statement of Activities for the Fiscal Year Ended June 30, 2008

INCOME	
Contributions	369,365
Endowment transfer in (4%)	34,963
Grants	
Temporarily Restricted	21,890
Unrestricted	60,000
Interest Income	5,715
Miscellaneous	1,087
<b>TOTAL INCOME</b>	<b>493,020</b>

EXPENSES	
Programs:	
Water Quality and Monitoring	95,550
Education and Outreach	139,756
Land Use Advocacy	159,079
Total Program Expense	394,385
Management and General	49,528
Fund Raising	53,742
<b>TOTAL EXPENSES</b>	<b>497,655</b>

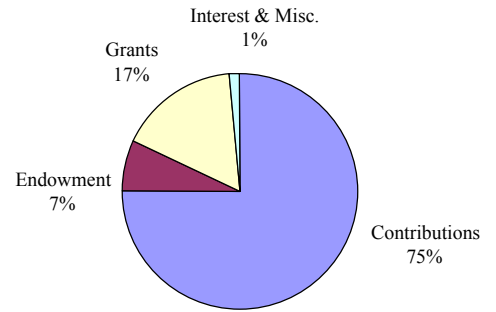
**SURPLUS/(DEFICIT) - see \*Note 1 (a)** **(4,635)**

ENDOWMENT ACTIVITY	
<b>Market Value 6/30/07</b>	<b>873,333</b>
Contributions (b)	12,000
Transfer to Operating income (4%) (c)	(34,963)
Investment Income & Interest Earned (d )	26,840
Gain/Loss on Investments (e)	(80,378)
net change	
<b>Market Value 6/30/08</b>	<b>796,832</b>

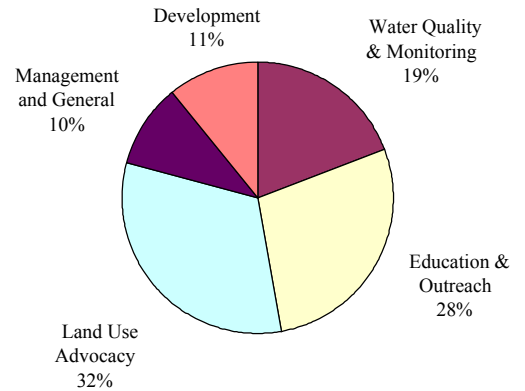
**\*Note 1:** The deficit is after depreciation of \$2,675. In addition, it does not include any endowment related activity, except for the annual 4% transfer of cash.

To tie to the audited financial statement's "change in net asset" line, you need to add (a), (b), (c ), (d) & (e) above.  
The audited financials reflect a loss of \$81,146.

**INCOME**



**EXPENSES**



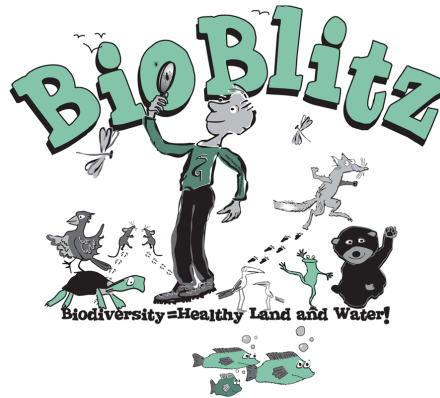
## Know Someone Who Would Like to Become a Member?

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 [www.greatswamp.org](http://www.greatswamp.org) for more information.



## BioBlitz 2009 Coming in May

Our very first BioBlitz, held in May, 2007, was such a success that we're doing it again! Concerned citizens will have the opportunity to team with professional scientists and environmental educators to comb a designated portion of the refuge for anything that swims, walks, flies, grows, or crawls so that we can survey what lives in the refuge now and compare our results to past and future findings. This intensive "snapshot survey" — part contest, part scientific research and part educational opportunity — brings together biological experts from local scientific institutions, nature clubs, and government wildlife agencies. For information on what a BioBlitz is all



about, go to the BioBlitz 2007 section on GSWA's website: [www.greatswamp.org/BioBlitz/BioBlitzHome.htm](http://www.greatswamp.org/BioBlitz/BioBlitzHome.htm). 🌿

### Interested in volunteering?

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



Printed on recycled paper.  
Please recycle again.

## Coming Attractions

Here's just a taste of what we have on tap for Spring 2009:

**March 10:** GSWA's monthly **Breakfast Briefings** resume

**April 4:** **Visual Assessment Training** for volunteers

**May 15-16:** **Bio Blitz 2009**

**June 6:** **Stream Clean-up**

The rain-delayed **Ten Towns Bike Tour**, presented in partnership with the Somerset Hills YMCA, is planned for some time in April, 2009.

Be sure to visit [www.greatswamp.org](http://www.greatswamp.org) for updates on these and other programs and events coming in 2009.

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



### GREAT SWAMP WATERSHED ASSOCIATION

Post Office Box 300  
New Vernon, NJ 07976  
(973) 538-3500  
[www.greatswamp.org](http://www.greatswamp.org)

### In This Issue:

Thanksgiving Bounty .....	1
Educational Programs.....	1
Guaranteed Returns.....	2
From the Executive Director.....	3
Watershed Watch.....	4
Land Use Committee.....	4
Citizen Advocacy Program .....	4
Educator Workshop.....	5
Steward Your Own Land.....	6
Watershed Institute Grant .....	7
GSWA Volunteers Recognized.....	7
Water Quality Sampling.....	8
Volunteer Monitoring Summit.....	9
Board Changes .....	9
2008 Gala .....	10
Financial Report .....	11
BioBlitz 2009 .....	12