

Ashokan Watershed Stream Management Program
Education and Outreach Working Group Meeting Notes

February 12, 2015, 5:00pm to 7:00pm

AWSMP Office, Shokan, NY

CCEUC/AWSMP's new Watershed Educator, Jennifer Bowman, opened the meeting with basic introductions.

In attendance:

Jennifer Bowman: Watershed Educator, CCEUC/AWSMP

Gina Gould: Executive Director of Ashokan Center. Gina has a background in Curating Museum Exhibitions (natural history and science exhibits) & evolutionary biology.

Molly Mason: Musician and Vice President of the Ashokan Foundation, which is connected with the Ashokan Center.

Carolyn Thompson: Onteora High School Science Teacher with 34 years of experience

Aaron Bennett: Environmental Planner with Ulster County Department of Environment

Martin Bernstein: Program Director for Ashokan Center, Oversees education programs.

Ted Hoover: Catskill Mountain Trout Unlimited, Secretary and Conservation Chair

Melanie Forstrom: CCE 4-H Program Leader

Molly Marquand: Catskill Center Catskills Regional Invasive Species Partnership (CRISP) Coordinator, Co-founders of Catskills Native Plant Society, Board Member of NY Floral Association

Leslie Zucker: AWSMP Program Leader, CCEUC Project Manager

Matt Savatgy: Youth Educator for CCEUC/Onteora School District Elementary

Brent Gotsch: Watershed Educator, CCEUC/AWSMP, focuses on Flood Hazard Mitigation

Mark Vian: New York City DEP Stream Management Program, and Education & Outreach point person with Stream Management Program

Mary McNamara: Esopus Creek Conservancy, Lower Esopus Working Group

Quick review of Ashokan Watershed Stream Management Program (AWSMP) E&O Working Group, and its History:

The AWSMP E&O Working Group last met in 2011/2012.

Leslie Zucker briefly reviewed the history of the AWSMP Education and Outreach working group. The AWSMP focuses on engaging the public through science based education and outreach to improve understanding of stream ecology and management. The AWSMP also works to help educate people about how to manage streams on their own properties.

The updated Education and Outreach Working Group Objective is to: Promote stream stewardship and the enjoyment of streams.

AWSMP would like to bolster education and outreach by getting people out into streams, and helping them understand why it is important to learn about streams, not just for flood purposes, but for the health of streams, and how their actions may impact the watershed. It is important to work with communities and get people involved in activities and programs, which help to create lifelong ownership and stewardship of the watershed.

Goals of Education and Outreach Working Group: Actively engaging with each other (partners), networking, public engagement (all target audiences, youth to seniors, families, etc...), annual education events, funding opportunities & collaborating on opportunities.

Some ideas AWSMP has for the work of the Education and Outreach Working Group include collaboratively working to connect with public audiences, expand engagement with local children, youth and adolescents, connect with families, increase volunteer opportunities and participation, improve education networking, project collaboration, and funding opportunities.

Role of AWSMP

Leslie Zucker explained that AWSMP is guided by a Stakeholder Council. The Council oversees a number of working groups connected to the goals and programs of AWSMP, including the Education & Outreach Working Group. AWSMP asks for several people to be the “leads” for each working group. Lead individuals report working group activities to the Stakeholder Council, which meets 3 times a year.

Jen also elaborated on AWSMP’s programs and opportunities for growth and collaboration. AWSMP would like to pursue more citizen science opportunities and help people participate in the work we do to foster interest and a sense of civic and community responsibility and involvement in the watershed.

The committee can work to inform local events, activities and events as they are connected to the watershed work we are collaboratively implementing, and can help support each other’s programs and projects. Working Group members also help keep AWSMP informed of opportunities for collaboration and related watershed activities and events.

Other Groups Roles

Groups and Individuals were asked to share what their organization focuses on, or what kind of work they are doing in the watershed or with local stream systems, what projects they wanted to highlight and share information about, what other groups they are partnering and working with, and what struggles and potential needs have they found, or currently have in carrying out watershed education and outreach.

CRISP/Catskill Center

Molly Marquand: <https://www.catskillcenter.org/crisp/>

CRISP focuses on invasive species projects. CRISP conducts invasive species outreach and education, predominantly with forest and terrestrial ecosystems, since most (70%) of the Catskills are forested. They have had a very successful Boat Stewards program that has been running for 3 years. CRISP would like to adapt the Boat Stewards program for the Esopus Creek and work with AWSMP more as the challenge of knotweed and phragmites spread and are impediments to water quality and recreation. They have had limited success with fishing and angler activities and outreach, and would like to improve communication and provide information for more anglers. CRISP has a growing group of volunteers. Catskill Corps Volunteer Coordinator has been working to bring people together people to remove invasive species. They are also working with the Rondout-Neversink SMP (as a model project) to treat knotweed at county garage and to stop spread of invasives. The project and partnership has been very successful.

Ashokan Center

Gina Gould, Martin Bernstein, & Molly Mason: <http://ashokancenter.org/>

The Ashokan Center covers many topics of cultural, natural and historic significance in the local watersheds. They host school groups for day trips and overnight stays, and school education programs fill their calendar from September to June. They are working to find creative ways to broaden their focus on watershed topics and utilize the watershed as a resource. Their three main categories of education focus are currently: Local natural/social history, environmental sciences, and a slightly smaller component about the utilization of local and historic natural resources, such as maple sugaring, making apple cider and blacksmithing. They host annual public events such as Maple Fest (March 7) and the Winter Hoot, which are well attended. They are also looking for creative ways to engage the local communities and public in a more active capacity. They have observed that the Ashokan Center can be isolated and as such, many locals are not familiar with the facility and their programs. They have over 12,000 visitors each year, and very few of them are local residents. They would like to reach out to local people and improve community participation. The Ashokan Center also faces the challenge of not being able to allow visitors to explore the grounds while youth groups are staying on site, for security & safety purposes. They are working on a growing membership program to help work with this challenge. A query offered was how they can work on expanding current cultural and historical programs to include watershed and local environmental resource information? Molly Mason highlighted the possibility of

cultivating more watershed “stewardship” learning opportunities with their programs since they have classes and programs that could benefit from more watershed related elements.

Molly spoke about a native planting and re-vegetation project at the Ashokan Center’s “old campus” and the importance of youth experiencing planting activities and community involvement and partnerships of such projects with the Ashokan Center and with groups like CRISP. Martin also mentioned they have worked with Trees for Tribes in the past and done work on Rain Gardens with CRISP. They want to focus efforts on integrating these learning experiences and subject material into their current and potential curriculum and programs for youth and community.

Jen spoke about watershed education experiences and activities with a historic spin, where present day activities were modified to work in the context of a historic time period of local history that helped participants to understand how people interacted with water in the past. The Ashokan Reservoir Watershed region has a wealth of cultural history and stories that provide ample opportunities for connecting the watershed, history and culture. AWSMP’s staff have discussed the educational challenge of how to help local communities to capture and cultivate gathering and sharing historic information to help bridge the generation gap between youth and seniors for a stronger watershed legacy.

There are many creative ways to put a historic spin on watershed education activities

Leslie spoke about the possibility of creating a collaborative education experience with the Ashokan Center and their blacksmithing classes in connection to stream process, features and function, and how people used to manage streams through structures such as small dams to use stream energy for industry in the past. AWSMP could look into the idea of arranging a field visit for blacksmithing classes to observe a current stream restoration site in connection to how stream energy changes based on stream ecology and geology. Gina also spoke about the use of coal in the forges and how that energy use and transference connects to climate change through carbon cycle impacts as another possible education angle linking culture and science.

Mark Vian offered an educational idea looking at historic waves of population in the Catskill region and how the reservoir systems grew in response to immigration. Each wave of population change brought a greater diversity of cultures to the region, and had significant impact on land development patterns along rivers and tributaries. There is also a strong potential educational musical component in connection to looking at historic cultural diversity of the region. Martin Bernstein also added the important historic impact of The Hudson River School of artists who, inspired by the river and tributaries, captured the beauty of the region in their paintings, which then influenced people’s perceptions of landscapes and open spaces, and increased tourism to the Catskills and Hudson River valley.

Martin Bernstein shared that the Ashokan Center mostly focuses on teaching 5th and 6th graders, and that they primarily host school groups from New York City and Long Island, as well as some local schools from the Catskills region. The Center staff have observed that students seem to be able to relate the lessons they learn at the Center to their own heritage and that many of the city students seem to come

from first, second, or third generation immigrant families and backgrounds. There may be an opportunity with this unique cultural connection to reach a wider audience base.

Gina also pointed out that the Ashokan Center is doing a little more “edutainment” type programming with activities such as a Summer Trip Camp program where kids will travel around the watershed to learn more about the local ecology and also visit museums in the city for to connect what they learned in the Catskills to a bigger picture of the watershed and region. They are also looking to branch out to reach more schools locally and on Long Island, and starting a summer day camp in 2016.

Jennifer Bowman explained that in similar context to how people interact with and take ownership of National Parks because of personal experiences and histories tied to them, individuals and families who are residents or visitors of the Catskills region have many personal and familial connections here. These connections help to create a sense of “ownership” of the region, whether they live here or regularly visit and influence their interaction with the region. This connection can be a powerful tool for education and outreach support.

Melanie Forstrom spoke about cultural exploration united around watershed and regional education experiences with a one-year Stream Team program that she carried out through CCEUC 4-H with a CWC grant for students from Onteora High School and New York City boroughs. The program increased integration of culture in education programs by connecting kids from different parts of the watershed and creating a space for them to learn from each other and their unique place-based experiences. The program had far reaching impacts, including job shadowing for the students. Students walked around the Ashokan Watershed and shared and compared their different life experiences in connection to their homes and waterways they were familiar with. Melanie also expressed interest in arranging a job shadowing day for students since that component of the program was so powerful for the students and had lasting impact for them.

There is significant learning when helping to find a way to bring kids together to learn from each other and share their cultural experiences, bridge gaps and foster unique and personally enriching memories and experiences that also create stronger community.

Melanie also highlighted that the past drama and unsettled feelings about construction of the Ashokan Reservoir provides a platform and opportunity for substantive dialogue and learning opportunities about the watershed and cultural experiences from the city to the mountains.

Mark Vian reported out that DEP has done upstate and downstate volunteer plantings with both urban and rural kids from opposite ends of watershed, with great success. He shared an idea about the effectiveness of “Everyone becoming native to their own environment” in support of place-based education and stronger residential community outreach. There is a cultural juxtaposition between the audience and the landscape, which when shared, can provide enriching ways to engage with and teach each other.

CCEUC 4-H

Melanie Forstrom: <http://ulster.cce.cornell.edu/4-h-youth-development>

The Cornell Cooperative Extension of Ulster County (CCEUC) 4-H club serves over 500 kids who regularly participate in the program, and 100 volunteers participate in 4-H program. Over a year, they work with over 1,400 kids, and the program is coordinated by CCEUC staff, and run through volunteer help.

A new program Melanie is running with an opportunity for a possible Natural Sciences unit overlap is a “Tech Wizards Mentoring Program” for youth who are considered minorities and underrepresented in the science fields. The program is designed to be a multi-layered learning experience with hands-on activities and has strong enrollment with students and mentors they are connected with. This is a program that could benefit from AWSMP’s interaction and involvement.

Matt Savatgy

Matt has worked at for the last 7 years (4 with CCEUC) as an educator at (Onteora) Bennett Intermediate School to bring [science] education enrichment programs to the students to bolster their learning and do after-school and outdoor activities through his Watershed Detectives Program on the school grounds. The program started as an enrichment program for more advanced students and has grown into an afterschool and club program for all children. Watershed Detectives is now one of the three science programs he covers each week. He is now directly connecting with classroom teachers to integrate and provide hands-on and experiential outdoor learning with their science curriculum.

Science and social studies are taking a back seat to language arts and math in New York State due to state testing protocol. He has also observed that with their heavy state testing protocol, teachers don’t have the time to do more interactive experiential learning, so he works with them to help provide more active learning experiences. He works all year long to integrate science curriculum with activities and match it to watershed relevance and science. He is trying to expand the programs to reach more students in other grades.

There are currently 21 days of testing and 70 plus days of required “professional development” for teachers. This means that those are days that teachers are not interacting with students, and opportunities for learning are lost.

The question was asked: How can we work to help teachers with this gap, and how can we offer help?

Trout Unlimited

Ted Hoover: Ashokan-Pepacton Chapter: <http://www.apwctu.org/> , Catskill Chapter: <http://cmtu.org/>

Trout Unlimited (TU) is a national organization with regional chapters. Trout Unlimited’s Catskill Mountain Chapter, and Ashokan-Pepacton Chapter are both active in the Ashokan Watershed and Esopus Creek tributaries. Trout Unlimited coordinates and facilitates a variety of national and regional activities, such as working to sustain and restore fisheries, stream clean-ups, and partner with local organizations and groups for programs such as citizen science. Trout Unlimited also helps to educate students in national and local classrooms through its Trout in the Classroom program. The Chapters

would like to try and collaborate more with CCE and other local organizations on activities and programs such as stream cleanups, which are a popular program. They also welcome help with volunteer coordination of groups for programs and events.

In related discussion to stream clean ups, Leslie also mentioned that AWSMP hosts stream walks every year that are very popular. Scientists and educators go on a hike with members of the public and talk about stream tributaries, stream ecology, geology, stewardship and the work of AWSMP's in the local tributaries.

Mary McNamara also mentioned the successful and well attended "Creek Week" program with Ulster County, which also gave people the unique opportunity to go out onto the Hudson in boats and see the Catskills from a different perspective. Family Fun & Fun Day was also mentioned as a successful local program that AWSMP collaboratively coordinates for the public, families and youth. Mary also highlighted the idea of helping people learn about their water sources and improving awareness of drinking local water.

Onteora School

Carolyn Thompson: <http://www.onteora.k12.ny.us/>

Carolyn is a High School teacher of chemistry, biology, anatomy and physiology. She shared that 20% of teacher evaluations are based on testing results. Based on state information, this process is likely to increase in the future. Teachers are currently hard pressed to find time to do innovative enrichment activities in any subject that they used to do before state testing happened. A very real situation the teachers are faced with asking is: Do they try to include interesting activating and enriching activities in their lessons when they are hard pressed for time, or do they push to progress through the curriculum because the state tests are approaching?

Onteora encourages enrichment activities after school, and many programs exist for the kids in various areas. The High School also offers and supports a community mentorship program for juniors or seniors for half a year that creates opportunities for students to shadow and work with local education groups and organizations that are willing to participate in the program and help provide learning experiences for students. There are many students in the school district who are very interested in STEM, and science-based, science-related fields, which is also important to keep in mind for potential program, material and curriculum development.

Martin mentioned that the Ashokan Center is working to make the process for justifying education trips to the Center and education programs with the Ashokan Center more streamlined and effective for teachers to present to school principals and school boards for approval.

It was then explained that fourth, fifth, and sixth grade teachers are instructed to stop teaching social studies, and science, six weeks before Common Core tests begin, in order to focus on math and language arts of the tests. It would be great if social studies and science could somehow be combined with math and language arts so that students don't lose out due to the tests. For example, students

could be preparing for the tests by reading about watersheds, local culture, history and ecology, and doing mathematic problems about local population and science figures in connection to their testing. Carolyn explained that helping to integrate this material into the testing matrix for local schools could help teachers who have very little time, and students who are missing out on subjects put on hold by testing. Such a change would be very supportive for teachers, especially if endorsed and supported by the principal and school Board of education.

Several people asked if there is a way we can help provide teachers with materials, education programs and professional development resources that make integrating more watershed, science and local culture topics more realistic and streamlined.

Carolyn explained that anything the Education & Outreach WG potentially develops will need to be directly connected to current and active curriculum, such as STEM, in order to get support and approval from the school district. It is important to understand what the curriculum objectives are so that materials can be created to cater to those requirements and needs.

Wrap-Up

We need to take a close look at the education and outreach needs, obstacles to further investigate, and shared opportunities that the group can synthesize and turn into action. We will prioritize what types of programs we'd like to see happen and plan, and look for funding opportunities to make those programs and projects reality.

The meeting wrapped up with a quick review of committee actions, and that follow-up emails with notes and details about the next meeting will be sent out. The working group is looking to meet quarterly.