

# THE CATALYST

## SLIPPERY ROCK WATERSHED COALITION MONTHLY ACTIVITIES UPDATE

**THIS MONTH'S MEETING:** Thursday January 13 at 7pm Jennings Environmental Education Center, pizza and pop will be provided. 12/9/04 Meeting Attendance: C. Cooper, T. Danehy, C. Denholm, L. Dologite, M. Dunn, D. Johnson, V. Kefeli, W. Taylor.

### Jennings and Watershed Education... A Perfect Match!!!!

Fall was a busy time of year for the Jennings Environmental Education Center!!! The center staff focused much of their time on teaching watershed education to students and teachers alike. The Watershed Education Program was developed by the Bureau of State Parks for students (grades 6-12) to promote investigation, research, and decision-making skills through the comprehensive exploration of watersheds. The Jennings staff has provided educational opportunities to many students from area school districts using biological, physical, and chemical testing methods. The staff has also visited several schools **to assist students and teachers with starting their own water quality monitoring programs.** School visits included **Titusville High School, Our Lady of the Sacred Heart** in Coraopolis, and **Wilmington High School.** Each school visit proved to be unique.



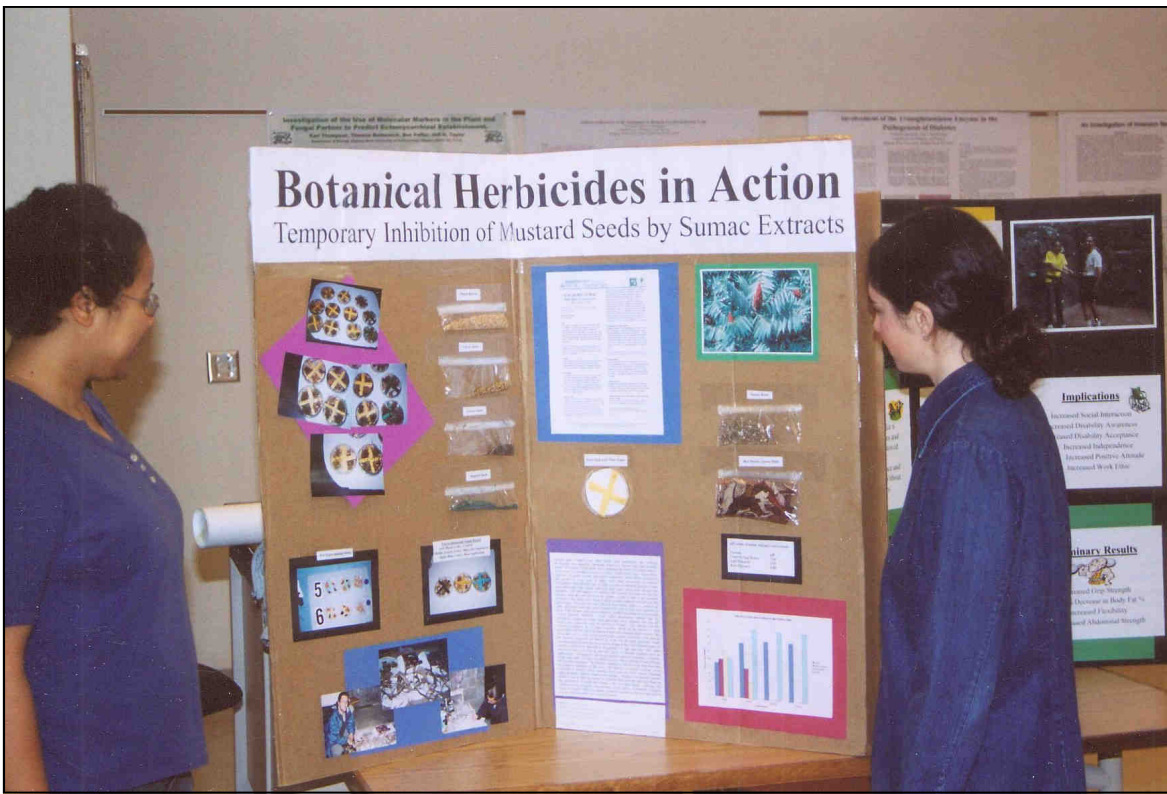
While exploring Oil Creek with **Patricia McKellop's fifty-one 11<sup>th</sup> and 12<sup>th</sup> grade students from Titusville High School, students found the overall water quality of Oil Creek to be above average.** All chemical testing was within normal limits and biological testing proved the creek to be abundant with life. Students found gigantic hellgrammites, entire rocks covered with caddisflies, plenty of stoneflies and mayflies, and many more macroinvertebrates. **Fifty 11<sup>th</sup> and 12<sup>th</sup> grade students from Wilmington High School** conducted chemical testing which revealed excellent results. **Connie White** and her students also found a nice diversity of macroinvertebrates while exploring the **Little Neshannock Creek proving the creek to be in excellent health.** **Twenty of Vicki Phelps' seniors at Our Lady of the Sacred Heart in Coraopolis found quite a surprise** compared to previous results during their stream study of **Montour Run** in late October. **Chemical results were fairly good** with the exception of the hard-

ness test, which read extremely high. The **macroinvertebrate search was poor**, finding only a few pollution tolerant organisms. The recent flooding in September impacted much of the Pittsburgh area including Montour Run. Hopefully, with time the stream health will recover.

Students weren't the only ones learning about watershed education with the Jennings staff. A **two-day Watershed Education workshop** was held at the center in October for teachers of grades 6-12. Thirteen teachers from area school districts attended the workshop to learn about the award-winning curriculum, discuss virtually all aspects of watershed education through participation in activities, and receive the curriculum to take back to their schools. By teaching the instructors about watershed education and providing them with the curriculum, many more students can be reached and educated about watersheds.



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### “Winterized” Research

What happens to soil and plant research during the winter months? It’s not time to hibernate! Instead, experiments are just moved indoors! **Valentine Kefeli**, soil scientist of the SRWC, is conducting experiments and research this winter in the basement of **Jennings Environmental Education Center**. Valentine and **David Johnson** of Jennings created the indoor environment for the investigation of plant propagation and water cleaning during the fall and winter months to have optimal light and temperature conditions, making use of fluorescent and incandescent light.

Students and volunteers worked on a fabricated soil plantation outdoors and now continue to work indoors during the colder months. Participants working on this project with Valentine include: **JEEC volunteer Robert Shearer**, (fabricated soil plantation); **Slippery Rock University students Jasmine Davis** (auxins and rooting), **Greg Boulous** (botanical herbicides), and **William Hendlee** (willow dormancy); **Carnegie Mellon University students Ryan Stahlman** (gray water platforms) and **Rebekah Keating** (water cleaning).

Valentine and his volunteers are conducting research on woody and grassy plants for water cleaning. Some woody and grassy plants are being used for vegetative propagation. Willow, poplar, and ivy cuttings were rooted in water with or without the plant hormone indolyl-acetic acid. These rooted cuttings were used for the construction of the plant platforms to examine the potential to remove waste and clean water. A combination of woody and grassy plants was tested for the cooperative development and the intensity of root growth. Active root formation on the stem cuttings placed on the platform was determined for such species as Chlorophytum, Papyrus, Kalanchoe, Salix (willow), Populus (poplar), and Hedera (ivy). Two types of plant platforms for winter and summer water cleaning were expanded. In addition, cover grasses were investigated as components of green roofs. The native plants most resistant to shading were determined. Sedums, grown on fabricated soil, were considered as light resistant plants which lost their compact type of growth in the shade.



Jasmine Davis, SRU



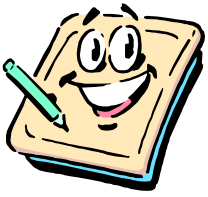
Ryan Stahlman, CMU



William Hendlee, SRU

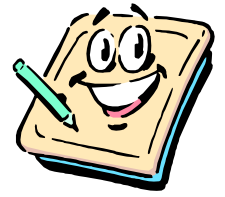


Greg Boulous, SRU



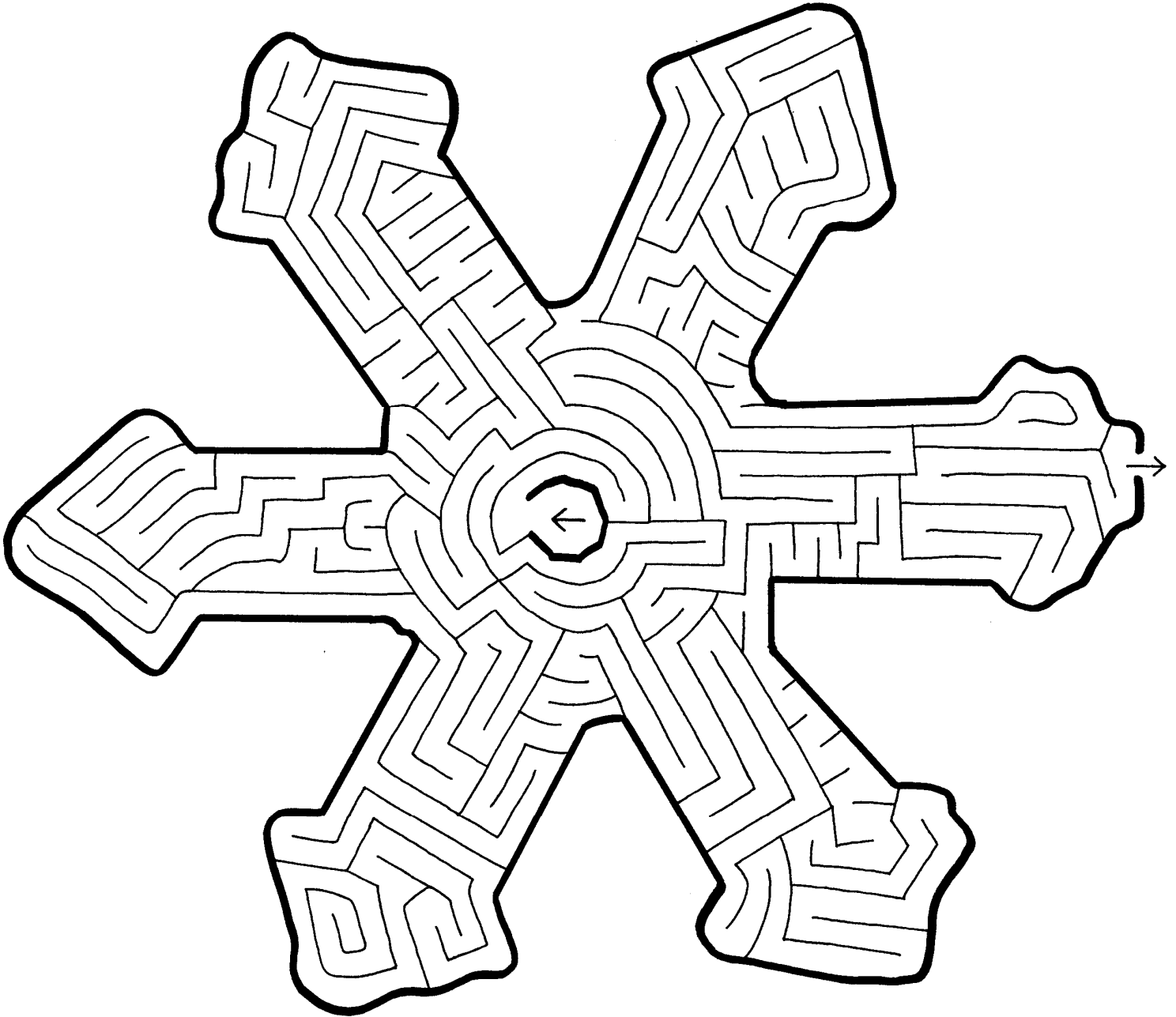
# The KIDS Catalyst

SLIPPERY ROCK WATERSHED COALITION FUN ACTIVITY



## Snowflake Maze

Will we see snow in January in the Slippery Rock Creek Watershed? Probably! Did you know all snow flakes have 6 sides, but no 2 snowflakes are the same?! Snow is frozen water that falls from the sky in the form of small white ice crystals. Snow is formed from the water vapor in the air at a temperature of less than 32 degrees Fahrenheit. Good luck with the snowflake maze below! See if you can start in the middle of the snowflake and find your way out. If you mail us your completed 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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## WISR Radio Appearance

To highlight the recent **US Dept. of Interior award, “Take Pride in America”** that was received by the Slippery Rock Watershed Coalition for their successful public-private partnership efforts, **Will Taylor, Tim Danehy, and Margaret Dunn** had the pleasure of appearing live on the radio November 10 as special guests on **WISR 680 AM. Hosted by Dave Malarkey, “It’s Your Turn” is Butler County’s only locally-originated LIVE call-in talk show.**



Image Courtesy of WISR 680 AM.

Will, Tim, and Margaret were thrilled to be able to share information about the accomplishments of the SRWC on-air with Dave and his listeners from 2:00 to 2:30 PM. Some of the topics included the on-going volunteer effort relating to the development and demonstration of passive technology at Jennings, founding of the SRWC by representatives from a local college, private industry, and state agencies, installing 15 passive treatment systems within a decade that successfully treat over 750 million gallons of abandoned mine drainage annually, and the continuing education and outreach efforts that include wetland plantings, electrofishing to document the return of fish in the Slippery Rock Creek headwaters, and providing tours of the restoration sites to hundreds of local, regional, national, and international participants.

For those interested in learning more about local happenings, Dave’s show airs weekdays from 12:30 until 2:30 PM, with the first hour of the program dedicated to open talk. **Thanks so much to Dave Malarkey and his listeners for their interest in the SRWC!!!**