

THE CATALYST

SLIPPERY ROCK WATERSHED COALITION MONTHLY ACTIVITIES UPDATE

NEXT MEETING: 7 pm on 6/8/17 at Jennings Environmental Education Center, pizza and pop provided.
5/11/17 meeting attendance: H. Bloom, C. Denholm, M. Dunn, L. Furst, B. Kuban, J. Puskas, R. Tiche, F. VanAtta

Reclamationist of the Year Award Winner: Tim Danehy!

The joint conference of the American Society of Mining and Reclamation, West Virginia Mine Drainage Task Force, and Appalachian Regional Reforestation Initiative took place April 9-13 at the Waterfront Hotel in Morgantown, West Virginia. During the conference, several awards were handed out to honor those individuals and organizations for their dedication to the reclamation of lands and waters impacted by AMD. We are excited to share the news that the SRWC's own **Tim Danehy** was named the **2017 Reclamationist of the Year!** Tim's award recognized individuals "demonstrating outstanding accomplishments in the practical application or evaluation of reclamation technology" as well as rewarding individuals "responsible for implementing innovative practices or designs for new reclamation strategies." Some highlights of Tim's accomplishments include co-founding BioMost, Inc. and co-leading Stream Restoration Incorporated as one of its Directors and Secretary/Treasurer; creating innovative and cost-effective methods of passive treatment; enhancing the sustainability of watershed protection and restoration efforts; publishing several papers, journals, book, and proceedings; piloting innovative AMD work that has led to the development of five patents. Congratulations, Tim!

Other award winners recognized at the ASMR Conference include the following, whom we also extend our heartfelt congratulations to:

The William T. Plass Award went to **Dr. Robert Nairn**, in recognition of significant contributions over his lifetime to the development of reclamation science and practice. Our great friend Bob truly has "distinguished himself in the field of mined land reclamation at the local, regional, national, and international levels." This award is the highest honor bestowed by the society and acknowledges those in teaching, research, outreach, and administration. Congratulations, Bob!

Dr. Jennifer Franklin was awarded the Richard I. and Lela M. Barnhisel Reclamationist Researcher of the Year Award. This award goes to the individual with substantial contributions to the advancement of reclamation science and/or technology through scientific research.

The Pioneer in Reclamation Award went to **Dr. Paul Ziemkiewicz**, for his significant impact and advancement of the art and science of land reclamation over his entire career, during which his research/reclamation has passed the test of time. His research helped create many of the passive AMD treatment technologies commonly in practice today, as well as helped initiate new policy and practice in mined land reclamation.

The Early Career Award in Reclamation went to **Dr. William H.J. Strosnider**, for his involvement in reclamation research, teaching, and application of reclamation technologies. The recipient of this award must have been employed for a minimum of three year, but not more than ten, and is doing outstanding work. In his short professional career, Bill has 26 journal publications and numerous conference proceedings, as well as formative service, research, and engineering expertise in Bolivia, Peru, Guatemala, Nicaragua, and Haiti. One of his more productive research efforts has been in the passive co-treatment of AMD with wastewater and sewage.

Congratulations again to Tim and to all of the winners!



Tim Danehy (Right) receiving the Reclamationist of the Year Award from Pete Stahl, president of the American Society of Mining and Reclamation.

20+ Years of SRWC Watershed Reclamation

How the Waters of Slippery Rock Creek have Improved Since 1995

Then and now...

In 1995, a gallon of gasoline cost \$1.09, Michael Jordan returned to the NBA from retirement, Toy Story was the first ever wholly computer-generated film, the DVD media storage format was announced, Windows95 was released by Microsoft... In 1995, one sampling location at Seaton Creek, a major tributary in the headwaters, had a pH of 4.5, alkalinity of 7, acidity of 63, total iron of 5.6, and manganese of 15.7. We're happy to say times have changed in the Slippery Rock Creek watershed! That same sampling point at Seaton Creek now shows a pH of 7.4, alkalinity of 69, acidity of -54, total iron of 1.0, and manganese of 1.0! That is some major improvement! Another Seaton Creek sampling point showed a 1995 aluminum level of 6.1 and a pH of 5.2, numbers that have since improved to less than 1.0 aluminum and a pH of 7.1!

Since 1995, 18 passive treatment systems have been installed in the Slippery Rock Creek Watershed, and over 200 acres of mined lands have been reclaimed back to suitable habitat for wildlife! 1 billion gallons per year of AMD water are being treated by the passive systems of the SRWC. Over 760 tons per year of iron are being removed from Slippery Rock Creek, equal to the iron in 760 trucks! Over 55 tons of aluminum no longer enters Slippery Rock Creek, an amount equal to 1.88 million soda pop cans! Roughly 760 tons per year of acidity is being removed from the creek, the equivalent of 34 tri-axle loads. Over 15 miles of stream have been significantly improved, with macroinvertebrate and plant life flourishing, and fish returning to sections of stream that haven't seen them in decades! Sampling done in 2015-2016 was accomplished as part of the Slippery Rock Renaissance Project, funded by a grant given by DCED Commonwealth Financial Authority and its Abandoned Mine Drainage Abatement and Treatment Program from the Marcellus Legacy Fund (to provide for the distribution of unconventional gas well impact fees.) Water quality data comparisons from two decades ago show we have come a long way in restoring the health of the watershed! To see all of the stream data collected in the headwaters of Slippery Rock Creek, please visit Datashed, an online database of watershed related information, at www2.datashed.org/slipperyrockcreek/.

Many of the places sampled along Seaton Creek and Slippery Rock Creek now make use of data loggers, providing a quick and easy way to regularly record water quality information. Twelve water quality data loggers (also known as sondes) were purchased by the SRWC through a Colcom Foundation grant and permanently placed throughout the watershed to cover the main stem and all major tributaries. The data resulting from the use of the data loggers provides valuable and much needed water quality information for monitoring degradation in the watershed by abandoned mine drainage. As a baseline is developed, significant changes in conductivity may indicate a discharge of pollution. We are very grateful for our volunteers who are downloading and maintaining the data loggers on a monthly basis. For more information about this monitoring program, please go to www.srwc.org/projects/data-loggers/.



The KIDS Catalyst

SLIPPERY ROCK WATERSHED COALITION FUN ACTIVITY



PA Wildlife Word Search

Pennsylvania is blessed with a wonderful variety of beautiful, exciting wildlife to observe! As the weather grows warmer, we'll be seeing more and more kinds of birds, mammals, insects, reptiles and amphibians! Try to find the names of all 24 PA species listed below hidden in the word search. Circle the words, and if you mail us your paper we'll give you a \$1 credit to Amazon (via a parent's email address). You can save up credits to buy something extra special!

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|---------------|-------------------|-----------------------|--------------|
| Gray squirrel | White tailed deer | Hummingbird moth | Green heron |
| Chipmunk | Red fox | Monarch butterfly | Canada goose |
| Porcupine | Cottontail rabbit | Luna moth | Cormorant |
| Beaver | American toad | Swallowtail butterfly | Garter snake |
| Black bear | Snapping turtle | Mallard duck | Rattlesnake |
| Bald eagle | Mourning dove | Red-winged blackbird | Bluebird |

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I	M	O	N	A	R	C	H	B	U	T	T	E	R	F	L	Y	B	E	N	H	Y	O	G	H

Name _____ Age _____ Parent email _____
 Address _____



Slippery Rock Watershed Coalition c/o Stream Restoration Incorporated
A PA Non-Profit Organization
434 Spring Street Ext.
Mars, PA 16046

Thanks to The William & Frances Aloe Charitable Foundation, Environmentally Innovative Solutions, LLC, Dominion Peoples, Amerikohl Mining, Inc., Quality Aggregates Inc., Drs. Ron & Kathy Falk Family, BioMost, Inc., Allegheny Mineral Corporation and PA DEP for their support. For more information contact: Slippery Rock Watershed Coalition, c/o Stream Restoration Incorporated (PA non-profit), 434 Spring Street Ext., Mars, PA 16046 (724)776-0161, fax (724)776-0166, sri@streamrestorationinc.org, www.srwc.org. June distribution: 313 copies

Upcoming Events at Jennings Environmental Education Center

The public is invited to attend a free program on climate change, to be held at Jennings Environmental Education Center on **Sunday, June 25th** from 2 PM to 3:30 PM. Entitled "Climate Change and Penn's Woods: What Might the Future Hold?", the possible effects of climate change in Pennsylvania will be explored. Those curious to learn more can find out how climate change may impact our state during this presentation by **Greg Czarnecki**, Climate Change and Research Coordinator with Pennsylvania's Department of Conservation and Natural Resources (DCNR). As the climate changes, plants and animals have three options – adapt, move, or die. Mr. Czarnecki's presentation will look at the current and projected impacts of climate change on our native species and forests, and the challenges and opportunities conservationists face in helping to ensure their survival. Pre-registration is not required for this event.

DiscoverE outdoor education programs for children will begin in June! Hide-N-Seekers, for children ages 4-5, is a weekly program held Tuesdays in June starting on 6/13. Participants will be introduced to insects both on land and in the water. They will learn the characteristics that define an insect, their life stages, social insects (ants and bees) and about macros in the water. A morning session at 10:30 and an afternoon session at 1:30 are both offered. DiscoverE Outdoor Explorers is tailored to young nature enthusiasts ages 6 to 8. These weekly sessions are held Thursdays in July, at 10 AM or 1 PM. Participants in Outdoor Explorers classes will be learning about "Night Creatures" - children will be introduced to animals that live and hunt in the night. Discussions will include the characteristics that make them so well suited for night living. Some of the creatures being discussed are owls, fireflies and bats. A night hike will be scheduled for the evening of July 13th, around 8:00 PM, to search for some of these elusive creatures. Lastly, DiscoverE Penn's Adventurers, for ages 9 to 12, begins Wednesday, July 26 and continues for the first two Wednesdays in August. In "Native Americans and Mother Earth" children will learn about the beliefs and customs of the American Indian's regarding Mother Earth and how they put them into practice. Some of our adventures will include building a traditional wigwam, using recurve bows to hunt for buffalo and deer, and investigating native plants and their use by the Native Americans. We will also create an Indian item to be taken home. The three Penn's Adventurers sessions will run from 10 AM to 2 PM.

Registration has begun and can be made by calling Jennings at 724-794-6011. Payment of \$5/session for Hide-N-Seekers or Outdoor Explorers, and \$10/session for Penn's Adventurers is required a WEEK BEFORE the start of the sessions.