Stormwater: making the land-water connection

Drought, then flood

August began with Chester County in a moderate drought: water levels in many wells dropping, streams at very low flows, and a drought watch declared. The month ended with 5 to 7 inches of rain from tropical storm Irene, flooding, and a FEMA major disaster declaration for the County on September 3rd.

Problem: Too Much Impervious Cover

This dramatic swing between too little and too much water illustrates the paramount importance of minimizing impervious cover. When natural infiltration is reduced, not only is ground water recharge obstructed, but the peak stream flows are higher and flooding risks increase. The USGS station that monitors flow in the French Creek in West Vincent Township recorded a 20-fold increase in flow as Irene passed through the area, swelling from 300 to 6,000 cubic feet per second overnight.

Solution: Green Infrastructure/Low Impact Development

Low Impact Development (LID) uses a variety of techniques to correct stormwater issues at the source. The techniques can be used with new development and can also be applied to existing built areas. The principle is to restore the natural hydrological functions of the site as much as possible. Impervious surfaces are replaced with pervious materials, storm drains are replaced with planted infiltration swales and basins, and excess rainwater is captured before it can run off, to be used or slowly released. In these ways, stormwater is treated as a resource to be used on-site, rather than a problem to be directed off-site.

What Green Valleys has done at Welkinweir: Visitor Entrance and Pavilion

Our visitor parking area uses both low impact design and green infrastructure techniques to manage stormwater. The parking bays are porous paving, which uses a special pavement which allows water to sink through and down into the infiltration zone beneath. During intense rainstorms, any rainwater that cannot percolate is directed to either of two bioretention basins.

See “Connection,” page 6

Heading South

Fall is a great time to enjoy one of the most popular recreational sports in the U.S. – bird watching. Many birds, such as orioles, warblers, and thrushes migrate through our area on their way to southern wintering grounds in Central and South America - in fact there are nearly 200 species of birds that migrate from North to South America.

These migrating birds, called neotropical migratory birds, are species that breed in Canada and the United States during our summer and spend our winter in Mexico, Central America, South America or the Caribbean islands. Migrating allows them to take advantage of seasonally abundant food and to avoid times when, or places where food and other resources are scarce. For more information about neotropical migratory birds see http://nationalzoo.si.edu/scbi/migratorybirds/fact_sheets/default.cfm?fxsht=9.

The best flights for migrating birds follow a cold front. Hawks, eagles and other raptors use the air currents to help them soar and glide, which requires less energy than flapping. Hawk Mountain Sanctuary is one of the best places to watch the annual hawk migration, one of nature’s greatest wildlife spectacles. Between August 15 and December 15, an average of 20,000 hawks, eagles and falcons pass the Sanctuary’s North Lookout and are identified and counted.

The flight’s greatest variety comes in mid-October, with golden eagles, red-shouldered hawks and more. Gradually, the passage of birds diminishes until raptor migration essentially ends in mid-December, although migrating eagles, goshawks and rough-legged hawks have been sighted as late as early January. A much smaller migration occurs each spring.
In remembrance: Maria Disque

Maria Disque, a former secretary of GVA, passed away peacefully at her daughter’s home on July 17, 2011 at the age of 97. A dedicated employee, Maria served in the GVA office for over 20 years (1973 – 1997), where she welcomed every member and visitor warmly, whether on the telephone or as a visitor to the Meeting House.

All correspondence went across Maria’s desk. She had a card system where she kept track of member contributions, changing addresses and telephone numbers. As Dr. Ralph Heister recalls, “She knew every member and could probably outperform today’s computers on personal information.”

Harriet Stone, current GVA board member and Executive Director from 1973 to 1978, remembers that Maria trained executive directors with tact and wit in how to deal with people and issues. “Her institutional memory helped us, her humor cheered us, and her adoration of Joe Paterno amused us.”

Maria was a wonderful person and she will be missed by all of us who knew her.

Annual Celebration & Meeting

Our Green Valleys Association Annual Celebration & Meeting takes place on Wednesday October 12th from 5:30 to 8:30 p.m. We come together each year to celebrate our achievements and to recognize the supporters who have made these achievements possible. Please join us!

This year’s event will be held again at the lovely Welkinweir Estate House, where founding members Everett and Grace Rodebaugh hosted the first meetings of GVA in 1964. From this beginning 47 years ago, GVA has gone forward to provide essential leadership in protecting and preserving the watersheds in northern Chester County. Our accomplishments would not have been possible without the support of our many members and volunteers, a fact which has never been truer than in 2011.

A wonderful autumn evening is planned. This year’s menu, created by Bause-Landry Catering, will feature a variety of local food, wild Alaskan salmon and fine drink, all complemented by the lovely house and grounds. Stroll the gardens or admire the view from the terrace overlooking the Rodebaugh Pond. Participate in the live and silent auctions. Meet your friends in the GVA community, including Board members, staff, volunteers and members.

Your generous support of GVA is essential to delivering programs and services to our community, and we hope that you will join us for this year’s celebration. This is an event not to be missed, and we look forward to seeing you there! If you are unable to attend, we ask that you consider donating the cost of the tickets to support Green Valleys Association in the mission of protecting the natural resources in our watersheds. We can’t do this important work without all of you. Thank you!

Call for Nominations

The Green Valleys Board of Directors is seeking nominations from our members for two recognition awards – the Everett and Grace Rodebaugh Award for outstanding financial support from a member, and the Ralph D. Heister Award for outstanding volunteerism by a member. To nominate an individual for either award please contact Dave Zelinger at Dzelinger@ts.jnj.com. Winners of the awards will be announced at the Annual Celebration and meeting on October 12th.
American chestnuts

Although many people living today have probably never seen one, the American chestnut was once as common a sight in northeastern forests as beech or oak and dominant over both. (It is estimated that 25% of the eastern forest was American chestnut.) Chestnuts provided large amounts of mast (nuts) for wildlife and people, and their strong and durable timber was used to build many a house and barn.

A little over a century ago, a fungal disease known as Chestnut Blight was accidently introduced into North America via imported Asian chestnut trees. Our native chestnuts had no resistance to this blight, and in only a few decades virtually all the mature chestnut specimens in eastern North America, numbering approximately three billion trees, had died.

Within the tree’s former range in the eastern U.S., very few mature native chestnuts remain; however many persist in a phoenix-like cycle of death and renewal. When the trunk dies, the root system of many mature chestnuts survives, unaffected by the blight. These root systems – some of which are centuries-old – keep sending up new shoots every time the trunk dies, in a never-ending effort to restore the mature tree. The few years the trunk survives appear to be enough to “recharge” the roots with energy to start the cycle again.

“South,” from p. 1

peak numbers usually occurring near the end of the third week in April. (Source: http://hawkmountain.org)

If you prefer bird watching locally, consider attending one of the guided Bird Walks offered at Welkinweir, led by local naturalists and expert birders. You need not be an experienced birder to learn about these fascinating creatures, as the leaders will help identify and point out the wide variety of bird species that migrate through or spend the winter here. Raptors, including coopers and sharp-shinned hawks, and the occasional bald eagle, are spotted here each fall, as well as several types of thrushes, woodpeckers, finches, sparrows, warblers and waterfowl. Bring your binoculars and field guides if you have them, and join us this fall for these free walks, which start in the visitors parking lot at 8:00 a.m. on the following Saturdays:

- September 24 with Sarah Neto and Noel Kelly
- October 8 with Rob Blye
- October 22 with Sue Lucas
- November 12 with Rick Keyser
- November 26, leader TBD

Birdwalks are held rain or shine. Appropriate for ages 6 and up with adult. FREE. No registration required. Contact GVA at 610-469-8646 for more information.

We open early (8 a.m.) Wednesday mornings for those who like to explore on their own. For a timetable of migrating birds, visit www.birdnature.com/timetable.html.

Help the birds: volunteers needed

GVA maintains a feeder site throughout the year, offering a diverse menu for our wintering birds. Volunteers are always needed to assist in filling the feeders, especially throughout the winter months. GVA provides the seed, you provide the service. If you, your family or group are looking for a fun and educational volunteer opportunity, consider adopting our bird feeders for a month or two. If interested, please contact Elaine Husted at 1classycat@comcast.net

Bird Bites

As the cold weather approaches, the bird species we enjoy year-round rely on many types of fruiting or seed-producing plants to sustain them throughout the winter months.

**Native tree and shrub species** homeowners can plant to attract various songbirds include cherry, dogwood, pine, crabapple, hawthorn, serviceberry, viburnum, oaks, holly, elderberry, and spicebush.

Seed-producing native flowering plants include coneflower, black-eyed Susan, and sunflower. For more information please visit: http://web4.audubon.org/bird/at_home/

If you feed feathered guests via feeders, consider black oil sunflower seeds, a songbird favorite, nyjer seed for finches, and cracked corn for ground-feeders.

Suet cakes are great for woodpeckers, with the fat providing the energy that the birds would normally get from consuming insects in the warmer months.

Please see GVA's Bird Seed Sale flyer enclosed with this newsletter or download a copy at our website: www.greenvalleys.org.
Summer of FUN at Welkinweir

Summer Nature Day Camp ended on August 26th with beautiful weather and happy campers. Over 100 local families with children in pre-school through 5th grade took part in the variety of activities during nine weeks of camp. Children in 6th-8th grade enjoyed outdoor adventures including camping and day trips to a wildlife sanctuary, an observatory, and national and state parks.

Each week, we hosted one or more guest presenters to enhance the educational components of our camps. Campers enjoyed returning favorites such as Spirit Wing’s Native American songs and dance, Bob’s Critters with diverse animals, including scorpions, snakes, birds and lizards, Bill Wood, entertaining and encouraging imagination with his nature stories, and live animals from Great Valley Nature Center. Doris McGovern, returned this year to band songbirds, a big hit with the campers; and Linda Swyderski, shared her wealth of knowledge on honeybees and showed the children the inside of the hive that she maintains here at Welkinweir. Alex Swavely, a senior camp counselor and certified arborist, demonstrated how he climbs trees to assess their health and perform maintenance.

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Many thanks to the following for their contributions to GVA’s 2011 Nature Day Camps:

- The Prizer family for welcoming campers to their property to hold our annual boat race during the water-themed week;
- Jim Moore for hosting the Herons group’s activities at the Marshlands conservancy;
- And the following businesses and foundations for their monetary support: National Penn Bank, Kate Svitek Memorial Foundation, The PA Department of Environmental Protection, The H.O. West Foundation, Wegman’s, Giant Foods, and Acme Markets.

Camp Staff experiences

We appreciate the hard work and dedication of our great camp staff. Each counselor brings his or her background, education and knowledge to the camp activities, giving the campers a variety of fun experiences.

“I loved the opportunity to work with children of different grade levels. It was amazing to witness each child’s progress throughout the summer. (Campers who attended multiple weeks of camp) Their knowledge grew drastically from the beginning of camp to the end.”

-Jessica DePaolis

“I enjoyed the variety of camp weeks and the freedom to be creative and go in-depth with different topics.”

-Jason Smith

“When children are placed in a natural environment, their imaginations run wild, and they are more likely to care for nature throughout their lives.”

-Alex Swavely

A camper tries on a beekeeping suit with presenter Linda Swyderski.

A new guest, John Matthews, displays the “Green Man” campers made with red clay.

Director Dawn White assists a camper in making a cornhusk doll.

Little Sprouts
Ages 3-5 with adult

Little ones and their parents can learn about nature together during these free programs offered at area libraries. Programs include interactive nature stories, animal artifacts, and take-home crafts.

Mondays, 11:15–12:00
Henrietta Hankin Library

Advanced, online registration required by 11 a.m. day of program. Contact the library at 610-321-1724.

October 14 – Bird Basics
October 21 – Fall Colors
October 28 - Animal Disguises
November 4 – Wildlife Detectives
November 11 - Super Senses
November 18 - Animal Tales

For all program information and registration, please contact Dawn at 610-469-8646, or dwhite@greenvalleys.org.
The best things . . .

Parents and kids agree—GVA is the place to be!

**Kids say:** “Counselors, meeting new friends, learning new things, daily nature walks, finding the fox bones was the best! . . . Making the bird house and feeder, banding the birds, catching insects, hikes and activities by the stream, all of it! . . . The place is so cool—I just loved being there.”

**Parents say:** “It’s more educational and fun than other options . . . It gives kids a reason to put down video games and get in touch with nature . . . Great curriculum and wonderful staff . . . One of the most alluring aspects is the absence of media. Rainy and hot days at other camps meant: movies! . . . I think that children need to be encouraged to be creative and interact on a social level . . . We are so fortunate to have found the GVA programs. The location is awesome, so is the constant learning that occurs. This will have lasting impact on our family.”

Party, group rentals available

Enjoy your next birthday party, family gathering, or other event in the beautiful settings Welkinweir has to offer. Both our outdoor Pavilion and Education Barn are available for rent and are popular locations for children’s birthday parties and family gatherings. For an additional fee, GVA naturalists will lead your group on a nature walk complete with activities to fit every age level. For corporate events, the Estate House provides a wonderful setting complete with multiple meeting spaces, full kitchen and pleasant atmosphere. For details on Pavilion and Education Barn rentals and programs for children or families, contact Dawn at 610-469-8646. For information on renting the estate house, visit www.welkinweir.org/rentals-and-events.html

**Fall Community Nature Programs**

Last November, GVA welcomed a huge crowd for our annual *Owl Prowl*. This year we anticipate another record crowd as participants of all ages gather to learn more about owls and their role and importance to our environment. The event will again be sponsored by *Penn Liberty Bank*, Chester Springs Branch and will feature live owls, touchable artifacts, children’s activities and a nature walk in search of our local wild owls.

The event will take place on **Friday, November 4, 7:00-9:00 p.m.** Penn Liberty Bank representatives will provide refreshments and souvenirs. Fees are $5 per child, $3 per adult for GVA members; and $7 per child, $5 per adult for nonmembers. Advanced registration is required by Thursday, November 3rd.

See the enclosed calendar for the full schedule of GVA’s fall Community Nature Programs.

**“Chestnuts,” from p.3**

My fellow Natural Lands intern, Kelsey Stanton, and I have been fortunate enough to come across two American chestnuts deep in the woods of Welkinweir. It was apparent that both had recently died off and were already sending up several new shoots around the decaying trunk. We have also seen a few on other properties, including the Natural Lands Trust Crow’s Nest Preserve in Elverson, which has several easy-to-find specimens located directly adjacent to the east side of Piersol Road.

Though I’ve seen many “recycling” American chestnuts at this point, I still get a thrill at finding one of these trees. That they can continue growing and dying back again for decades is inspirational. While very unlikely, I always hope that maybe this time the blight will not kill the tree, and this one will survive.

Thankfully, there is some realistic hope for the future. The American Chestnut Foundation, among others, is working to breed blight-resistant American chestnuts by cross-breeding surviving American chestnuts with exotic chestnuts that evolved with the blight fungus, in an attempt to produce trees that appear identical to a pure American chestnut but are immune to the blight. Efforts such as this are the best chance we have to restore this once mighty tree to its former place in our forests. Hopefully, the American chestnut will someday be restored to its former glory. In the meantime, if you come across one in the woods, pause to appreciate its resilience and to imagine what it once was and could be again.

- John Zollers

**Fall Color Photography Workshop**

**October 28, 29 and 30, 2011**

Join nature and wildlife photographer Steve Fredrick to capture the stunning fall colors at Welkinweir. This workshop combines classroom training, shooting at several locations in northern Chester County, and review of participants’ work. For more workshop details visit: www.itsallaboutthelight.com. Space is limited to 12 participants, so register early 610-469-7543 or gva@greenvalleys.org
Summer Song

A gardener’s job changes significantly when the temperature rises and there is no rain in sight. For a few weeks it seemed as though plants were wilting faster than one could possibly bring water to all of them. Mowing was a thing of the past, and even the weeds were beginning to show signs of surrender. But even as the plant life appeared to be in decline, there was an explosion of sound that had no regard for day or night and seemed to thrive on the hottest summer days. What creature could happily make so much noise during weather like this?

Here began my introduction to some unusual insects I had only heard mention of in an introductory insect course in college. It is not one creature, but two—cicadas and katydids—that are responsible for the steady stream of noise. Another interesting note is that the males are the only ones who sing. The insects make such a racket for mostly one reason: to get the girls. The cicadas take the day shift and the katydids take the night.

Katydids are comparable to grasshoppers, with chewing mouthparts and a diet of leaves. Cicadas have needle-like mouthparts to suck fluid out of trees. Cicadas make noise by rubbing their wings together. Cicadas make noise with something called a timbal which basically consists of flexible ribs that pop in and out, making a buzzing noise. This sound is then amplified with a flap that opens. Some types of cicadas are known to spend 13 to 17 years underground before emerging as adults to molt, mate, and die. More scientific terms could be used here, but I am no entomologist.

There is a third insect that may find the cicada’s buzzing particularly annoying and seems bent on eradicating the source. This insect is the Cicada Killer Wasp, easily identifiable by its large size and yellow and black abdomen. Having previously only seen one mounted in an insect collection, it was a treat to see a live one flying around carrying a cicada. These cicada predators are just as unusual as their prey. Rather than kill a cicada, the females only sting to paralyze it and then carry it back to a six- to twelve-inch-deep burrow to be fresh food for the next generation of cicada wasps. Though large enough to fly while toting an adult cicada and armed with a wicked stinger, these predators seem quite peaceful.

Finally, there are ants. They do not sing, are not very colorful, are miniscule in size, and I often do not give them a second thought. That is, until I saw a solitary red ant dutifully dragging a live yellow jacket by the antenna, unfazed by desperate attempts by the yellow jacket to sting the ant or dislodge it in some way. The ant won. Soon, two more ants had joined in, and the yellow jacket disappeared under the soil with the ants. I am learning not to underestimate any insect. Outside, the heat has subsided and the ground is fresh with new rain. The summer song continues.

- Beth Moosman

Welkinweir Fall Hours

Welkinweir’s arboretum and surrounding natural lands are open M-F, 9 a.m. to 4:30 p.m. and weekends for members only. www.welkinweir.org

“Connection,” from p.1

The first bioretention basin in the bus circle acts as a vernal pool in the spring. The absence of fish allows amphibian species to use this pool as a nursery.

The second bioretention basin is a vegetated swale. Serving as an overflow for stormwater from the main parking area, this additional storage assists in achieving the goal of zero percent runoff from the site, even during a 100-year storm. Bioretention basins are effective at removing non-point source pollutants and can be retrofitted to many existing impervious covers—such as parking—improving groundwater recharge and reducing stormwater impacts.

The majority of the plants around the parking area and pavilion are native species which are attractive and necessary for insects and the birds that depend on them, as well as pollinators—leading to better ecosystem health, increased biodiversity, and better habitat. Stormwater from the pavilion roof falls directly into large in-ground infiltration trenches.

Do you have any photos and/or descriptions of a stormwater issue? Please email this info to gva@greenvalleys.org and we may publish it in our newsletter or website.

View the real-time stream gauge at http://waterdata.usgs.gov/usa/nwis/uv?01472157
**October**

**Monday, October 10**—Young Naturalist Day: Live Like the Lenape, 9:00 a.m.-3:00 p.m.

Bring the kids to GVA for a relaxed, but structured day of discovery as they experience life in the 1500s as a Lenape Native American. Go back in time to hunt, garden and craft like the Lenape did. Find out how these first Americans dressed, played, and used their natural resources wisely. Rain or shine. Held in and outdoors. For children entering 2nd through 5th grades. Fees per child: $65 GVA members, $75 nonmembers. Advanced registration and payment required by Friday, October 7. Contact GVA at 610-469-8646.

**Wednesday, October 12**—Annual Celebration and Meeting 5:30 to 8:30 p.m.

**Friday, October 21**—Girl Scouts’ Night Hike and Campfire, 7:00-9:00 p.m.

Join us at Welkinweir for a night of fun and educational programming. We’ll enjoy a night hike to search for nocturnal animals. Then, observe the night sky through amateur telescopes. End the evening with stories and s’mores around the campfire. Bring flashlights and ‘sit-upons’. Rain or shine. For Girl Scouts ages 6 and up with adults. Fees: $12 per person. Advanced registration required. Contact GVA at 610-469-8646.

**October 28, 29 and 30**—Photography Workshop, see p. 5.

**November**

**Friday, November 4**—Owl Prowl, 7:00-9:00 p.m.

Get up close and personal with live owls and learn more about these amazing hunters. Examine feathers, dissect a ‘pellet,’ and call for our local owls. Refreshments provided. Appropriate for ages 6-Adult only. Fees: GVA Members $5 per child, $3 per adult; Nonmembers $7 per child, $5 per adult. Advanced registration required by Thursday, November 3. Contact GVA at 610-469-8646. (Sponsored by Penn Liberty Bank)

**December**

**Saturday, December 10**—Children’s Holiday Crafts 10:30 a.m.–12:30 p.m.

Children can make and take home ornaments, wildlife feeders, and other creations, made from natural items. The program will be held in the Estate House, and is appropriate for children ages 4 to 12 with adult supervision. Craft materials provided.

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**Nature Programs for Children**

Children can discover the wonders of nature with their parents during these fun and educational programs. Each class includes age-appropriate activities based on the theme, including a nature discovery walk, story, craft, and other activities. A snack is also included. Fees for children only: $6 GVA members, $8 nonmembers. Advanced registration required. Contact GVA at 610-469-8646.

**Kinder Nature Classes—Ages 3-5 with adult**

All classes meet Tuesdays, from 12:30 – 1:45 p.m. Each class is independent of the others.

**October 18** – Going Batty

**October 25** – Animal Disguises

**November 1** – Nature’s Treasure Hunt

**November 8** – Fall Colors

**November 15** – All Ears!

**November 22** – Eye See You

**Little Wonders Classes—Ages 2-3 with adult**

All classes meet Wednesdays, from 12:30 – 1:15 p.m. Each class is independent of the others.

**October 19** – Going Batty

**October 26** – Animal Disguises

**November 2** – Nature’s Treasure Hunt

**November 9** – Fall Colors

**November 16** – All Ears!

**November 23** – Eye See You
Please join us...

Join GVA or Renew Your Membership Today! *ONLINE MEMBERSHIP now available!

Name ________________________________
_____________________________________
Address ______________________________
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ZIP ______ Phone _____________________
Township _____________________________
Watershed ______________________________
Email _________________________________

☐ I would like to volunteer time to GVA.

Dues and contributions are tax-deductible. Green Valleys Association is a registered charitable organization. A copy of the registration and financial information is available by calling 1-800-732-0999. Registration does not imply endorsement.

MEMBERSHIP includes quarterly newsletter, notice of events and programs, access to Welkinweir grounds, reduced rate to special programs (including summer environmental camp) and fishing with a GVA permit.

☐ Supporter........................................... $50.00
☐ Naturalist......................................... $100.00
☐ Environmentalist............................ $250.00
☐ Protector........................................... $500.00
☐ Preservationist............................... $750.00
☐ Steward............................................ $1,000.00

I am a ☐ Renewing Member .................. ☐ New Member

SUPPORTING CONTRIBUTION

☐ Friend of Welkinweir ....................... $25.00

FISHING PERMIT —With Family Level membership or higher

☐ Welkinweir Fishing Permit ............... $5.00

Make checks payable to Green Valleys Association and mail with Membership Form to 1368 Prizer Road, Pottstown, PA 19465. Visa/MasterCard accepted—please call office.

FALL, 2011

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