

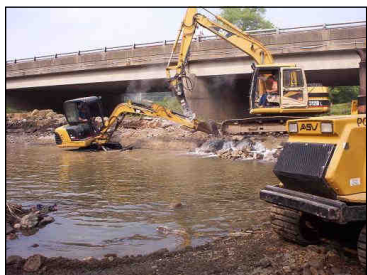
THE CATALYST

SLIPPERY ROCK WATERSHED COALITION MONTHLY ACTIVITIES UPDATE

THIS MONTH'S MEETING: Thursday 10/13 at 7 pm at Jennings Environmental Education Center, pizza and pop provided. 9/8/05 Meeting Attendance: M. Brewer, C. Cooper, C. Denholm, M. Dunn, D. Johnson, V. Kefeli, D. Macurak, "Baby" Jordan Macurak, D. Sloan, W. Taylor

A Year of Changes for Wolf Creek

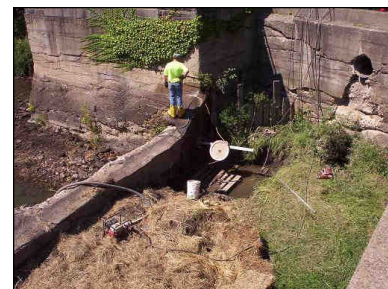
A lot can happen in a year ... and it has for the section of Wolf Creek that flows through Grove City. In the summer of last year, removal of Grove City Borough's two dams was still in the planning stages. Now, both are gone. The history of Grove City and the history of the dams are intertwined – both dams were built to power mills more than 200 years ago, before Grove City was Grove City. The original "Lower Dam" was built by Valentine Cunningham, one of the founders of Grove City, while the "Upper Dam" was built by his brother-in-law, James Graham. The Upper Dam remained in its original location, just upstream of the Route 208 bridge over Wolf Creek. At some point, the Lower Dam was removed and rebuilt further downstream, just downstream of the Main Street bridge over Wolf Creek. After having been purchased by the Borough, the Lower Dam was converted to generate power for the Borough in 1908. Around this same time, the pool behind the Upper Dam was used as a recreational area. In fact, for a time it boasted a steamboat that took passengers on a ride from the dam, around "third island," and back. In the 1970s, the Upper Dam was also purchased by the Borough, along with a portion of the pool behind the dam. Neither dam was officially being used when the decision to remove them was made by the Borough council. Liability insurance for the dams was an issue, and the upper dam was in poor repair. In addition, the removal of the dams helps to restore the natural pattern of the streams they are built across. These patterns include migration of fish upstream, migration of nutrients downstream, and maintenance of proper water temperature and dissolved oxygen level in the stream (water within the dam pool is warmer than that within the moving stream and contains less dissolved oxygen).



PennDOT offered to include removal of the Upper Dam in a project to replace the Route 208 bridge. When difficulty in including the dam's removal in the bridge project was encountered, PennDOT removed the dam themselves. **American Rivers**, a national non-profit organization dedicated to protecting and improving the quality of the nation's waters, provided funding to remove the Lower Dam and restore the former dam pool of the Upper Dam. The funding was from a **Growing Greener Grant** they had been awarded by the **Pennsylvania Department of Environmental Protection (DEP)** for dam removal and subsequent restoration activities. The **Pennsylvania Fish and Boat Commission** created the removal plan for the Upper Dam and facilitated the provision of additional funding

for the Upper Dam restoration and Lower Dam removal through the **Natural Resources Conservation Service's Wildlife Habitat Incentive Program (WHIP)**. They also provided match funding for a portion of the available **WHIP** funds. **Beran Environmental Services, Inc. (BESI)** provided bids for the permitting and removal of the Lower Dam and the restoration efforts at the Upper Dam and was awarded both contracts.

Work on the Upper Dam began with conversations with the Borough of Grove City about what they would like to see on the land that would again be dry after the dam's removal. At first, a natural area to be used as a park was proposed, but when it became clear that the main channel of Wolf Creek would separate the park from public access, it was decided to plant native trees and shrubs with known wildlife value in the area. Instead, the park would be created on adjoining land owned by Pine Township, who had been considering developing a walking trail along Wolf Creek. Somehow, melding the two projects seemed like an excellent idea.



PennDOT removed the Upper Dam in September of 2004. The removal started a flurry of activity that involved the implementation of projects long planned by **BESI**. In October, a community clean-up occurred that focused on removing refuse from both the former dam pool and the future park area. Members of the community and students from **Grove City College** supplied the labor force. **Mekis Construction Corporation** (contracted for the bridge replacement) spread gravel to form a parking area off Route 208, and six bluebird boxes were placed by the **Mercer County Coordinator of the Bluebird Society of Pennsylvania**. Shortly before Thanksgiving, the **Boy Scouts of America**, the **Girl Scouts of the USA**, and other members of the community offered their time to clear the trail that had been designed by employees of **BESI**. After a rest for the winter, the still-developing park again became a center of activity this spring. An observation deck was built with funds provided by the **Grove City Rotary Club** and **ALCOA**, and the **Grove City Environmental Club** volunteered to help mount three Wood Duck boxes within Wolf Creek Park...

Article continues on p.2



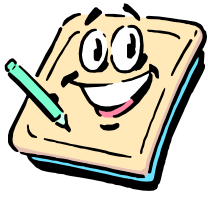
A visual comparison shows the difference between the Upper Dam area of Wolf Creek before dam removal (Left) and after dam removal (Right). See article p.1-2 for details.

...Wolf Creek Changes, continued from front page...

...One stormy Saturday morning in April, an estimated 50 volunteers arrived at the Upper Dam to plant 5,750 native trees and shrubs within the former dam pool area; work which was completed in just over five hours. These volunteers consisted of representatives from the **Grove City Rotary Club**, **ALCOA**, the **Boy Scouts of America**, the **Girl Scouts of the USA**, **Grove City College**, the **Grove City Area United Way**, **Pine Township** and **Grove City Borough** municipalities, and others from the community. Most recently, **Sonntag Excavating, Inc.** was sub-contracted to remove the rubble from the dam from where it had been piled against Wolf Creek's banks during the dam's removal, and **BESI** completed a crib wall and installed rootwads to defend the streambank immediately adjacent to the newly-installed observation deck. The bank was eroding due to the new flow patterns caused by the dam's removal and a nearly 90 degree turn made by Wolf Creek just upstream of the observation deck. These activities were funded by **American Rivers** and **WHIP**. In the spring, areas will be sown with wildflower seed, funded by **WHIP**, and planted with wildflower plugs, funded by the **Grove City Rotary Club**, to attract butterflies to the park. Future plans, if funds can be raised, include the installation of picnic tables, a boardwalk through a wetland, footbridges over tributaries crossed by the trail, and a bat condo.

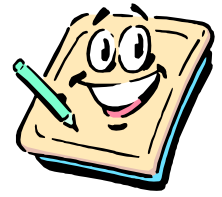
Work on the Lower Dam permitting began with a survey of the area by **Chamberlin Surveying**, continued with creation of a removal plan (complete with an approved Erosion and Sediment Control Plan) by **BESI**, and concluded with receipt of an approval letter from the **DEP's Department of Dams and Waterways**. The dam had been repaired once before, in the fifties, and a small section of the dam had been removed to de-water the pool. Following completion of the repairs, a metal plate had been installed in the cut to restore the integrity of the dam. Between the arrival of the remnants of hurricanes Frances and Ivan in the fall of 2004, the plate was removed to again draw down the pool. This allowed approximately one year for sediments behind the dam to stabilize prior to removal. Because removal of the abutments could create a stability problem, not to mention one of them is a portion of the former mill building that has been converted to Cunningham Memorial Park, it was decided to leave them, and a small slice of the dam immediately adjacent to each one. Cutting between the portion of dam that was to remain and the portion that was to be removed seemed to be the best way to keep things clean and simple. Due to the existence of a plunge pool downstream of the dam and the thickness of the dam, **Pitt Services Center** was sub-contracted to use a wire saw to complete the work. To use the wire saw, a hole must first be drilled at the lowest end of the cut. **Bob Beran** removed some of the sediment from behind the dam to allow access. The saw body was then clamped to the dam wall and an industrial-grade diamond-coated wire was threaded through the hole, across the top of the dam, and around the saw. The ends of the wire were attached to form a loop, and the saw was started. It moves the chain in a circle and creates tension, slowly pulling the wire through the dam. Once one cut was complete, **Joe Puryear of Puryear Excavating** attached a hydraulic hammer to his excavator and began to remove the dam. The hammer is rested on the dam, and with rapid up-down movements strikes the concrete, breaking it apart. In this manner, the dam was removed in layers, working from side-to-side and top-to-bottom. As pieces from the dam were chipped away, Beran used his excavator and posi-track to move debris into the plunge pool, which was estimated to be between five and ten feet deep prior to removal of the dam. Four days later, the dam was gone and Wolf Creek flowed more freely through Grove City than it had done for approximately two centuries.

-this article contributed by Anna McAnnich



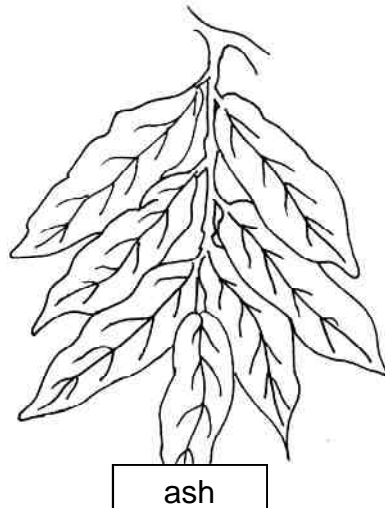
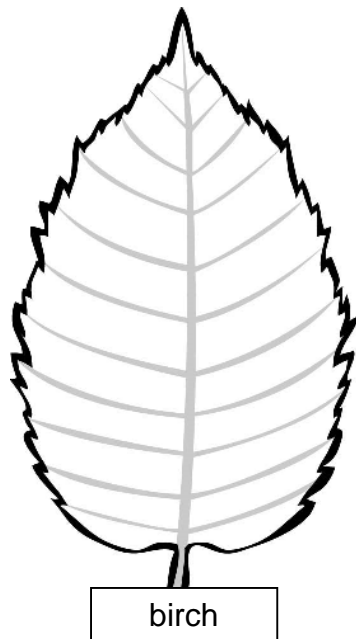
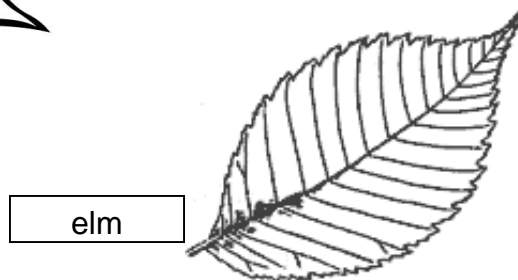
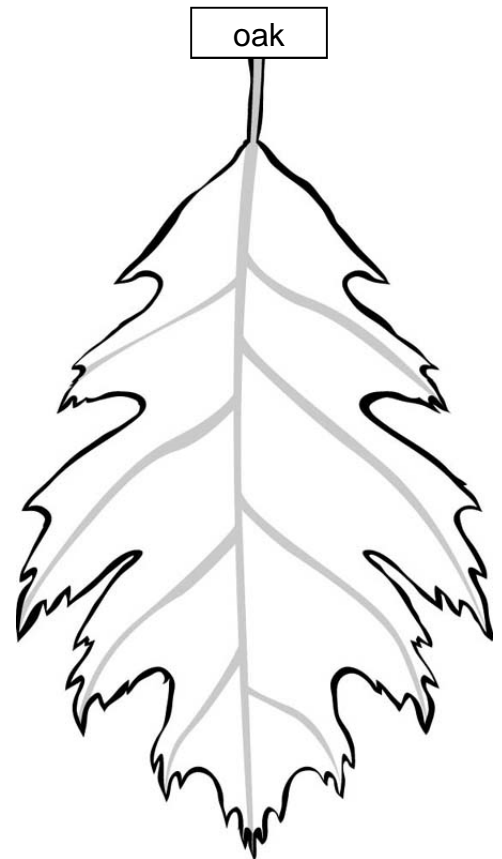
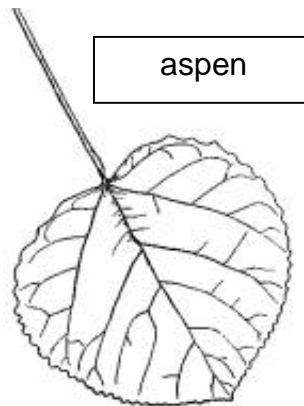
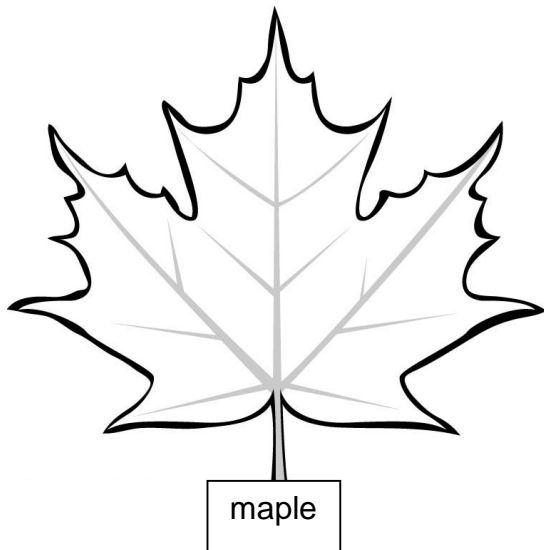
The KIDS Catalyst

SLIPPERY ROCK WATERSHED COALITION FUN ACTIVITY



BEAUTIFUL AUTUMN LEAVES!

The leaves on Pennsylvania's trees are starting to change color and fall to the ground. Do you know why this happens? Plants know to get ready for winter when they notice the days are getting shorter. Plants make a food called glucose (a kind of sugar) for energy and growth, and a chemical called chlorophyll helps them do this. Chlorophyll gives plants their green color. During winter there is not enough light or water for the trees to make food. They will rest and use the food they stored during the summer. As they shut down their food-making factories, the green color fades from the leaves. As the green fades away, we begin to see yellow and orange colors. Small amounts of these colors have been in the leaves all along. We just can't see them in the summer, because they are covered up by the green chlorophyll. The bright reds and purples we see in leaves are made mostly in the fall. In some trees, like maples, glucose is trapped in the leaves after photosynthesis stops. Sunlight and the cool nights of autumn turn this glucose into a red color. The brown color of trees like oaks is made from wastes left in the leaves. Enjoy coloring the leaves below in pretty shades of red, orange, yellow, purple, and brown! Maybe you can even find some leaves in your yard and use these pictures to identify the tree they fell from! If you mail us your paper we will send you a free gift certificate!



Name _____

Age _____

Address _____



Slippery Rock Watershed Coalition c/o Stream Restoration Incorporated
A PA Non-Profit Organization
3016 Unionville Road
Cranberry Twp., PA 16066

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The Guardian of the Adopted Highway

Some much deserved recognition heads to SRWC participant **Charlie Cooper** this month! Charlie was a one-man trash-picking machine on Thursday August 11! He single-handedly represented the SRWC in cleaning up our 1-mile stretch of I-79 between mile markers 100 and 101. On a sweltering day with high humidity, Charlie showed his dedication to the **Adopt-a-Highway** cause, working for over three hours to make the SRWC's I-79 portion cleaner and greener! And in the character of the best of SRWC's participants, he was in attendance at the monthly meeting that same night (who can pass up the delicious pizza, right?) Thank you again, Charlie, for working so hard in the heat to bag up trash from the highway! If you would like to help the SRWC with a future trash pick-up day as part of their Adopt-a-Highway project, please contact **Cliff Denholm** at 724-776-0161 for more information.

