

Esopus Creek News

Summer 2012



Cornell University
Cooperative Extension
Ulster County

Ashokan Watershed Stream Management Program Newsletter

A quarterly publication of Cornell Cooperative Extension Ulster County

Esopus - Broadstreet Hollow - Woodland Valley - Stony Clove - Fox Hollow - Birch Creek - Beaverkill - Little Beaverkill - Peck Hollow - Bushnellville - Bush Kill

AWSMP Hosts Spring Educational Events

The Ashokan Watershed Stream Management Program (AWSMP) has been busy developing a number of different educational events this spring.

On March 19 and again on March 26 and 27, AWSMP along with the Schoharie Watershed Stream Management Program, the New York City DEP and Trout Unlimited, offered a **training on post-flood emergency stream response**. Having experienced first-hand the devastation that floods can cause to not only streams but to people's homes and infrastructure, AWSMP and its partner agencies realized that many of those who work in streams after floods are not always familiar with the science behind how streams work and how their actions may exacerbate known problems or create new ones.

AWSMP and its partner agencies spent months developing the material that they would teach attendees. This training was developed for professional contractors as well as municipal equipment operators to teach them the basics of stream process. It also instructed attendees on best management practices for how to restore streams following major flooding events such as those witnessed during Tropical Storms Irene and Lee. Over 150 operators were trained at the three sessions.

Topics ranged from the definition of a watershed to the impact of geology during streamwork to better understanding stream



Above: Kerry Robinson of the USDA-NRCS gives the keynote address during Third Annual Ashokan Watershed Conference.

headcuts and why they are so easy to create and difficult to control. The day-long training ended with discussions on how to utilize best management practices such as using on-site woody debris as a cost effective measure.

The response to the training was overwhelmingly positive. The program was so effective that there is talk of developing a professional curriculum that can be taught state or region-wide.

The second major educational event this year was AWSMP's **Third Annual Watershed**

Conference. Continuing with the appreciation of the scale of the Irene and Lee storms—both in terms of size in of the floods and their impacts on the community—the theme of this year's conference was *People, Streams, and Floods: Lessons from Irene*. This year's conference was held at the Bearsville Theater in Woodstock, NY on April 21. Nearly 100 individuals attended and listened to a diverse group of speakers talk on a variety of watershed topics including how the geology, geography and climate of the Ashokan Water-

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We're on the web!
www.ashokanstreams.org

**6375 Rt. 28
Phoenicia, NY 12464
phone: 845-688-3047
fax: 845-688-3130**



Recent Public Events in the Ashokan Watershed

March

AWSMP and partner agencies held three **training sessions on post-flood emergency stream work** for general contractors, highway department personnel, and municipal officials on March 19, 26, and 27. For more detail please see the featured story on page 1.

April

On April 3, the **CSBI Program's Riparian Buffer Working Group** held a conference at Belleayre Ski Resort. At the conference a number of speakers discussed a variety of environmental topics related to riparian buffers. Cornell University Department of Natural Resources professor Cliff Kraft gave the keynote address on the ecological benefits of large woody debris.

The **Third Annual Ashokan Watershed Conference** was held on April 21 at the Bears-ville Theater in Woodstock, NY. For more details please see the featured story on page 1.

May

On May 5, AWSMP along with a number of community partners supervised a **Stream Cleanup** along County Route 42 in Oliverea. Over 40 volunteers pulled out a large dumpster's worth of trash and a massive pile of metal and other recycling. A very special thanks goes out to the Oliverea Landowners' Association, the Catskill Watershed Corporation, the Big Indian-Oliverea Fire Department, the Town of Shandaken, the Cold Spring Lodge, the Bruderhof, and all the volunteers who made this cleanup such a phenomenal success.

On May 12, AWSMP organized a **Stream Walk and Science Talk** on the Rochester Hollow trail. The walk was led by Danny Davis of NYCDEP who explained to the group basic stream science principals. This was followed by a Woodchuck Lodge led hike up to the John Burroughs monument at the top of the trail.

The **CSBI Program** had two volunteer plantings this spring season. The first was held on April 28 on a property near the Bushkill in the Town of Olive and the second was held on May 19 along Silver Hollow in the Town of Shandaken. Both events utilized volunteers from the watershed community to plant and stabilize a riparian buffer with native Catskill vegetation.



Above: Volunteers help to cleanup the Esopus Creek along County Route 42 on May 5. AWSMP in conjunction with many other community groups received a grant from the Catskill Watershed Corporation to remove flood-related trash from the Esopus Creek. Over 40 volunteers worked for over 4 hours and filled a large dumpster full of garbage. A large pile of metal, tires, and other recyclables was also collected.

From May 21-25 AWSMP helped sponsor an **Aquatic Organism Passage** training for over 50 local, state and federal staff conducted by the US Forest Service in Kingston, NY.

June

On June 16-17, volunteers and staff from Cornell Cooperative Extension of Ulster County attended the initial training session for Cornell University's pilot **Master Watershed Steward** program. This program, similar in format to the Master Gardener Program, will train volunteers in a variety of watershed-related topics. Candidates from our watershed will complete a 30 hour project designed to study or improve an aspect of the watershed.

On June 23, AWSMP partnered with Trout

Unlimited and the Catskill Watershed Corporation to hold another **Stream Cleanup** on the Esopus Creek along Rt. 28 in the Towns of Olive and Shandaken. A Trout Unlimited-sponsored BBQ followed the event.

(Birch Creek-continued from page 3)

agement plan for Birch Creek that describes the assessed condition of the stream and makes recommendations for future management. In addition to the assessment, UCSWCD and SCA interns conducted a research project on the creek to help predict an annual streambank erosion rate for the stream and rank and prioritize site-specific erosion prone areas. The plan and the additional information collected about the stream will be used by AWSMP staff and DEP to prioritize future projects in the Birch Creek

Featured Stream: Birch Creek

Birch Creek is located within the north-eastern most part of the Ashokan Watershed. It is 6.3 miles long and is located in a steep mountain setting. In fact, most of the Belleayre Ski Resort is located within Birch Creek's watershed. Birch Creek has a drainage area of 12.8 square miles which represents 6.7% of the entire Upper Esopus Creek Watershed. It typically receives about 50 inches of rain on average with about 31 inches occurring as runoff. It also receives considerable snow precipitation. Because of the steep terrain, Birch Creek is subject to flash floods meaning that during high precipitation events (e.g. heavy rains, rain-on-snowmelt, etc.) the level of water in the stream will rise quickly, with relatively little warning.

Geologically, Birch Creek is much like the rest of the Ashokan Watershed and the greater Catskill Mountain area. The bedrock is composed primarily of sedimentary siltstones, mudstones, and sandstone of the Oneonta and Walton formations. Much of the current topography of the watershed is a result of the glacial and meltwater erosion from the Wisconsin glacialiations that occurred during the Pleistocene ice age some 10,000-25,000 years ago. Repeated advances and retreats of glacial icesheets left behind abundant glacial deposits including clay-rich bouldery till, silt and clay layers from glacial lakes, and glacial outwash. All of these deposits contain the fine sediments that cause turbidity. The stream in the upper headwaters of Birch Creek runs mostly through till while the lower watershed below the Pine Hill lake contains thick deposits of solid lake clay under a thin layer of stream deposit. This area is highly susceptible to erosion. When erosion occurs along streambanks, the water loosens these fine sediments and they become suspended in the water. If these levels of suspended sediment get too high it can have a serious impact on water quality and aquatic habitat.

Like much of the upper headwater streams in the watershed, Birch Creek is a decent trout fishery and supplies cold water to larger streams like the Esopus. The Birch Creek system holds a good population of wild brown, rainbow, and brook trout. The majority of the native brook trout can be located in the headwaters of Birch Creek tributaries, whereas the brown and rainbow trout often inhabit the lower reaches of the stream. There are two DEC recreational access sites, one at the Pine Hill day use area and one near the top of the watershed at the former es-

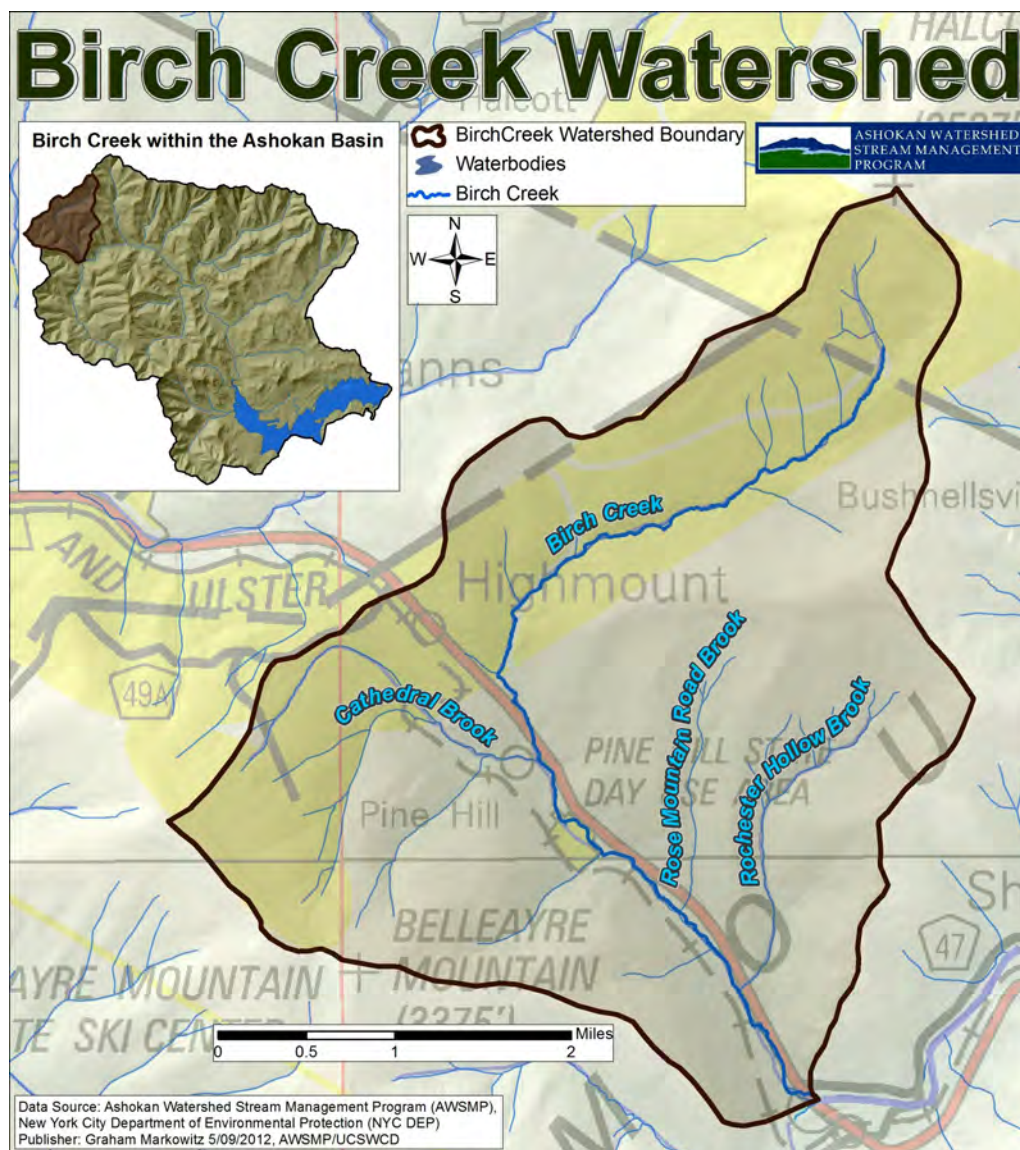
tate of Doc Riser. Both areas are stocked with native brook trout. There is also a large chunk of DEP land along lower Birch Creek Road that is open to public recreation access.

Along Birch Creek there is a dam and inlet structure that redirects water from the stream to fill Pine Hill Lake. About 10 years ago this was identified as a barrier to fish passage as well as lacking sufficient in-stream habitat. Due to its high importance for trout spawning in the Esopus Watershed several projects were spearheaded by the watershed's local Trout Unlimited (TU) Chapters to increase the amount of available in-stream fish habitat. The fish passage barrier at the inlet structure was mitigated through a partnership project between volunteers from TU, the US Fish and Wildlife Service, and NYSDEC. The organizations installed a fish ladder which allowed fish to navigate above the inlet structure. In addition, habitat was improved by planting a dense

riparian buffer of willows and evergreen species to provide shade and cool the water as it flowed over the riprapped stream banks around the lake. Finally, the culvert that passes under Elm Street in the Hamlet of Pine Hill was also identified as a potential barrier to fish passage. Volunteers from both TU chapters installed baffles (wooden slats that slow and redirect water through the culvert) to assist in fish migrations during both low and high flows. These projects were successful in reconnecting fish populations in the upper sections of Birch Creek to the Esopus Mainstem.

Birch Creek was assessed in 2011 by Ulster County Soil & Water Conservation District (UCSWCD) staff with assistance from the Student Conservation Association (SCA) and Ulster County Community College. This assessment data is being used to develop a stream man-

(Birch Creek continued on page 2)



Right: A map of Birch Creek and the surrounding watershed.



Recreation Corner: Tubing and Kayaking on the Esopus Creek



Above: Tubers enjoying a summer day floating down the Esopus Creek

The Upper Esopus Creek is a well-known recreational stream which provides residents and visitors alike with a plethora of recreational opportunities. Although the region is well known for fishing, tubing and kayaking on the Esopus are also very popular and contribute to the tourist economy of the communities in the watershed. When the combined users of tubing, kayaking and canoeing are considered, it is estimated that the average number of whitewater recreational users on the Esopus Creek is between 20,000 and 26,000 a year. In addition to the money brought in directly from folks renting tubes, kayaks and related equipment; they also spend money on gas, food and lodging in local establishments.

Tubing is perhaps the most unique recreational activity on the Esopus and is a popular pastime for residents and visitors alike. Tubing has been around since at least the mid-20th Century and most likely originated when children and adolescents acquired old truck inner tubes and used their buoyancy to float downstream as a way to pass the time and cool off on a hot summer day. As the activity increased in popularity, entrepreneurs seized the opportunity to capitalize on tubing and began renting out tubes to visitors and designating courses along the Esopus.

There are currently two commercial tube rental businesses on the Esopus, both in Phoenicia: Town Tinker Tube Rentals (<http://www.towntinker.com/>) which has been operating since 1978 and F&S Tube Adventures, LLC (<http://www.fstuberental.com/>) which has been operating since 1975. Harry Jameson of Town Tinker Tube Rentals estimates that, depending on weather conditions, he has between 12,000 and 15,000 customers a year who come to rent tubes and other equipment.

The Esopus Creek is also an excellent creek for whitewater paddling. The American Whitewater and Whitewater Classification System considers the Esopus to be a Class II-III stream meaning that much of the stream is appropriate for beginners with some sections being a little more challenging and appropriate for intermediate paddlers. The Esopus is also home to the country's second oldest slalom race being in existence since 1964. The Kayak and Canoe Club of New York (KCCNY) sponsors these races. These races reached their peak of popularity during the 1980's. During this time the Esopus and its associated races drew participants from across the eastern United States. It was considered an excellent training ground for Olympic hopefuls. In fact, during that time period many national champions (and even a few world champions) competed in races. Several competitors went on to represent the US in the Olympics. The popularity of paddling the Esopus as well as it being a training ground for future professional competitors has waned in recent years, however, KCCNY (<http://www.kccny.com>) still retains a strong presence in the area and hosts the annual Esopus Whitewater Funfest in early June with races, river-runs, and a freestyle "rodeo" where paddlers perform maneuvers and tricks on standing waves.

Tubing and kayaking are both dependent upon recreational releases from the Shandaken Tunnel to provide adequate water levels for recreation. Both user groups jointly make formal requests to the NYS DEC for summer recreational releases. The DEC measures cold water levels in the Schoharie Reservoir in mid-

June to assess whether cold water volume will be sufficient for summer releases. By law, NYC DEP which owns and operates the reservoirs must satisfy temperature requirements by not discharging water above 70 degrees Fahrenheit in order to protect cold water fisheries. Unfortunately, in some years some recreational releases have had to be canceled or reduced in quantity based on environmental conditions.

Safety is always a concern for tubers and kayakers. Abnormally high flows can be far too dangerous for even advanced and experienced recreationalists. Both tubing businesses and KCCNY members self-regulate and the businesses typically prohibit entrance into the stream during dangerously high flows. Logjams and other debris have also been a concern. In the summer of 2002, a tuber and a kayaker were both killed when they became entangled in logjams and drowned. It should be noted that, in the case of the tuber, this individual was not on a designated course monitored by either of the tube companies and had entered the stream above a known hazard. Questions about liability and debris removal have been at times loud and divisive and currently no clear solution has been found. Safety is stressed for both kayakers and tubers and includes wearing a helmet and life vest as well as being aware of your surroundings and the condition of the equipment that you use. American Whitewater, a national non-profit devoted to enhancing and protecting whitewater recreation opportunities provides river status updates on its website: <http://www.americanwhitewater.org/content/River/state-summary/state/NY/>. Information about the Esopus Creek, including postings of hazards observed by other users, is included on that site.

Tubing and Kayaking continued on Page 6)



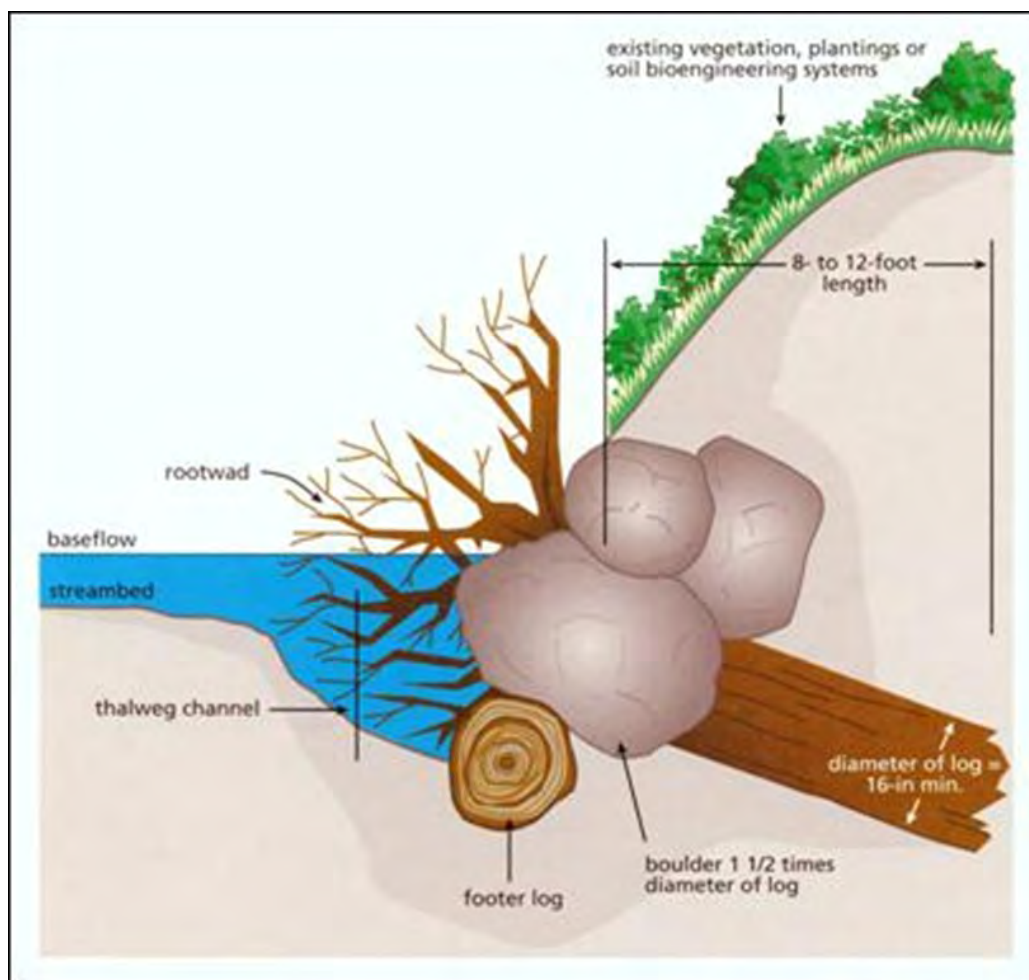
Right: Kayaking the Esopus Creek (photo courtesy of Myles Gordon, KCCNY)

Science Corner: Rootwad Structures

One of the most common questions our office gets from landowners is “how can I fix my streambank without much money? One technique we recommend to stabilize streambanks without using quarry rocks or other more expensive techniques is using rootwads from fallen trees. Rootwads with attached tree trunks are simply buried into a stream bank and stream channel with the mass of roots (the “rootball”) protruding into the creek. The rootwad helps to provide the structure and resistance to hold the streambank together. In addition, the mass of tree roots and tree trunks provide good habitat for fish and other aquatic organisms by creating cover areas of lower velocity and refuge from higher flows. Rootwads are often used during emergencies as a quick fix to stabilize a stream, but they can have longer term potential as well. Rootwads tend to work best for low streambanks (streambanks with heights between 2 and 6 feet). Higher streambanks are usually too complicated for Rootwads to be installed at the base or “toe” of the stream. Rootwads can be used in conjunction with other stability practices including plantings, rocks and bio-engineering. Using rootwads to stabilize streambanks can offer a variety of advantages. Rootwads are typically inexpensive because many streamside properties have fallen trees available onsite. Rootwads are not suitable for every project and have limitations. Performance and sustainability of rootwads is often associated with the construction technique to install them and some require vegetative plantings for them to reach their full potential.

The design and construction of a rootwad structure is important. The exact design is highly dependent upon your property’s unique configurations. Any design should be completed with the assistance of a stream professional such as a technician from your local Soil and Water Conservation District. However, there are some general rules of thumb that you can follow.

When preparing the trees for installation, leave 10 – 15 feet of log attached to the rootwad. The rootwads should be installed by excavating into the streambank deep enough to accommodate 8 to 10 foot long logs. Be careful NOT to infringe on the creek. This technique will work when the logs are installed into the streambank. The logs with rootballs are typically buried



angled downward into the streambed. This will require some excavation. You should try to install your project during dry periods when water levels are low. This will help ensure that the rootwads and logs are deep enough in the bed to stay submerged. Roughly three quarters of the length of the log should be securely embedded. The most critical aspect is the configuration of the rootwad fan itself. The face of the rootwad must intersect the incoming flow at a 30 degree angle. The rootwad should face upstream. Sometimes this is counter-intuitive, but you want the power of the creek driving the log deeper into the streambank. The rootwad should not be rotated towards the streambank or extend straight out into the channel. This can cause excessive bank erosion and may result in structural failure. We recommend when available to use large rocks around and on top of the rootwads to help hold everything in place. Also, in some cases stream engineers will pin and cable rootwads to rock bolsters. This type

Above: An artist’s rendering of an installed rootwad structure. (image from <http://www.fhwa.dot.gov/engineering/hydraulics/pubs/09111/page06.cfm>)

of cabling work will require assistance from an engineer to plan.

Before any stream work is begun a complete site plan must be developed and a permit must be obtained from DEC. You can consult with a technician from your local soil and water conservation district to assist you with developing this plan. They will discuss with you your goals for your property as well as any considerations that you should make including the type of soil and plant cover on your property, the slope of the stream channel and your stream banks, the volume and timing of water levels in the stream and the location of your property relative to stream features such as bends and pools. If rootwads are an appropriate practice, for many streamside land-

(Rootwads continued on Page 6)



Upcoming Programs

July

On July 14 AWSMP with support from the Catskill Watershed Corporation will sponsor an Arm of the Sea production of **"The City That Drink's the Mountain Sky."** See side panel to right for more details.

On July 15, AWSMP will have a booth at the **Phoenicia Duck Race** sponsored by the Phoenicia Rotary Club.

Only July 28, AWSMP in conjunction with the NYS DEC, and other organizations will host a **Family Fish & Fun Day** at Kenneth Wilson State Park. DEC staff will be on-hand to teach children the basics of fishing. There will also be arts and crafts available followed up by a BBQ and other assorted activities. Check our website or contact our office for more details. Pre-registration for this event is required.

August

AWSMP will have a booth at the **Ulster County Fair** from August 1st through 5th. There will also be a stream table demonstration and literature available.

September

AWSMP plans to participate in the annual **Ulster County Creek Week** festivities the week of September 15-23rd. For more information see the Creek Week website: <http://ucenvironment.org/ulster-county-creek-week/>

Volunteers participating in **WAVE** will collect data this month. Contact our office for more details.

October

The Catskill Environmental Monitoring and Research Conference will be held on October 25 to the 26 at the Ashokan Center. Check out our website or contact our office for more details.

Go to our website www.ashokanstreams.org for more information about events and programs or follow us on Facebook!

Arm-of-the-Sea is coming to Phoenicia

AWSMP in partnership with the Catskill Watershed Corporation is bringing the Arm-of-the-Sea's production of "The City that Drink's the Mountain Sky" to the Phoenicia Playhouse on July 14.

Heralded as one of the wonders of the world, New York City's ingenious system of aqueducts and reservoirs provides clear mountain water from the Catskills to nine million downstate residents. And though the struggle over these water resources has, at times, bitterly divided city managers and watershed residents, it has also irrevocably united them. Through a shimmering tapestry of poetry, puppetry and evocative music, City that Drinks the Mountain Sky brings alive the lyrical landscape of the Catskills— to portray the on-going story of the watershed and the uneasy marriage of those who must protect its vulnerable flowing treasure. You can expect plenty of visual punch and timely wit as the Hudson Valley's premier eco-logic theater traces life's quintessential liquid from mountain top to city tap. Visit our website (www.ashokanstreams.org) or contact our office (845-688-3047) for more information or to register.



City Water From "City That Drinks the Mountain Sky"

(Rootwads—Continued from page 5)

owners, rootwads can be an effective alternative to rock which provides both streambank protection and habitat.

For more information on Rootwads or other measures to that you can use to protect your streambank please contact the Ulster County Soil & Water Conservation District at (845) 688-3047.

(Tubing and Kayaking—continued from page 4)

Safety should be the highest priority, but this should not dissuade those who wish to tube or kayak from enjoying the natural beauty and relaxing experience of the stream. Tubing and kayaking provide many fun and unique experiences and allow residents and visitors alike to get in touch with their inner Tom Sawyer and Huckleberry Finn.

Special thanks to Harry Jameson (Town Tinker Tube Rental), Myles Gordon, David King and John Coraor (all of KCCNY) for their assistance with this article.

(FEMA—continued from page 8)

you are (or if you think you are in the floodplain when the maps say you aren't) you will have the opportunity to file a comment and the mapmakers will take a second look before they are adopted. The town will have six months for comment and revisions after the maps are completed. If the town does not adopt the map within six months then residents of that town will not be eligible for flood insurance until the map is adopted. Therefore it is important for residents to work with FEMA during the six month map review period. If you disagree with a finding after the maps are adopted by the town you can file a Letter of Map Amendment with FEMA to have your property not in the floodplain officially taken off. You will need to provide supporting information, such as a survey of your structure.

For more information on the National Flood Insurance Program please visit the FEMA website at <http://www.fema.gov/about/programs/nfip/index.shtm>.

AWSMP Program Updates

AWSMP STAFF ANNOUNCEMENTS

CCE Ulster County is pleased to announce the promotion of **Gretchen Rae** to Watershed Educator. Gretchen has had her duties expanded to include community education and volunteer programs. Gretchen began work in April 2011 as the program's Office Manager and is usually the first voice that you hear when you call our office. She has an associate's degree in animal medical technology from the University of Maine and a bachelor's degree in human ecology from Goddard College in Vermont. Prior to coming to AWSMP, she worked as a volunteer coordinator at a therapeutic horseback riding center in Maine and for a national healthcare nonprofit organization. In the past, Gretchen has worked as a zookeeper caring for rare and endangered animals including the Black Rhinoceros. She looks forward to assisting the watershed community in her expanded role.

AWSMP has a new Student Conservation Association (SCA) intern working in our office this summer. **Allison Lent** hails from Prineville, Oregon and earned her B.S. degree in Geology from the University of Oregon. This year Allison will be assisting AWSMP staff with stream assessments and geographic information system (GIS) projects. In her free time, Allison enjoys exploring the many Catskill Mountain trails in the watershed. She looks forward to learning more about how streams work and meeting new people.

The entire AWSMP team is bidding a fond farewell to Program Coordinator **Elizabeth Higgins** who left the program at the end of May to take the position of Agriculture and Natural Resource Program Leader with CCE Sullivan County. Liz worked for CCE Ulster County for the five years, over three of which were with AWSMP. Liz has a long list of accomplishments during her tenure with AWSMP. Liz (who is a certified floodplain manager) helped coordinate with local, state, and federal officials following the major flood events of the past few years and educated local officials and residents on the National Flood Insurance Program. Liz has also been instrumental in coordinating the various

committees and working groups in AWSMP as well as managing the Stream Management Implementation Fund which has allocated over \$2 million to the local community for stream improvement products. Liz will continue to work one day a week with the program until her replacement is hired. The entire AWSMP wishes Liz the best in her new position and thanks her for her years of leadership and service.

CATSKILL STREAMS BUFFER INITIATIVE (CSBI)

The CSBI Program is accepting applications for fall plantings. Applications are accepted on a rolling basis and the first plantings are (weather permitting) expected to begin in September. Visit the CSBI Website at www.catskillstreams.org/CSBI/ for more information. A new native plant guide which features species available from the CSBI program is available for download from our website at www.ashokanstreams.org/publications.html.

NEW YORK STATE FLOODPLAIN MANAGERS CONFERENCE

Four watershed area officials attended the New York State Floodplain Manager's Association conference in Binghamton, NY this past May 1-3. Brent Gotsch (CCE Ulster County), Beth Reichheld (NYC DEP), Richie Stokes (Town of Shandaken), and Glenn Hoffstatter (Town of Hurley) all took the exam to become Certified Floodplain Managers (CFMs) and will be able to utilize those skills in their respective positions aiding municipalities and local residents.

SHANDAKEN KIOSK PROJECT UPDATE

AWSMP is partnering with the Town of Shandaken to update old kiosks and install new ones throughout the town. AWSMP plans on sponsoring an update of a kiosk in Woodland Valley describing the stream restoration/flood control project there as well as a kiosk at the junction of the Stony Clove and Main Street Bridge in Phoenicia describing the stream work done there post-Irene.

(Spring Educational Events—Continued from page 1)

shed played a role during the floods, a discussion on who to call when a flood hits your area, the role of Ulster County Emergency Management during the flood, a primer on basic stream process, and a panel discussion on how floods effect aquatic organisms. Bill Nechamen of the NYS DEC provided a training on floodplain management responsibilities that gave town code enforcement officer continuing education training credit.

This year's dynamic keynote speaker was Kerry Robinson of the USDA-NRCS's National Technology Support Center in Greensboro, NC. Mr. Robinson, a hydraulic engineer for the NRCS explained to audience members the challenging nature of streamwork and the importance of properly planning stream channel restoration. He also "busted" some popular myths and misconceptions about stream management and restoration with an interactive presentation that required audience participation.

In May, AWSMP sponsored a training delivered by the US Forest Service on how to properly size and place stream crossing culverts. Over 50 local, state, and federal staff attended the **Aquatic Organism Passage Workshop**, which was held in Kingston, NY. This training taught how to properly size and place stream crossing culverts. Proper design and installation of culverts not only allows flood waters to flow properly and not back-up or wash-out stream crossings, but it also ensures that fish and other aquatic organisms can pass through them to reach other habitats. This helps to ensure the continuation of healthy aquatic ecosystems while reducing long-term maintenance costs and flood hazard risks.

AWSMP continues to work to develop high-quality educational programming that educates area residents on the importance of water quality and watershed science. For example, AWSMP is helping to plan this year's **Catskill Environmental Monitoring and Research Conference** to be held in October at the Ashokan Center.

If you have a request for a training on a specific topic related to watershed science or management please contact our office at 845-688-3047 and we will see if we can accommodate your request. We post upcoming public programs on our website at www.ashokanstreams.org and our Facebook page.

Cornell Cooperative Extension of Ulster County
232 Plaza Road
Kingston, NY 12401

Non-Profit Organization
PAID
Permit No.1
Kingston, NY 12401

Announcements: FEMA Floodmap Updates



Cornell University
Cooperative Extension
Ulster County



6375 Rt. 28

Phoenicia, NY 12464
Phone: (845) 688-3047

Fax: (845) 688-3130

Free to residents by request.

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Editors

Brent Gotsch, Elizabeth Higgins,
CCE Ulster County

The Town of Shandaken, like many watershed towns, was hit hard by flooding late last summer. One of the many outcomes of that event was the realization by many communities and residents, that there is a need for updated flood maps. The maps used in many of the communities in our watershed date to the mid to late 1980s. Since then much has changed—as many discovered who attempted to use the current maps after the flood. The level of detail in the existing maps is very low. It can be a challenge to find where a specific structure is located on the map.

Even more problematic, much has changed in the watershed in the past 25 years and the existing maps show several of the streams in locations where they currently are not found. The good news is that even prior to the flood FEMA was in the process of updating the maps. With support

from NYC DEP, the new maps will be very detailed and much more accurate than the old maps.

FEMA issued flood maps are important for a number of reasons. First, the flood maps delineate where flood prone areas are, which helps with community planning. They are also used to determine the high, medium and low risk areas which determine the insurance rates paid for a specific property for the National Flood Insurance Program (NFIP). People who live in a floodplain (high risk area) pay higher insurance costs than those who do not because they are at a greater risk of experiencing flood damage. The new maps will offer a clearer picture to area residents of where floodprone areas really are.

Preliminary maps for the Town of Shandaken should be available for review by March of 2013. The



new maps will use the latest technology to clearly show which areas of the town are most prone to inundation due to the 100 year flood. There should be digital copies made available to municipal officials that can be integrated into current geographic information (GIS) software. The Town has to officially adopt the new maps before they become official and if you don't think that you are really in the floodplain when the maps say

(FEMA—continued on page 6)