

ALLEGHENY WINs

“WATERSHED IMPROVEMENT NEEDS”

COALITION

ANNUAL REPORT 2014



Cover photograph: Minister Creek by Alex Vallejo. Five miles of this stream located in Forest and Warren counties are managed under the Wild Brook Trout Enhancement program. Fishing is open all year round; there are no tackle restrictions, but no brook trout may be killed or possessed.

WINs COALITION MISSION:

To promote protection, restoration, and habitat improvement activities in watersheds that lie entirely or partially in the Allegheny National Forest and to achieve Forest Service and community needs through collaboration and partnerships.

Table of Contents

Page

What is Allegheny WINS?	3
Where is Allegheny WINS?	5
<i>Upper and Middle Allegheny River Watershed Projects</i>	6
• Allegheny Reservoir Cleanup, Tenth Annual	7
• Water Quality Monitoring in response to the 2012, 2013, and 2014 Harmful..... Algae Blooms at Allegheny Reservoir	8
• Allegheny River and Conewango Creek Cleanups, Sixth Annual	10
• Anders Run Natural Trail Improvement	11
• Big Bend Boat Launch.....	12
• Conewango Creek Dam Removal Projects	12
• Conewango Creek Watershed Association Wetland Restoration.....	13
• Conewango Creek 2015 River of the Year	14
• Dutchman Run Fire Pond Dam Removal Project.....	14
• Iron Furnace Chapter Trout Unlimited Water Quality Monitoring	15
• Morrison Run Watershed Restoration Project.....	16
<i>Clarion River Watershed Projects</i>	18
• Bear Creek Restoration.....	19
• Big Mill Creek Watershed Restoration Project	19
• Clarion River Cleanup.....	19
• Clarion River Mussel Survey	20
• Spring Creek Watershed Restoration Project.....	21
<i>Tionesta Creek Watershed Projects</i>	23
• The Branch/FR 145 Restoration Project.....	24
• Tionesta Lake, Adopt a Lake 2013, Handshake Partnership	25
• Tionesta Lake Adopt-A-Lake	26
<i>North Country Trail Connector</i>	27
<i>Large Wood Re-introduction</i>	29
<i>Project Funding</i>	30
<i>Monitoring and Assessment</i>	36
<i>2014 Volunteer Contributions</i>	38
<i>Allegheny WINS Partner List</i>	39

What is Allegheny WINs?

Northwestern Pennsylvania is fortunate to have many miles of high quality streams and rivers. The Allegheny River, a federally designated Wild and Scenic River, is the centerpiece of the half-million acre Allegheny National Forest. The Allegheny and its major tributaries, Tionesta Creek and the Clarion River, are well known for their recreational value and high quality fisheries. Healthy populations of sport fish such as trout, bass, walleye, muskellunge, and pike share these waters with rare and endangered species of turtles, mussels, amphibians, invertebrates, and fish. Rich riparian zones provide feeding areas, nesting sites, and travel corridors for waterfowl, birds of prey, and other wildlife. Thousands of miles of smaller streams are home to our state fish, the Eastern Brook Trout.

The scenic waters of the Allegheny region appear to run clean and pure, and, in fact, some are now in better condition than they were decades ago. The Allegheny River, Clarion River, and Tionesta Creek each support healthy fisheries, which was not always the case. From the late 1800's through the mid-1900's, the rivers were spoiled by pollution from pulp mills, tanneries, mines, intense oil and gas exploration, and timber harvests. As these industries faded, conservation measures were implemented, and the waters began to heal and recover.

Unfortunately, new threats have arisen to, again, threaten our waters. Impacted by decades of acid rain and industrial pollution, the region's aquatic ecosystems are now being stressed by booms in oil and gas development and outdoor recreational activities. The number of miles of impaired streams is steadily increasing in the region, with some of the most vulnerable being our smaller headwater tributaries. These first and second order streams provide important habitat for fish and wildlife, and ensure that clean water flows to downstream communities by controlling sediment and nutrient loads. They also stabilize flows by retaining water during storm events and releasing it slowly over time and maintain a base flow during drier periods.

Because their natural buffering capacity is weak, the region's freestone streams are vulnerable to acid deposition. An acid rain event can immediately lower the pH in streams and virtually eliminate aquatic invertebrates and fish in large sections of streams.

Streams affected by acid deposition often suffer from increased sedimentation as well. An extensive network of dirt and gravel roads overlays the entire WINs area. Over 2,000 miles of oil and gas access roads and 1,200 miles of Forest Service roads penetrate even the most remote corners of the Allegheny National Forest. The native sandstone material used to construct these roads is comparatively soft, breaks down easily under traffic, and readily erodes into adjacent streams. As a result, gravel stream bottoms, which are vital for fish reproduction, become embedded with mud and sand. Aquatic invertebrates, a primary food source for fish, are also unable to survive under these conditions. The result is a loss of critical habitat for coldwater species and a reduction in overall productivity of the stream. Sensitive species like trout have to migrate up into smaller tributaries or downstream into larger waters to survive.

Other issues related to dirt and gravel roads include elevated stream temperatures and poorly placed culverts and road crossings that act as barriers to fish passage. Several of the region's remote streams that once held healthy populations of brook trout have become degraded because of these problems.

Most of the streams across the region lack the habitat complexity created by large wood because of historic logging activities. The current habitat is largely defined by high frequencies of riffle and glide features with few pools. Since pool habitat is important for aquatic organism survival and propagation, streams in the region may not fully meet Pennsylvania designated protected water uses due to the lack of adequate aquatic habitat in the form of pools. Best management practices now encourage the protection of riparian areas by leaving stream buffers and limiting activity. In response to these policies, riparian areas are reaching an age where they are beginning to contribute large wood (e. g. small trees, limbs, and trees affected by mortality and wind throw) to stream channels. Large wood will help recover the ecological processes and in-stream

functions such as storage of sediment and coarse organic matter in small tributary streams and the creation of larger, deeper pools. It will take several more decades of careful riparian area stewardship before these ecological processes are fully affecting larger fish-bearing streams.

Normally, a healthy aquatic system will adjust to stress caused by changes in conditions. However, when changes occur more quickly than the system can adjust, it becomes unstable and results in degradation. This has been the case in and around the Allegheny National Forest. The situation demands greater protection of healthy and pristine watersheds and repair to the impaired ones.

In summary, the main environmental problems affecting Allegheny watersheds include:

- Atmospheric deposition
- Sedimentation, erosion, and in-stream habitat degradation from sandstone-based roads used for timber and oil and gas well access
- Sedimentation and erosion problems associated with recreation such as camp sites, boat and canoe launches, and all-terrain vehicle trails
- Fish barriers and habitat degradation around culverts, crossings, and dams
- Lack of in-stream habitat for fish

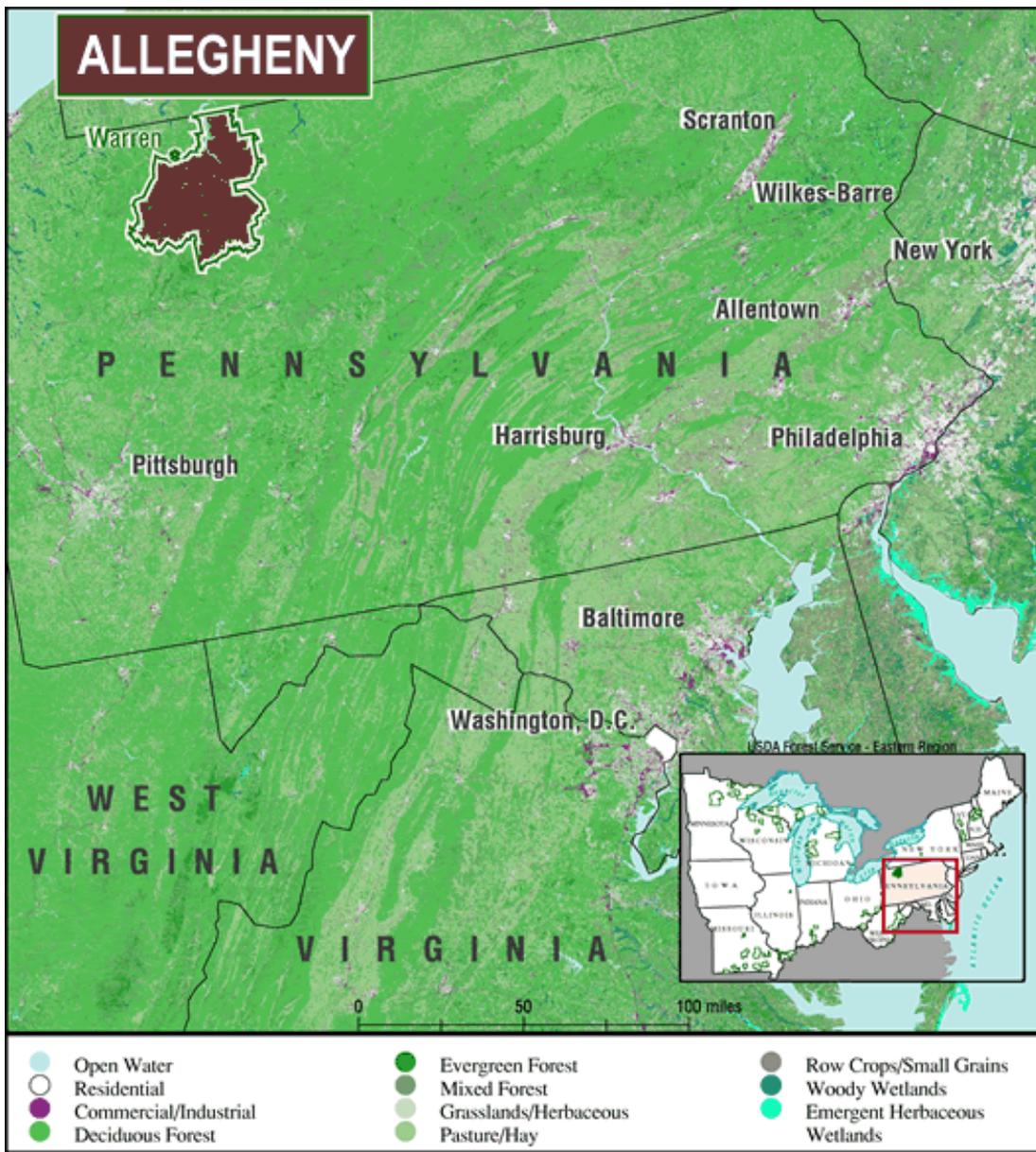
In an economically active and large geographic area such as the Allegheny, these problems can be overwhelming for any single government agency or community-based organization. To address the issues and find solutions to the problems, a group of like-minded non-profit organizations, private individuals, and local, state, and federal government agencies decided to join forces and build a coalition. The common thread that binds the partners of this coalition is an interest in developing and promoting watershed restoration activities.

The Allegheny Watershed Improvement Needs Coalition (WINs) was formed in April 2007; its mission is **“To promote protection, restoration, and habitat improvement activities in watersheds that lie entirely or partially in the Allegheny National Forest to achieve Forest Service and community needs through collaboration and partnerships.”** The group’s main focus is to develop and implement projects to protect and improve high quality watersheds and aquatic ecosystems and to restore others that are impaired. This includes outreach and education campaigns targeting rural communities and youth as a means of preventing problems from occurring. Since its inception, the Coalition has demonstrated a high degree of success in project development; this report documents those accomplishments.

Allegheny WINs is governed by a steering committee made up of representatives of municipal, county, state and federal government agencies, and leaders of various non-profit organizations such as the Western Pennsylvania Conservancy, Trout Unlimited, and local watershed organizations. The group meets bi-monthly at locations throughout the region.

Where is Allegheny WINs?

2,500
Square miles
Over 600,000
Acres of public land
2,000+
River and stream miles
14
Major watersheds
3,500+
Miles of dirt and gravel roads



Map courtesy of US Forest Service

Allegheny WINs projects can be found on the half-million acre Allegheny National Forest and on neighboring state forests, state game lands, and private lands in Northwestern Pennsylvania. The Allegheny National Forest is within a day's drive of 1/3 of the nation's population.

Upper and Middle Allegheny River Watershed



Photo courtesy of US Army Corp of Engineers

Kinzua Dam on the Allegheny River near Warren, Pennsylvania

Allegheny Reservoir Cleanup – 10th Annual

- **Partners: U.S. Forest Service, U.S. Army Corps of Engineers, Seneca Nation of Indians**

The tenth annual Allegheny Reservoir Cleanup that took place on Saturday, May 10, 2014 was a huge success! This was the first year that the Reservoir Cleanup crossed north into New York State and it became quickly apparent that it won't be the last. In just one day, 97 volunteers donated 776 hours while removing more than 55 cubic yards of trash, 221 tires, and more than 1,000 pounds of recyclable metal.

The annual cleanup continues to be a cooperative effort involving the U.S. Forest Service (USFS), U.S. Army Corps of Engineers, Warren County Adult Probation and Parole, and numerous other agencies, organizations, and businesses.



This year, the group was joined by two new partners: Seneca Nation of Indians and Cattaraugus County's Onoville Marina, who served as hosts for this year's activities and played key roles in making the event the smashing success that it was.

Items of interest collected during this year's cleanup included: a collapsed cabin (12 boat loads), hundreds of feet of orange snow fence, numerous blue plastic 55-gallon drums, various appliances, and two children's battery powered riding toys.

Now in its tenth year, the positive effects of the annual Reservoir Cleanup are very apparent. As a result of this annual "community conservation event," the shorelines and waters of the Allegheny Reservoir are much safer and cleaner places for the wildlife and recreationalists who use them.



Water Quality Monitoring in Response to the 2012, 2013, and 2014 Harmful Algae Blooms at Allegheny Reservoir

➤ **Partners: USACE, ANF, Seneca Nation of Indians, Onoville Marina.**

Kinzua Dam and Allegheny Reservoir, authorized by the Flood Control Acts of 1936 and 1938, is one of 16 flood control projects owned and operated by the U.S. Army Corps of Engineers, Pittsburgh District (Corps). The project is also congressionally authorized for downstream water quality control. The Corps is responsible for recreation and land, water, and natural resource management at the project and also the health and safety of those who recreate at the lake. The Allegheny Reservoir spans the Pennsylvania and New York state borders. The Pennsylvania reach of the reservoir is completely surrounded by the Allegheny National Forest, and the New York reach of the reservoir by the Allegany State Park and the Allegany Indian Reservation of the Seneca Nation. In addition, Cattaraugus County's Onoville Marina is located in Sawmill Bay in the New York reach of the reservoir.

In the summers of 2012, 2013, and 2014, the New York Department of Health (NY DOH) reported harmful blue-green algal or Cyanobacteria blooms (HAB) in the New York reach of the Allegheny Reservoir near the Friends Boat Launch in Allegany State Park. While summer season blue-green algae blooms had regularly been reported in this reach of the reservoir since the dam was constructed in 1965, the 2012, bloom was the first HAB that was ever documented in the lake. Blue-green algae (BGA) are naturally occurring in fresh water ecosystems, but when produced in high numbers they can produce neurotoxins that can adversely affect humans, wildlife, pets, and other animals with exposure (i. e. water contact sports). Algae toxins can cause allergic-type reactions, skin irritations, and, in severe cases, liver or nervous system damage. A BGA bloom that is producing neurotoxins is referred to as a Harmful Algae Bloom or HAB.

In response to each of these reports, the Corps implemented a HAB Plan to reduce human health risk associated with exposure to algal toxins in the lake. This plan follows the guidelines published by the World Health Organization which identifies safe levels for exposure to BGA. These guidelines are based on cell counts rather than algae toxin concentrations and were developed from direct evidence of acute, non-cumulative health effects associated with primary body contact in recreational surface waters with BGA blooms. The plan recommends that BGA cell counts be monitored weekly and that signs be posted in high use recreational areas around the lake, if and when these action levels are exceeded, to warn the public of the possible health risks associated with exposure to algal toxins. Cell counts less than 20,000 cells/ml are considered safe; when counts are greater than 20,000 cells/ml but less than 100,000 cells/ml, HAB advisory signs are posted, and when cell counts exceed 100,000 cells/ml, the risk to human health and safety is considered high, and HAB caution level signs are posted. These actions were continued until the threat dissipated, that is, when all cell counts remained below action levels for at least two weeks.

All three HABs occurred primarily in the nine mile long reach of the reservoir located between Willow Bay and a few miles upstream of Quaker Bay and were dominated by the blue-green algae species *Aphanizomenon flos-aquae*. The 2012 HAB began on August 30, and continued until November 26. The maximum BGA cell count documented during this HAB was 52,195,950 cells/ml maximum on October 17, 2012. The 2013 HAB began on July 16, and continued until October 30, with a maximum cell count on September 16, of 5,725,194 cells/ml. The 2014 HAB

began on July 28, and continued until October 27, with a maximum cell count on September 29, of 23,226,500 cells/ml.

The Corps also conducted water quality surveys at Allegheny Reservoir during the 2012 – 2014 period to support the operation of Kinzua Dam. The data collected during these surveys are utilized to identify and understand the impacts of reservoir operations; identify opportunities to enhance operational benefits; document trends in water quality conditions; ensure compliance with federal and state laws and regulations; and ensure long term, sustainable management of aquatic resources. These data are also critically important for understanding the causes of the Allegheny Reservoir HABs. Three lake surveys were conducted in 2012, six during 2013 (monthly May – October), and three during 2014. The first survey in 2014 was conducted on June 10-12, prior to the start of the bloom, and two were conducted during the bloom, on August 27, and September 22. Field water quality parameters measured during these surveys included water temperature, dissolved oxygen, pH, turbidity, oxidation reduction potential, light transparency, and Secchi Disk depth. Samples collected were analyzed for many parameters in addition to algae identification and cell counts, including, nutrients, metals, salts, alkalinity, acidity, pH, conductivity, color, turbidity, hardness, sulfate, chlorophyll, and zooplankton.

Allegheny National Forest (ANF), Seneca Nation of Indians (SNI), Allegheny Reservoir, and Onoville Marina (Cattaraugus County) staff assisted with the reservoir water quality surveys and /or conducted the weekly HAB sampling during this entire three year period . ANF and the Onoville staff provided boats and boat pilots and assisted with sampling efforts. SNI staff also assisted with lake water quality surveys and began collecting weekly samples at all sampling sites located on Seneca Lands in September 2014. In addition, the Reservoir staff collected weekly algae samples throughout the duration of all three HABs. These surveys could not have been conducted without the help and support of our partners.

Weekly results were shared with Allegheny Reservoir stakeholders, including the NY Department of Health, NY Parks, NY Department of Environmental Conservation, Cattaraugus County / Onoville Marina, Allegheny National Forest, the Seneca Nation, PA Department of Environmental Protection, the PA Fish and Boat Commission, and the public. Because of the diligence of the inter-agency monitoring team, the NY Department of Health did not receive a single reported case of injury or illness associated with use of this recreational body of water during any of the HABs. In addition, the water quality data generated during the inter-agency surveys will be utilized by the Corps to analyze Allegheny Reservoir water quality to better understand the causes of the HABs and possibly identify solutions to reduce their frequency or intensity.

Allegheny River and Conewango Creek Cleanups - Fifth Annual

➤ Partners/Sponsors: U.S. Forest Service and the Conewango Creek Watershed Association

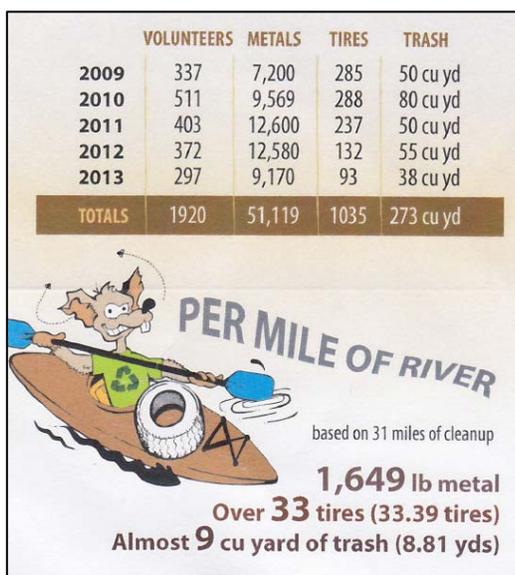
Thank you to everyone who participated in this year's sixth annual Allegheny River Cleanup resulting in tons of trash being dragged from Conewango Creek and the Allegheny Wild and Scenic River!

In total, 246 volunteers donated 1,968 hours removing trash from 39 miles of the Allegheny River and 15 miles of Conewango Creek. Two days of this year's cleanup was spent on the lower Conewango Creek between Russell and Warren, PA.



The final 4-days of the cleanup yielded over 34 cubic yards of trash plus 10,340 pounds of metal and 99 tires. These totals do not include items removed during the pre-Cleanup event on August 28 or on the first Saturday, September 6.

Items of interest included: a motorcycle, 12 bicycles, 10 shopping carts, 4 lawnmowers, various appliances, numerous car parts ... and the list goes on and on!!



Planning for the seventh installment of this annual community conservation event has already begun. New volunteers and new ideas are always welcome. Visit www.alleghenyrivercleanup.com to get involved.

Anders Run Natural Trail Improvement Project 2013

➤ Partners/Sponsors: Pennsylvania Department of Conservation of Natural Resources

During the summer of 2013, in a cooperative interagency effort, the Allegheny National Forest again offered the services of their Student Conservation Crew (SCS) to the Cornplanter Forest District to complete trail re-routing and maintenance and improvement work at the Anders Run Natural Area. This 100-acre State Forest Natural Area contains many large tree specimens of white pine, hemlock, and hardwood species. The area is considered a second-tier old growth forest. This forest also affords protection to Anders Run, a high quality stream that is home to several aquatic species of special concern.



The crew who worked at the 2013 Anders Run continued work started by a previous crew in 2012. To further stabilize the trail system and eliminate any erosion that may be impacting Anders Run on the southern portion of the natural area, the crew continued to improve the trail surface by using techniques and measures to ensure long-term resiliency. The crews also assisted with permanently closing and stabilizing retired portions of the old trail system no longer in use and helped to widen the trail by trimming back brush and other natural materials.

While the southern portion of the system required the most work, the crew was also provided attention to the northern section of the trail. This section had an extremely steep grade combined with a spring seep on this portion of the trail system that caused erosion issues for many years and was in dire need of being re-routed.

Following a route flagged by Bureau of Forestry staff, the students did an admirable job of constructing the new re-routed portion of the trail. It not only eliminated erosion issues, but improved public safety by replacing a steep, slippery slope with a more gradual grade. The crew also placed water bars in a section of the trail that could not be re-routed to aid in dispersing water off the trail, thereby reducing erosion. The crew also moved part of the trail that was located too close to an Anders Run tributary to higher ground. Once the old trail reverts back to a vegetative state, erosion will be significantly reduced.



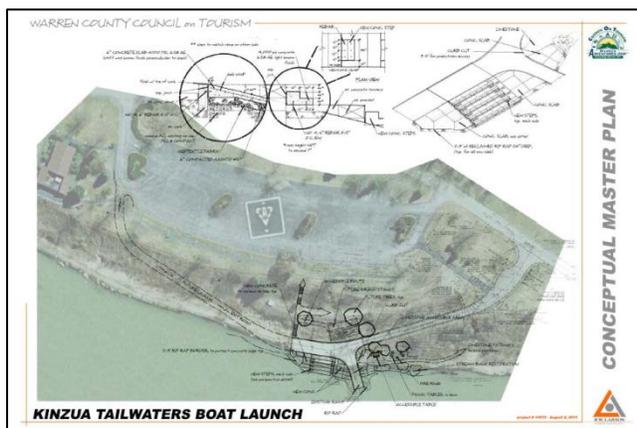
Without the efforts of the Student Conservation crew and the U.S. Forest Service, this project could not have been completed. The Cornplanter Forest District appreciates the inter-agency support of the Allegheny National Forest for the services of their crew.

Big Bend Recreation Area - Boat Launch

➤ Sponsor: US Army Corps of Engineers

This project's goal is to make continuous improvements to the Big Bend Recreation Area (BBRA) to make the site a premier tourist attraction in the Commonwealth. It already draws tourists from across the United States, Canada, and around the world with its wide, sweeping views of the Kinzua Dam whitewater outflow and the northern terminus of the Wild and Scenic Allegheny River.

Project partners include the US Army Corps of Engineers, US Forest Service, Allegheny Outdoor Club, WINs Coalition, Warren County Chamber of Business and Industry, Warren County Council of Tourism, Penn Soil Resource Conservation and Development Council, and Allegheny Outfitters.



In 2009 the partners completed construction of a bird-viewing platform and Riverside Watchable Wildlife Trail at the BBRA. Visitors enjoy an enhanced view of many different birds including bald eagles, ospreys, mallard ducks, mergansers, and blue herons. Utilizing funds from local contributors, a significant portion of the trail surface, approximately 800 linear feet adjacent to the viewing platform, was blacktop paved during fall 2013.

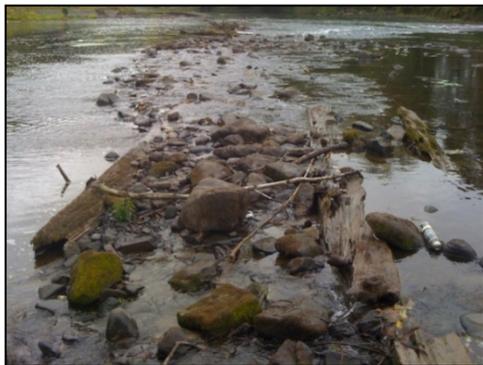
In 2011 improvements to the existing boat launch were begun with the addition of four new concrete steps to make access to the water safer and more efficient. The construction of concrete slabs to replace the existing riprap is planned for spring 2015.

Conewango Creek Hospital Dam Removal

➤ Sponsor: Conewango Creek Watershed Association

Two abandoned and partially intact dams were removed from Conewango Creek near the Warren State Hospital property in September 2014. The dams were removed to reduce hazards for recreationalists as well as to restore the full flow of the creek back to a more natural state. One dam was a rock and crib design probably built around the mid 1800's. The other was a rock and crib dam reinforced by a concrete cap that was built around 1900 by the Warren State Hospital to serve as a water supply for the hospital.

The timbers were removed and the rock was scattered to restore the previous form of the main stream channel. Nature will further rearrange the stone as time passes. The timbers were donated to local woodworkers as this old growth timber, preserved by total saturation, is highly prized by wood workers. The concrete rubble was used as rip-rap for bank stabilization for the disturbed area. The other disturbed areas were graded, seeded and mulched.



View from Conewango Creek left of Hospital Dam (L) and upper dam remnant (R).

CCWA is currently working on obtaining some plant materials to further restore the wooded area to improve the riparian function. The dams were removed in partnership with American Rivers, DEP Dam Safety, PA Fish and Boat Commission, Ohio River Basin Fish Habitat Partnership, Glade Township and Conewango Creek Watershed Association. Interpretive signage is planned for the site. The total budget for the project is \$130,000.

Conewango Creek Wetland Restoration

➤ Sponsor: Conewango Creek Watershed Association

Monitoring of area wetlands by Roger Tory Peterson Institute continues. No official results are available yet, but a number of amphibian species and other species such as dragonflies and butterflies are found in the wetlands. Monitoring will continue using RTPI staff and Jamestown Community College students.

A Japanese knotweed control project was undertaken. A strip of knotweed has established itself along the road next to the wetlands. The infestation apparently came from fill material brought in from another area and had been spreading.

In 2013, CCWA initiated the control project in conjunction with Pine Grove Township. In 2013, the knotweed was weakened using mechanical means of mowing and hand cutting. In 2014, \$1,160 was spent to have the knotweed sprayed with herbicides by a certified public pesticide applicator. The area was sprayed twice at strategic plant development stages to kill as much knotweed as possible. The knotweed had not escaped too far into the wetland.

Plans are to kill the knotweed back to a manageable level for hand control and to prevent it from spreading further into this valuable wetland area. Plans are also being developed to address the issue of amphibian road crossing where a good deal of mortality takes place.

Conewango Creek - 2015 River of the Year

➤ **Sponsor: Conewango Creek Watershed Association**



Conewango Creek had the honor of being named the 2015 Pennsylvania River of the Year. The annual river of the year contest is sponsored by PA Department of Conservation and Natural Resources and the PA Organization for Watersheds and Rivers. The Conewango Creek Watershed Association nominated Conewango Creek. Other nominated streams were: Loyalhanna Creek, Lackawanna River, Ohio River, and Neshaminy Creek. Citizens made the final selection by voting via the internet. Conewango Creek got 42% of the almost 10,000 votes. Second place

was Loyalhanna Creek with 30% of the vote. This opportunity provided Conewango Creek and northwestern Pennsylvania much positive publicity. The CCWA will receive a \$10,000 grant to be used to conduct educational celebration during 2015.

Conewango Creek has a quality and biodiversity which rivals French Creek of northwestern Pennsylvania despite sediment pollution problems caused by rural, agricultural, and urban stormwater issues. Unique fish confirmed to inhabit the Conewango include: the burbot, (once thought to be extirpated), and the paddle fish which was reintroduced to the area. The Conewango Creek is also home to 19 native species of freshwater mussels including the northern riffleshell mussel. Also common along the creek are river otters, bald eagles, osprey, and herons.

Dutchman Run Fire Pond Dam Removal

➤ **Sponsors/Partners: Warren County Conservation District and American Rivers**



Fire Pond Dam is located on a tributary to Dutchman Run adjacent to US Highway 6 in Mead Township. This concrete dam supplied water for fire suppression until it was abandoned several decades ago. The dam blocks fish passage and impacts the stream's water quality and thermal profile.

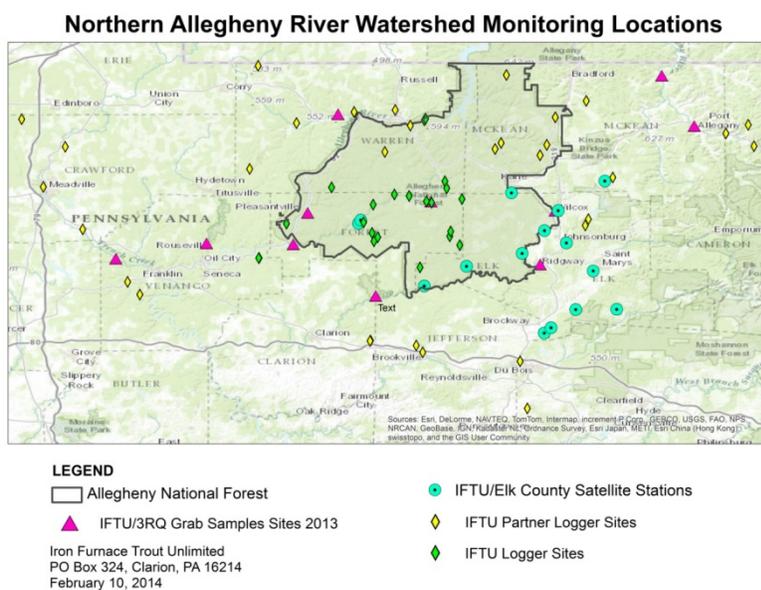
This project will remove the dam and restore the former impoundment, including establishing a riparian corridor and placing fish habitat enhancements. Design is complete and permitting is pending, with construction anticipated in summer or fall 2015.

In addition, the project includes the design and replacement of three aquatic organism passage culverts to replace existing culverts that are fish passage barriers. When the dam removal and culvert replacements are complete, 3 miles of Dutchman Run and its tributaries will be reconnected to allow brook trout and other species to access habitat on the Allegheny National Forest.

At this time, project partner Warren County Conservation District has received \$184,000 from Growing Greener to undertake deconstruction of the Fire Pond dam, restoration and riparian plantings in the former impoundment, and design of one AOP culvert replacement. Grant requests from Ohio River Basin Fish Habitat Partnership, Eastern Brook Trout Joint Venture, and National Fish Passage Program (US Fish & Wildlife Service) are under review.

Iron Furnace Chapter Trout Unlimited Water Quality Monitoring

➤ Sponsor: Iron Furnace Chapter Trout Unlimited



Iron Furnace Chapter Trout Unlimited (IFCTU) received a \$100,000 grant from the University of West Virginia Water Resources Research Institute through the Three Rivers Quest Program (3RQ) to become a research partner with Duquesne University and Wheeling Jesuit University.

IFCTU collected grab samples at 11 locations throughout the Northern Allegheny River (NAR) basin on a bi-weekly schedule during 2013. Analytical results indicated relatively good water quality throughout the basin with higher than expected

alkalinity and low acidity. Bromide which is normally associated with deep shale production was only detected three times throughout the sampling. Chloride and sodium were detected at all sites on all sample dates. Sulfate concentrations were highest at collection sites in the Clarion River at Cooksburg and Ridgway indicating AMD occurrence.

Because water quality was interpreted as good within the NAR basin, 3RQ dropped 10 stations from the 2013 program but expanded the sample area to 24 stations at different locations to be sampled quarterly in 2014. This project was funded at \$50,000.

IFCTU also received a second grant of approximately \$40,000 from 3RQ under their Mini-Grant Program. Using the funds from this grant, IFCTU awarded grants to the Crawford, Elk, McKean, and Warren County Conservation Districts, and National Trout Unlimited to purchase Hobo

loggers for stream monitoring purposes. National TU then funded six NAR basin chapters including Allegheny Mountain, God's Country, Caldwell Creek, Cornplanter, Oil Creek, and Jim Zwald. A total of 41 loggers were purchased in the program. Training and support was provided by IFCTU and National TU staff and the grants will extend into mid-2014.

IFCTU continues to monitor locations in the Northern Allegheny basin with loggers and the existing satellite network established in 2012.

Morrison Run Watershed Restoration Project

➤ **Sponsor: Cornplanter Chapter Trout Unlimited**

Morrison Run In-Stream Habitat Improvement



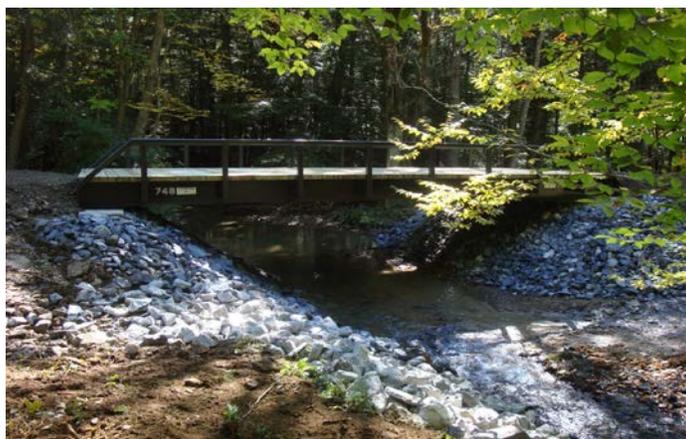
This phase of the Morrison Run Watershed Restoration Project began in September, 2009. In five years, 27 fish habitat structures have been installed in the headwaters of Morrison Run. Devices constructed include: modified mud sills, bank, single and multi-log vane deflectors, log faced stone deflectors, and toe log deflectors. Teamwork among the Cornplanter Chapter Trout Unlimited, Western Pennsylvania Conservancy, PA Fish and Boat Commission, U.S. Forest Service, and various volunteer organizations have made this project very successful. Upon completion of work on the first section of stream, permits have been secured and plans have been made to continue this project for another 1,000 feet. Work takes place at the end of September each year. This hands-on project adds structure and habitat to the stream and builds on what has been completed as we continue to move the Morrison Run Restoration Project forward.

Morrison Run Aquatic Organism Passage Barrier Removal

Undersized culverts on a stream crossing of Forest Road 156 had historically been a source of annual flooding and road repair and a significant aquatic organism passage barrier.



CCTU and its partners replaced the culverts with a new metal bridge eliminating the passage barrier and significantly reducing the risk of flooding during high water flows.



Partners in this initiative are Western Pennsylvania Conservancy, PA Council Trout Unlimited, Cornplanter Chapter Trout Unlimited, and three private land owners.

Clarion River Watershed Projects



The Clarion River near Cook Forest

Bear Creek Restoration

- **Partners/Sponsors: Headwater Resource Conservation and Development, Elk County Freshwater Group, and US Forest Service**

The goal of this project is restore the water quality of Bear Creek by installing treatment systems at several locations in the headwaters of this watershed. Headwaters contracted with Dietz-Gourly, LLC for the design and construction oversight for the Pine Run Acid Deposition Remediation Project. Based on a field review with ANF staff last fall, a location in the Pine Run headwaters was selected. A completed field survey identified wetlands where the treatment system will be installed. To protect the wetlands, the site will be moved about 50 yards downstream. It is anticipated that the design for the system will be completed in the summer of 2015. This project will improve the alkalinity and pH of Pine Run, which was added to the State's impaired stream list in 2014.

Additional Activities and Accomplishments

- In the summer of 2014, aquatic passage friendly culverts were installed on an ATV trail crossing of Twin Lick Run and a forest road crossing of Red Lick Run. Road surfacing and drainage were improved at these crossing to reduce sedimentation.

Big Mill Creek Watershed Restoration Project

- **Partners/Sponsors: Elk County Freshwater Association (ECFA); Elk County Conservation District (ECCD)**

The construction phase of the Big Mill Creek Watershed Restoration Project was completed in 2012. Monitoring is ongoing and has demonstrated that the restoration project has had a significantly positive effect on the watershed's water quality. PFBC surveyed the watershed in the summer 2014 to document the fisheries' response to the completed acid precipitation restoration effort.

Clarion River Cleanup

- **Partners/Sponsors: Elk County Conservation District, Elk County Solid Waste and Recycling Department, and Country Squirrel Outfitters**

In 2013, the Elk County Conservation District, Elk County Solid Waste & Recycling Department, Ridgway School District, Country Squirrel Outfitters and several volunteers participated in a river cleanup along the Clarion River. The cleanup occurred on the Clarion River between Ridgway (river mile 94) and an area locally known as Cherry Tree Flats (river mile 90). The cleanup was a success and over 600 pounds of materials were removed from the river. The annual event was being planned for 2014. However, on May 21, 2014 much of Elk County was devastated by a significant storm event that led to substantial flooding along the Clarion River and its tributaries.

The flooding event was of the magnitude that had not been seen on the Clarion River in many decades. Water levels peaked at over 21 feet. Much of the town of Ridgway and several other communities were greatly impacted. No lives were lost, but the event resulted in hundreds of thousands of dollars of damages to roadways, bridges, homes and businesses. As a result of this flooding, the Elk County Conservation District was very busy providing technical assistance and permitting needs for post-flood cleanup activities. Due to the increased workload, the Conservation District and its partners were unable to organize a 2014 river cleanup event. The May 2014 flooding event has greatly impacted the Clarion River and added a significant amount of debris to this waterway.

Planning efforts for 2015 river clean-up are underway. The Conservation District has several new partners including the Western Pennsylvania Conservancy and Elk County Council of the Arts (ECCOTA).

Clarion River Mussel Surveys

➤ Partners: U.S. Forest Service and Western Pennsylvania Conservancy

In July 2014, approximately 32 miles of the Clarion River from Clear Creek State Park to Ridgway were surveyed for the presence of freshwater mussels. This was the first mussel survey completed in the river in more than 100 years and was designed to determine if mussels had begun repopulating the river following decades of industrial pollution.

In 1909, Carnegie Museum mussel biologist Arnold E. Ortmann called the Clarion River “one of the worst streams in the state” due to pollution from mine drainage and unregulated industries such as tanneries and chemical plants that, at the time, were dumping untreated waste directly into the river. Ortmann noted that the river “flowed 'blackish-brown' all the way to the Allegheny River and it appeared to be devoid of aquatic life. ”



In 2014, 16 sites were surveyed at approximately 2-mile intervals using a combination of snorkeling and scuba to complete the work. Water quality parameters including pH, alkalinity, dissolved oxygen, turbidity, total dissolved solids, as well as levels of nitrogen and phosphate were collected at each location. Substrate composition was also estimated based on perceived percentage of sand, silt, gravel, cobble, and bedrock.

Forty-two mussels were collected from 7 of the 16 surveyed locations. Two species, Wavy-Rayed Lampmussel (*Lampsilis fasciola*) and Creeper (*Strophitus undulates*) were identified. The presence of adult and juvenile mussels, favorable substrate composition, and vastly improved water quality indicate that the Clarion River is once again capable of supporting

healthy mussel communities. As a direct result of this survey, potential common species reintroductions are now being considered.



The mussels on top are weathered dead while live mussels are pictured below. Wavy-Rayed Lamp mussel (left) and Creeper (right) were the only two species found during our survey. Size, shape, and color of shell and foot were useful characteristics for identification.

Spring Creek Watershed Restoration Project

➤ **Partners/Sponsors: Western Pennsylvania Conservancy and U.S. Forest Service**

The Spring Creek watershed in Forest and Elk Counties is a major tributary of the Clarion River, a federally designated Wild and Scenic River that forms the southern boundary of the Allegheny National Forest. The forests and waters of the Spring Creek watershed are recovering from decades of unsustainable timber harvest and industrial development. Today the watershed is prized for its recreational resources, its timber base, and its coldwater fishery.

The goal of the project is to restore and improve riparian and in-stream habitat throughout the drainage by reducing sedimentation, rehabilitating riparian areas, and removing barriers to fish passage. Specific objectives of the project included: reconstructing forest roads to improve drainage and reduce sedimentation; eliminating multiple fish passage barriers associated with inadequate road crossings; hardening and decommissioning dispersed camp sites; hardening existing parking to reduce sedimentation while improving access to the stream; and addressing soil and water impacts associated with approximately 80 miles of user-created horse trails.

Since 2006, partners of the WINs Coalition have completed numerous projects including: fish habitat projects, culvert replacement for aquatic organism passage (AOP), correcting runoff and erosion problems related to roads, and correcting horse trails. In October 2012, the US Forest Service (USFS), Western Pennsylvania Conservancy, and Pennsylvania Fish and Boat Commission (PFBC) completed a second fish habitat improvement project on Spring Creek. The project included the installation of 25 devices, including multi-log vane deflectors, modified mud sills, bank cribs, and root wads to stabilize 550' of eroding stream bank.



Construction of Modified Mudsills



Root wads placed in Spring Creek

In 2012, 38 miles of horse trails were improved or relocated to reduce erosion and sedimentation problems. In addition, over 70 horse trail fords through stream channels were armored with rocks to reduce impacts on water resources. Other improvements included broad based dips and grade brakes to reduce storm water runoff. At the end of the structures, dry wells were constructed to increase infiltration and control runoff. This project was funded by the American Recovery and Reinvestment Act.

In 2013, USFS decommissioned 0.4 miles of snowmobile trail along a tributary to Wolf Run and reconstructed this trail away from this stream to reduce sedimentation.

In 2014, WPC, USFS, and the James Zwald Chapter 314 of Trout Unlimited initiated the development of a project to restore approximately 4,900 feet of East Branch Spring Creek near the Pig's Ear ATV Trail.

By adding large woody material from the surrounding forest to the stream and floodplain, the project will increase habitat diversity, improve floodplain function, reduce bank erosion and flooding of the ATV trail. Construction of naturally inspired large wood structures will be accomplished by both hand methods and heavy equipment.



Tionesta Creek Watershed Projects



Photo courtesy of US Army Corp of Engineers

Tionesta Dam near Tionesta, Pennsylvania

The Branch and FR 145 Restoration Project

➤ Sponsor: U.S. Forest Service

The Branch in Forest County is a major tributary of Salmon Creek in the Tionesta Creek watershed. The Branch is a high quality coldwater fishery. The ANF's Marienville Ranger District has been working to stabilize a failing section of FR 145 along the Branch for more than 10 years. The goal of the Branch and FR 145 Restoration Project is to stabilize the FR 145 road slump along the Branch to reduce future erosion, to improve fish habitat using an engineered large wood jam, and to restore the saturated road of FR 145 by installing a stone base for drainage.



Constructing the log and rootwad structure by weaving and interlocking pieces together.



Photo taken upstream at the pool forming along the engineered large wood jam.

An engineered large wood jam was constructed at the base of FR 145 to stabilize the slope being eroded by the Branch. Logs and rootwads were trucked from a new oil and gas well site. Twenty-six rootwads with 40 feet of stem attached and 20 to 40 foot logs and branches were weaved together to form a jam at the foot of the steep slope. The base rootwads were buried into the stream bed. Additional logs and rootwads were placed above the 100 year flood elevation to act as ballast and hold the logs and rootwads in place. The road was surfaced with Limestone DSA and French drains were installed to improve drainage.

Additional Activities and Accomplishments

- In August 2014, an aquatic passage friendly culvert was installed on an UNT to Salmon Creek on FR 216 and road surfacing and drainage were improved to reduce sedimentation.
- During the summer of 2014, the USFS partnered with Jenks Township to improve a township road which contributed storm runoff and sediment loads to Little Salmon Creek. Sediment reduction was improved through improved road surfacing and road drainage. This project replaced four culverts on small streams with aquatic passage friendly culverts.

Future Activities

- USFS and Trout Unlimited have begun planning for a large wood addition project on Tionesta Creek. This will be a large project that will include various large wood structures.

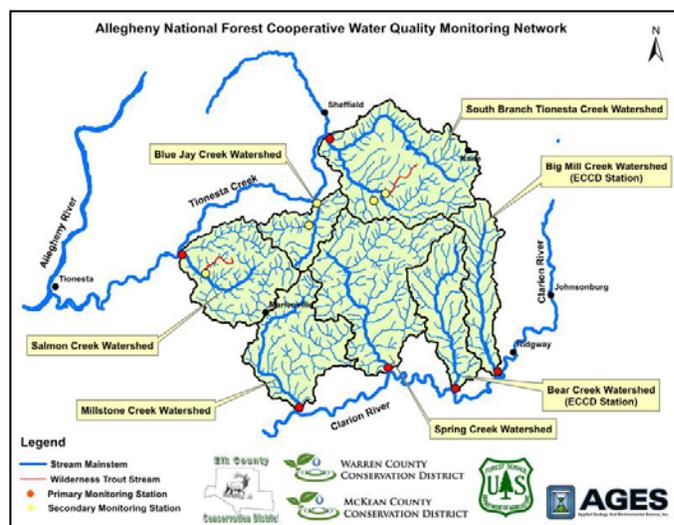
Tionesta Lake, Adopt a Lake 2013, Handshake Partnership

The United States Army Corps of Engineers (USACE) rangers from Tionesta Lake along with the project manager, have been searching over the last few years for a great project for a Handshake Application, and we found it!

The Kellettsville Campground is located in the southern portion of Allegheny National Forest and is a true gem when it comes to quiet camping and recreational opportunities. It is also a great place to meet with friends and family and enjoy fishing, hiking, canoeing, hunting, and other recreational adventures. The campground could provide additional opportunities. Specifically, the USACE along with its partners would like to enhance the Kellettsville recreation area with the addition of a 24-foot x 36-foot multi-purpose pavilion to expand opportunities for campers and other visitors. It would also provide an area for partners, Trout Unlimited, U.S. Forest Service, and Forest County School District conduct environmental education and conservation programs to schools and visitor groups.

The campground currently has the needed infrastructure to support the delivery of environmental education programs with ample parking, restrooms, secure grounds, and three local streams, Tionesta Creek, Salmon Creek, and Blue Jay, that converge on USACE property.

Our vision is to make the proposed pavilion a central feature of the campground and have it function as a student/community environmental education center. The Forest County School District received a 2012 Science, Technology, Engineering, and Math (STEM) Grant to develop and deliver locally based environmental education programs built around real time satellite stations and data loggers that are currently monitoring water quality at the Kellettsville Campground.



Forest School District administrators and teachers are working with IFCTU (Iron Furnace Chapter of Trout Unlimited) to expand the use of existing data in classrooms and to bring students to the Kellettsville Campground for hands-on environmental education classes built around activities in watershed science/stream ecology that meet or exceed PA science curriculum standards.

STEM funding will allow students to learn how water quality relates to land use, watershed processes, and freshwater biological communities.

The monitoring station located on Salmon Creek at the Kellettsville Campground that is operated by the IFCTU sends water quality data to the internet every 4 hours. The data is available to the schools and public and can be viewed on the IFCTU web page at: www.ironfurnacetu.net.

Currently there are no shelter facilities at the campground or nearby on U.S. Forest Service land. Although the primary purpose for the proposed pavilion is educating students, this structure will also be enjoyed by a wide variety of visitors and community members.

Tionesta Lake, Adopt-A-Lake

USACE Tionesta Lake staff have partnered with Forest County Sheriff's Department, Forest and Warren County Probation Offices, Girl Scout Troop #30715 and the USFS, to place recycled Christmas trees into Tionesta Lake for fish habitat. Volunteers and employees also collected trash from the lake's shoreline and campground.

The day's events were planned in celebration of Earth Day and helped to maintain the majesty of Tionesta Lake for its 680,000 annual visitors. In total, 38 volunteer and employees spent four hours installing 50 trees and collecting nearly 50 bags of litter, used tires, and some very large pieces of metal.



Volunteers prepare Christmas trees for placement in the lake.



Volunteers return with a load of trash during the fourth annual Tionesta Lake Cleanup

This event was successful thanks to the following team members: Supervisory Natural Resource Management Specialist Rodney Daum, Lake Project Assistant Joella Zaffino, Park Rangers Ricky McKee and Luke Houston (event coordinators), Jason Quinn and Jason Bowers.

North Country Trail Connector

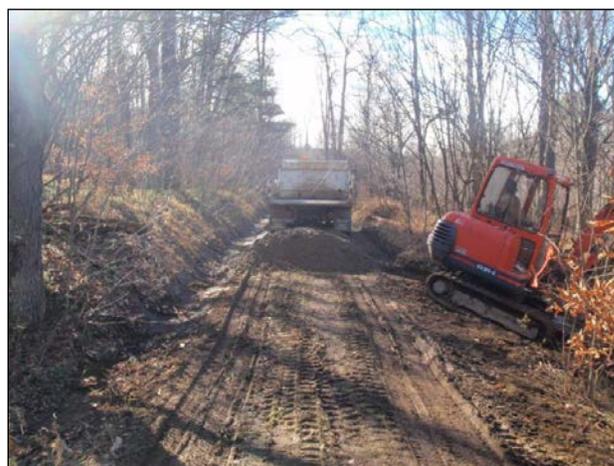
- **Partners/Sponsors: Pennsylvania Game Commission, Pennsylvania DCNR Bureau of State Parks, and U.S. Forest Service**

The North Country Trail, which stretches 4,650 miles from eastern New York to western North Dakota, now has an improved spur that connects it with Chapman State Park. In May 2014, a ribbon-cutting ceremony marked the official 'opening' of the North Country Trail Connector. One of 11 National Scenic Trails, 96 miles of the NCT meanders through the Allegheny National Forest. With the 5.6-mile-long North Country Trail Connector, travelers on that cross-country trail have an improved option of visiting Chapman State Park with its lake and facilities. The NCCT also connects with the Tanbark Trail at its southern terminus.

The improvement project dates back to 2007, when a survey to address water quality in Tionesta Creek survey found an unmaintained forest road, which runs from Chapman State Park to Hearts Content Road at Dunham's Siding, to be negatively impacting the West Branch of Tionesta Creek through sedimentation. This road also runs through State Game Lands 29 where it is designated a horse and bike trail. The West Branch is classified as a High Quality Cold Water Fishery and some of its tributaries are designated Exceptional Value Streams.



DCNR and Penn DOT work together to apply DSA limestone surfacing on the Chapman State Park portion of the NCCT



Crowning the road and cleaning the ditch line on the Chapman State Park portion of the NCCT

The Allegheny Watershed Improvement Needs Coalition (WINs) reconstructed this old road and created the North Country Connector Trail (NCCT). The NCCT connects the recreationally diverse Chapman State Park to the NCT and in turn other recreational sites on the equally diverse ANF.

The new NCCT allows opportunities for hiking, biking, skiing, horseback riding, wildlife viewing and access for hunting and fishing. The NCCT, now complete, is a model project that demonstrates how ecological problems, restoration and recreational improvements are a cause and effect resulting in benefits for the earth, the wildlife and the people. One of the goals of the U. S. Forest Service on the ANF is to work across boundaries to accomplish goals.



Trail dedication

Key partners in this project include: the Pennsylvania Department of Conservation of Natural Resources, Pennsylvania Game Commission, Penn Soil Resource Conservation and Development Council, Northwest Commission, Warren County Planning and Zoning Commission, Western Pennsylvania Conservancy, Allegheny Outdoor Club, and the USFS.

Project Timeline

- WINs pre-project monitoring fish surveys were completed in July, 2008 and macro-invertebrate surveys were completed in the spring of 2009.
- The NCCT was added to Warren County's Greenways Plan in August of 2008.
- DCNR, Pennsylvania Fish and Boat Commission, and the USFS completed a shoreline stabilization project in Chapman State Park in October, 2008.
- The USFS, PGC, AOC, and Western Pennsylvania Conservancy completed a road decommissioning project on SGL29 in May, 2009 (see Earth Day 2009).
- In May, 2010, DCNR partnered with Penn Soil RC&D Council to obtain a \$10,000 Northwest Greenways Grant to reconstruct the Chapman State Park portion of the NCCT.
- In May, 2011 Chapman State Park personnel worked with Penn DOT crews through an Agility Agreement to place 200 tons of limestone along the portion of the trail through Chapman SP. This portion of the trail is now complete.
- In fall of 2012, the USFS and PGC began work on the remainder of the trail (96 percent) using \$250,000 in American Recovery and Reinvestment Act (ARRA) funds to reconstruct the trail across State Game Lands 29 and the Allegheny National Forest. This phase of reconstruction was projected to be completed in summer 2013, but ran short of funds to complete the entire reconstruction.
- In fall 2013, kiosks were installed at each end of the trail to inform visitors about the trail and other recreational opportunities in immediate area.
- Partners are now in search of additional funding to complete the reconstruction of the roadbed through several especially wet areas and to place surfacing material over the entire length. Engineered cost estimates place the cost of completion at approximately \$180,000.

Large Wood Re-introductions

➤ Sponsor: U.S. Forest Service

In 2013, the USFS began the systematic reintroduction of large wood (LW) into streams throughout the Allegheny National Forest. This has been accomplished using a variety of techniques including the felling of whole trees directly into small headwater streams. Here's a little background on why.

Before the 1970s, LW was generally considered a nuisance or hazard in streams throughout the world. LW was systematically removed from streams to benefit river navigation, prevent or decrease flooding, enhance log transportation, and improve fish passage. The effects included alteration of riparian habitat, changes in nutrient cycles, simplification of stream channels, and the subsequent loss of fish habitat. These consequences have existed for hundreds of years in most European streams and for the last 150 years throughout North America.



Over the last 40 years, the role of LW in streams has been re-examined and our understanding of that role has fundamentally shifted, as has the treatment of LW in streams. An emerging body of literature has documented the role of LW in structuring the physical template in streams, the importance of wood in nutrient cycles, and the role of LW in streams as fish habitat. A growing recognition that LW is an important component in stream systems worldwide has caused researchers and managers to examine the potential for stream restoration or rehabilitation by adding LW to streams.



In the short-term, directionally felling trees into a stream will provide an immediate, direct benefit to the stream's physical environment and its fisheries. In the longer-term, the stream benefits from the thinning of its riparian corridor. Thinning enables the remaining live trees to grow bigger and faster to a mature forest condition that will eventually begin to provide for the natural recruitment of LW to the stream.

Allegheny WINs Project Funding

(April 2007 – December 2014)

CLARION RIVER WATERSHED				
Project	Objectives	Sponsor	Grantor	Funding
Bear Creek Acid Remediation	construct passive treatment pond systems	Headwaters RC&D (HRC&D)	Commonwealth Financing Authority	\$ 227,185
			Domtar	10,000
Big Mill Creek Acid Remediation	construct passive treatment pond systems	Elk County Freshwater Association	PA Dept. of Environmental Protection (DEP) - Growing Greener	393,000
			PA Dept. of Conservation and Natural Resources (DCNR)	250,000
			DEP - Growing Greener	414,000
			Stackpole Hall Foundation	50,000
	post project monitoring & assessment	HRC&D	DEP - Growing Greener	26,200
Clarion River Dispersed Recreation	eliminate erosion, sedimentation, and sanitation concerns	Elk County Commissioners	DCNR	107,700
Clarion River Bank Stabilization	bioengineering streambank stabilization	WPC	Northcentral Greenways Block Grant	27,000
Spring Creek Watershed Restoration	eliminate aquatic organism passage (AOP) barriers, decommission roads, repair and add limestone to dirt and gravel roads to improve drainage and reduce sedimentation; improve instream and riparian habitat	US Forest Service (USFS)	USFS - K-V Trust Fund	118,860
			Garden Club Federation	7,500
			USFS - Stewardship End Results Contracting (SERC)	110,000
		Western Pennsylvania Conservancy (WPC)	National Forest Foundation (NFF)	15,000
			WPC	50,000
		PA Fish & Boat Commission (PFBC)	PFBC - Cooperative Habitat Improvement Funds (CHIP)	6,000
		PA Game Commission (PGC)	WPC	20,000
Clarion River Watershed Subtotal				\$ 1,832,445

TIONESTA CREEK WATERSHED				
Project	Objectives	Sponsor	Grantor	Funding
Bobbs Creek	eliminate (3) AOP barriers, reduce erosion and sedimentation	USFS	National Wild Turkey Federation	\$ 10,000
			USFS SERC	200,000
East Branch Tionesta Creek Aquatic Organism Passage	eliminate (10) AOP barriers on tribs	USFS	NFF	211,000
			National Fuel Gas	90,000
Ross Run	fish habitat improvement project (FHIP)	Kellettsville Sportsmen Club (KSC)	KSC	4,230
			Collins Pine	650
			PFBC	11,315
		USACE	USACE	650
Salmon Creek	UNT Salmon (FR216) AOP	USFS	USFS - timber sale	18,550
	Lt Salmon (Twp Rd) AOP		USFS - CMLG Legacy	150,000
	The Branch (FR145) large wood FHIP			30,000
South Branch Tionesta Creek	UNT Martin Run (FR152) AOP	USFS	USFS - SERC	30,000
Tionesta Lake Cleanup (2011 - 2014)	remove trash & litter from impoundment	USACE	multiple	1,700
Tionesta Lake FHIP	FHIP	USACE	USACE	2,500
West Branch Tionesta Creek Watershed Restoration	North Country Connector Trail - eliminate AOP barriers, erosion & sedimentation, enhance rec.	USFS	USFS - American Recovery and Reinvestment Act	250,000
		PGC	PGC	50,000
		DCNR / Penn Soils RC&D	Northwest Greenways	11,300
	Chapman Lake bank stabilization project	DCNR	DCNR	12,510
			PFBC	2,000
	FHIP	USFS (Farnsworth)	PFBC - CHIP	1,500
			USFS - watershed funds	5,914
			PFBC - CHIP	2,138
			PGC	1,680
			DCNR (Chapman SP)	DCNR
		PFBC - CHIP	1,076	
Kellettsville Env. Ed. Pavilion	construct environmental ed. pavilion at USACE Kellettsville Campground	Trout Unlimited - Iron Furnace Chapt (IFCTU)	US Army Corps of Engineers (USACE)	19,000
Tionesta Creek Watershed Subtotal				\$ 1,119,353

UPPER AND MIDDLE ALLEGHENY RIVER WATERSHED				
Project	Objectives	Sponsor	Grantor	Funding
Allegheny Reservoir Cleanup (2005 - 2014)	clean & maintain impoundment	USFS	USFS	\$ 9,000
			multiple	10,000
Allegheny River Cleanup (2009 - 2014)	remove trash & litter from 37-mile section of the Allegheny River and two major tributaries, Brokenstraw and Conewango Creeks	USFS	Allegheny Outfitters	8,000
			National Public Lands Day Grants	3,000
			Veolia	8,000
		corporate donations	10,000	
		Conewango Creek Watershed Association (CCWA)	multiple	4,000
Big Bend Recreation Area	Bird Viewing Platform - construct a bird-viewing platform and a Riverside Watchable Wildlife Trail overlooking the Kinzua Dam and Allegheny River to provide an environmental education and recreation opportunity	Penn Soil Resource Conservation & Development Council (PSRC&D) and Allegheny Outdoor Club (AOC)	Allegheny Outdoor Club	955
			Boy Scouts of America - Eagle Scout project	1,950
			Community Foundation of Warren Co. (CFWC)	9,500
			DCNR - Lumber Heritage Region	25,000
			Eastern National Forest Interpretive Association (ENFIA)	500
			Northern Allegheny Conservation Association	2,000
			Warren Co. Council of Sportsman	1,500
			Water Resources Education Network	280
			corporate donations	32,880
			USACE	USACE
			3,000	
		Boat launch - improve boater access and address safety concerns	AOC & USACE	CFWC
			USFS	7,500
			corporate donations	12,000
Big Four Wetland Restoration	Knotweed eradication	CCWA	CCWA	1,160

UPPER AND MIDDLE ALLEGHENY RIVER WATERSHED (continued)				
Project	Objectives	Sponsor	Grantor	Funding
Brokenstraw Creek	streambank stabilization	WPC	Constellation Energy	\$ 5,000
			Foundation for PA Watersheds	15,400
			Northwest PA Block Grants	28,000
Brook Trout Surveys and Habitat Restoration	unassessed waters brook trout surveys and habitat restoration	WPC	National Fish & Wildlife Foundation	49,000
	fish and physical surveys of culverts		USFS	15,000
Conewango Creek	Capacity Building Grant	CCWA	Foundation for PA Watersheds	27,000
	Conewango Creek Water Trail		CCWA	2,500
	environmental education		corporate donations	6,500
	Water chestnut eradication		CCWA	800
Conewango Creek Dam Removals	Hospital dam removal	American Rivers (AR)	AR	65,000
			DEP - Division of Dam Safety	25,000
			Ohio River Basin Fish Habitat Partnership (ORBHP)	40,000
	Carter Dam removal (mussel salvage)		AR	8,500
Dutchman Run	dam removal	American Rivers	American Rivers	35,000
			DEP - Growing Greener	184,464
			Orvis	10,000
			USFS	30,000
Riparian Tree Plantings	riparian tree plantings in priority watersheds	WPC	R. K. Mellon Foundation (1/3)	100,000
			Colcom Foundation (1/10)	40,000
Watershed Restoration	conservation and restoration	WPC	Colcom Foundation	100,000
McKean Co. Acid Mine Drainage (AMD)	Railroad Run passive treatment system (PTS)	MCCD	DEP - Growing Greener	430,480
	Hamlin Run PTS			540,900

UPPER AND MIDDLE ALLEGHENY RIVER WATERSHED (continued)				
Project	Objectives	Sponsor	Grantor	Funding
McKean County FHIP Efforts	stabilize streambanks, create miles of riparian area, plant trees	McKean County Conservation District (MCCD)	Casella	\$ 52,300
			DEP - Growing Greener	150,000
			DEP - Stream Improvement Program	117,020
			Midwest Fish Habitat Partnership	39,000
			PFBC - Sinnema-honing Watershed Grant (SWG)	255,000
	PFBC - SWG		100,000	
	Wildcat Park dam removal		Patagonia	8,000
Marilla & Gilbert Reservoirs	PFBC - SWG	100,000		
McKean Co. agricultural BMPs	agricultural BMPs and streambank stabilization	MCCD	DEP - Growing Greener (tributaries to the Allegheny River)	262,352
				298,948
				280,155
		WPC	PA Dept. of Community & Economic Development	164,000
		US NRCS - Conservation Innovation Grant	58,500	
McKean Co. Environmental Education	bird banding on ANF	MCCD	DEP - Env. Ed. Grant	3,000
			Northcentral Greenways	9,900
Meade Run Ponds Project	replace/repair outflow boxes and intake pipes, fish and wildlife habitat improvements	USFS / PFBC / PGC	PFBC - SWG	20,000
			PFBC / PGC	18,480
			USFS watershed funds	6,968
Morrison Run Trail (McKean Co.)	trail improvements	PSRC&D	PSRC&D	4,000

UPPER AND MIDDLE ALLEGHENY RIVER WATERSHED (continued)				
Project	Objectives	Sponsor	Grantor	Funding
Morrison Run Watershed Restoration	decommission heavily eroded ford	CCTU	CCTU	\$ 800
			First Energy	1,000
			PA General Energy	1,000
	fish habitat improvement	CCTU	PFBC - CHIP (2009 - 2014)	3,200
	streambank stabilization (BPRR trestle)	USFS	Gas & Oil Management	500
			USFS	2,500
	Lower' dam removal, bridge replacement, and streambank stabilization	CCTU	CCTU	1,200
			PGC	25,000
			USFWS	16,000
	aquatic organism passage restoration (FR156 crossing)	WPC and CCTU	CCTU	5,480
			Colcom Foundation	5,288
			Coldwater Heritage Partnership (CHP)	10,000
			Gas & Oil Management	14,680
Mead Oil			5,000	
Oak Hill Timber			2,061	
Sugar Run AOP Project	USFS	USFS Secure Rural Schools Act - Title 2	30,000	
		Shinglemill Creek (FR271) crossing replacement	EBTJV	80,000
		Sugar Run (FR182) crossing & road decom.	USFS SERC	30,000
South Branch Kinzua Creek	Phase I - construct acid precipitation PTS, reduce sedimentation, and replace undersized culverts	USFS	USFS SERC	15,000
		PFBC	PFBC	120,000
	Phase II	USFS	EBTJV	25,000
		USFS	Road maintenance funds	104,482
Willow Bay	FHIP and wetland restoration	WPC	USFS KV and watershed funds	60,000
Upper and Middle Allegheny River Watershed Subtotal				\$ 4,494,415

MONITORING AND ASSESSMENT				
Project	Objectives	Sponsor	Grantor	Funding
Brokenstraw Creek Conservation Plan	establish baseline dataset, document threats, develop recommendations	WPC	CHP	\$ 5,000
Browns Run Conservation Plan				\$ 5,000
EB Tionesta Conservation Plan				\$ 4,300
Clarion River Mussel Surveys	ascertain the status of the freshwater mussel populations in the Clarion Wild & Scenic River	USFS	Elk County Conservation District (ECCD)	\$ 500
			USFS	\$ 20,000
			WPC	\$ 10,000
Hellbender Surveys	ascertain the status of the hellbenders in western PA; habitat restoration	WPC	DCNR - Wildlife Resource Cons. Grant	\$ 36,271
			Colcom Foundation	\$ 17,500
			DCNR - Wildlife Resource Cons. Grant	\$ 35,006
			National Fish & Wildlife Conservation Agencies - Regional Cons. Needs Grant	\$ 15,800
"Rainmaker" Sediment Production Study	quantified sediment production roads impacted by the shallow oil and gas production on the ANF	USFS	US Dept. of Energy - National Energy Tech. Laboratory	\$ 75,000
			USFS, Northern Area Research Station	\$ 5,000
			USFS, ANF	\$ 12,000
Shale Gas-Related Monitoring	monitoring of focus areas across PA shale gas region	WPC	Richard King Mellon Foundation (1/4 on ANF)	\$ 170,000
Tathers Run Watershed Assessment	establish baseline dataset, document threats, develop recommendations	TUFC	Coldwater Heritage Partnership	\$ 6,900

MONITORING AND ASSESSMENT (continued)				
Project	Objectives	Sponsor	Grantor	Funding
Water Quality Monitoring and Stream Assessments	monitoring water quality and flow and assessing streams before, during, and after Marcellus Shale gas drilling operations	ECCD	Colcom Foundation	\$ 146,000
			ECCD Act 13 Funds	\$ 5,560
			Foundation for PA Watersheds	\$ 20,000
			Headwaters Charitable Trust	\$ 1,600
			Prochemtech Int.	\$ 2,000
			Stackpole Hall Foundation	\$ 65,000
			Toby Creek Watershed Assoc.	\$ 2,000
		MCCD	Colcom Foundation	\$ 23,600
			DEP - (604B) "stimulus money"	\$ 25,955
			DEP Environmental Education Grant	\$ 7,500
			SM Energy	\$ 6,151
		IFCTU	Colcom Foundation	\$ 150,000
			WV Water Resources Research Institute - 3 Rivers Quest Grant	\$ 100,000
				\$ 39,700
Monitoring and Assessment Subtotal				\$ 1,063,343
TOTAL EXTERNAL FUNDING*				\$ 8,509,556

2014 VOLUNTEER CONTRIBUTIONS				
Allegheny Reservoir Cleanup (10th Annual)	collect trash from 38 miles of reservoir shoreline	USFS, USACE, PFBC, and 9 other organizations	97	776
Allegheny Reservoir FHIP	construct and install pine tree and porcupine crib structures	KFWA, USFS, USACE, and PFBC	61	310
Allegheny Reservoir Gill Net Surveys	annual survey at 35 locations	USFS, PFBC, and SNI	28	224
Allegheny River & Conewango Creek Cleanup (6th Annual)	collect trash from 31 miles of the river and two major tributaries	CCWA, USACE, USFS, WCAPP, and 68 other organizations	246	1,968
Brook Trout Refuge Areas	maintain boundary wires and signage	KFWA and PFBC	23	86
Morrison Run Watershed Restoration	fish habitat improvement	CCTU, PFBC, and USFS	10	40
PA Cleanways (McKean County)	litter pickup along McKean Co. streams	MCCD	36	130
Ross Run	fish habitat improvement	Kellettville Sportsmen's Club, PFBC, and USACE	30	180
Tionesta Lake Cleanup (4th Annual)	collect trash from 12.6 miles of reservoir shoreline	USACE, USFS, and others	30	180
Tionesta Reservoir FHIP	collect trash from 12.6 miles of reservoir shoreline	USACE, USFS, and others	25	100
Water Chestnut Eradication	hand removal from Conewango drainage and Allegheny River at Warren	CCWA and WCCD	12	320
Water Quality Monitoring and Stream Assessments	monitoring water quality and flow and assessing streams before, during, and after Marcellus Shale gas drilling operations	MCCD	120	240
		TUIFC	32	200
Brokenstraw Creek Streambank Stabilization	stabilizing eroding banks on private land	WPC	4	32
2014 VOLUNTEERS & HOURS DONATED*			754	4,786

NOTE - Since 2008, WINs partners have recorded **33,754** hours donated by **5,005** volunteers in support of a wide range of watershed restoration efforts. Without all of those wonderful volunteers and their gracious donations of time and energy, WINs could not succeed.

Allegheny WINs Coalition Partners

Partnerships and volunteers have made the WINs coalition the success that it is. Credit is due to various individuals from the organizations and government agencies listed below.

Non-profits

Acronyms

Allegheny Outdoor Club AOC	
Audubon Nature Center	ANC
American Rivers	AR
Boy Scouts of America.....	BSA
Conewango Creek Watershed Association.....	CCWA
Elk County Freshwater Association	ECFA
Friends of Allegheny Wilderness.....	FAW
Headwaters Resource Conservation & Development Council	HRCDD
Kellettville Sportsmen's Association.....	KSA
Kinzua Fish & Wildlife Association.....	KFWA
National Wild Turkey Federation.....	NWTF
Penn Soil Resource Conservation & Development Council	PSRCD
Pennsylvania Council of Trout Unlimited	PATU
Pennsylvania Council of Trout Unlimited – Cornplanter Chapter	CCTU
Pennsylvania Council of Trout Unlimited – Iron Furnace Chapter	IFTU
Western Pennsylvania Conservancy.....	WPC

County Agencies

Elk County Conservation District	ECCD
Forest County Conservation District	ECCD
McKean County Conservation District	MCCD
Warren County Adult Probation & Parole	WCAPP
Warren County Conservation District	WCCD
Warren County Planning & Zoning Commission.....	WCPZC

State Agencies

Pennsylvania DCNR – Bureau of State Parks	DCNR BSP
Pennsylvania DCNR – Bureau of Forestry	DCNR BOF
Pennsylvania DEP – Northwest Regional Office	DEP
Pennsylvania DOT – Engineering District 2-0.....	PA DOT
Pennsylvania Fish & Boat Commission – Division of Habitat Management	PFBC
Pennsylvania Game Commission – Bureau of Wildlife Habitat Management	PGC

Federal Agencies

US Army Corps of Engineers – Kinzua Dam and Tionesta Dam	USACE
US Forest Service – Allegheny National Forest	USFS ANF
US Forest Service – Northern Research Station	USFS NRS
US Fish & Wildlife Service – Great Lakes Field Office	USFWS

Tribal Nations

Seneca Nation of Indians – Fish & Wildlife Department.....	SNI
--	-----