



Photo by Diane Granger

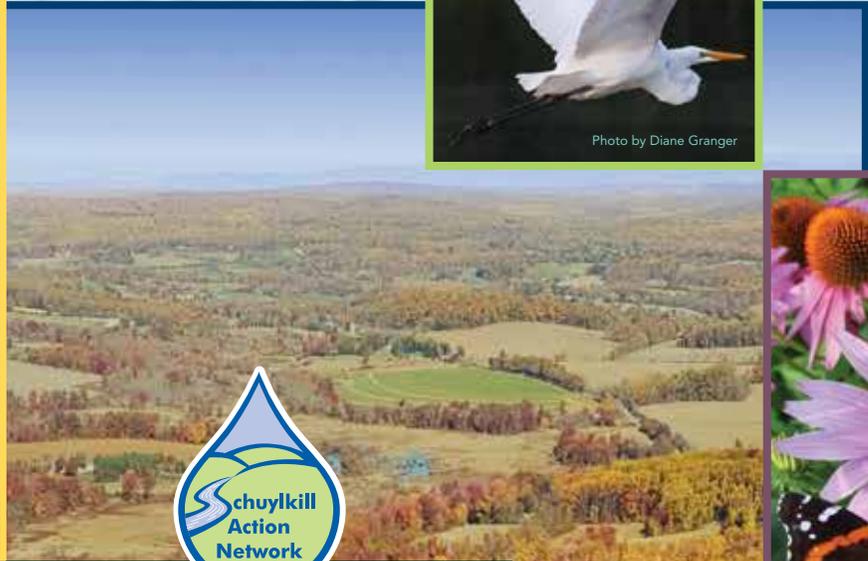


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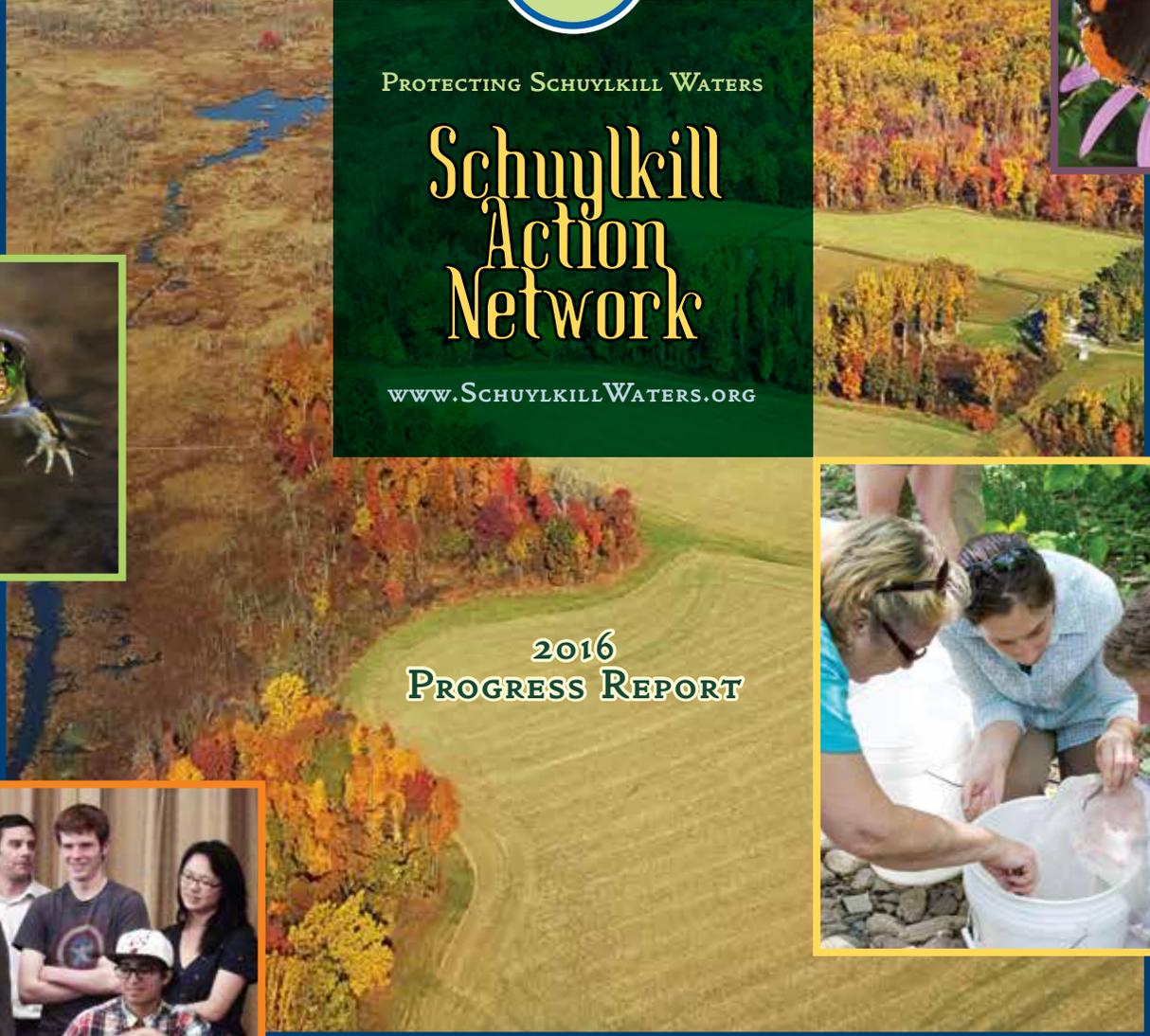
PROTECTING SCHUYLKILL WATERS

# Schuylkill Action Network

WWW.SCHUYLKILLWATERS.ORG



Photo by Diane Granger



## 2016 PROGRESS REPORT



## Abandoned Mine Drainage

**PROBLEM:** Clean rain water enters abandoned coal mines, becomes contaminated with heavy metals, such as iron and aluminum, and is released into the headwaters (or the beginning) of the Schuylkill River. The bottom of the stream gets smothered from heavy metals, and fish and wildlife cannot survive in the highly acidic (low pH) waters.

### SOLUTIONS:

- Treatment systems filter out heavy metals and raise pH before entering a waterway.
- Stream lining prevents clean rainwater from entering abandoned mines and becoming contaminated.

**WHAT WE'RE DOING:** By filling in large sinkholes (or crop falls) on Sharp Mountain in Pottsville, we've not only ensured the safety of residents, but prevented clean rain water from becoming polluted in the underground mines.

### 2015 ACCOMPLISHMENTS:

- Installed an interpretive trail at the Silver Creek treatment system.
- Continued to improve water quality at 4 treatment sites (Pine Forest, Mary D Borehole, Bell Colliery, and Silver Creek).



## Agriculture

**PROBLEM:** Cows and other farm animals produce large amounts of manure that can run off into waterways or soak into groundwater. If not stored properly, it contaminates our drinking water sources.

### SOLUTIONS:

- Manure storage tanks store manure so that it does not run off into waterways or soak into groundwater.
- Riparian buffers (trees and shrubs along a waterway) help filter manure, fertilizers, pesticides, and other pollutants before reaching the waterway.
- Stormwater controls, such as rain gutters and pipes, keep clean rain water from mixing with manure.
- Stream crossings limit cattle's access to streams.

**WHAT WE'RE DOING:** In Kutztown, Berks Nature worked with farmer, Dalton Biehl, to install two manure storage tanks on his dairy farm. These tanks can hold manure for up to 6 months (during the winter months) and be spread in the spring as a natural fertilizer. This limits the use of chemical fertilizers and prevents manure from polluting our waterways.

### 2015 ACCOMPLISHMENTS:

- Developed 56 conservation plans for 2,184 acres in Berks County.
- Awarded over \$1.5 million in funding from the Natural Resources Conservation Service for farm projects.
- Conducted 5 farmer outreach meetings and workshops.



## Education & Outreach

**PROBLEM:** Most people want to do the right thing when it comes to protecting the environment, but may not know the best way to help.

**SOLUTIONS:** Through education and outreach, the Schuylkill Action Network engages people in protecting the watershed through simple behavior changes, such as picking up pet waste and trash.

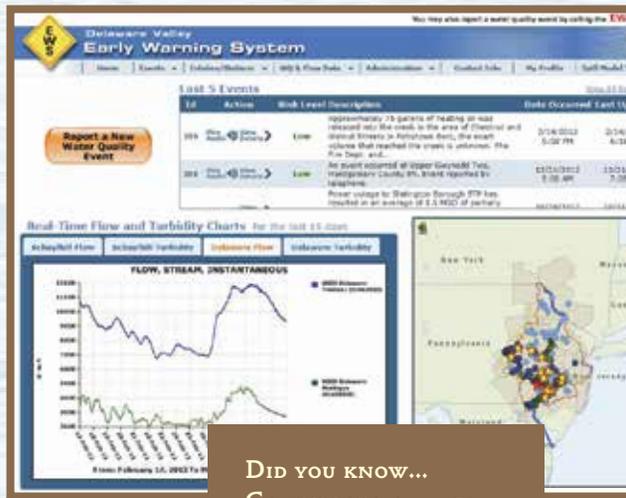
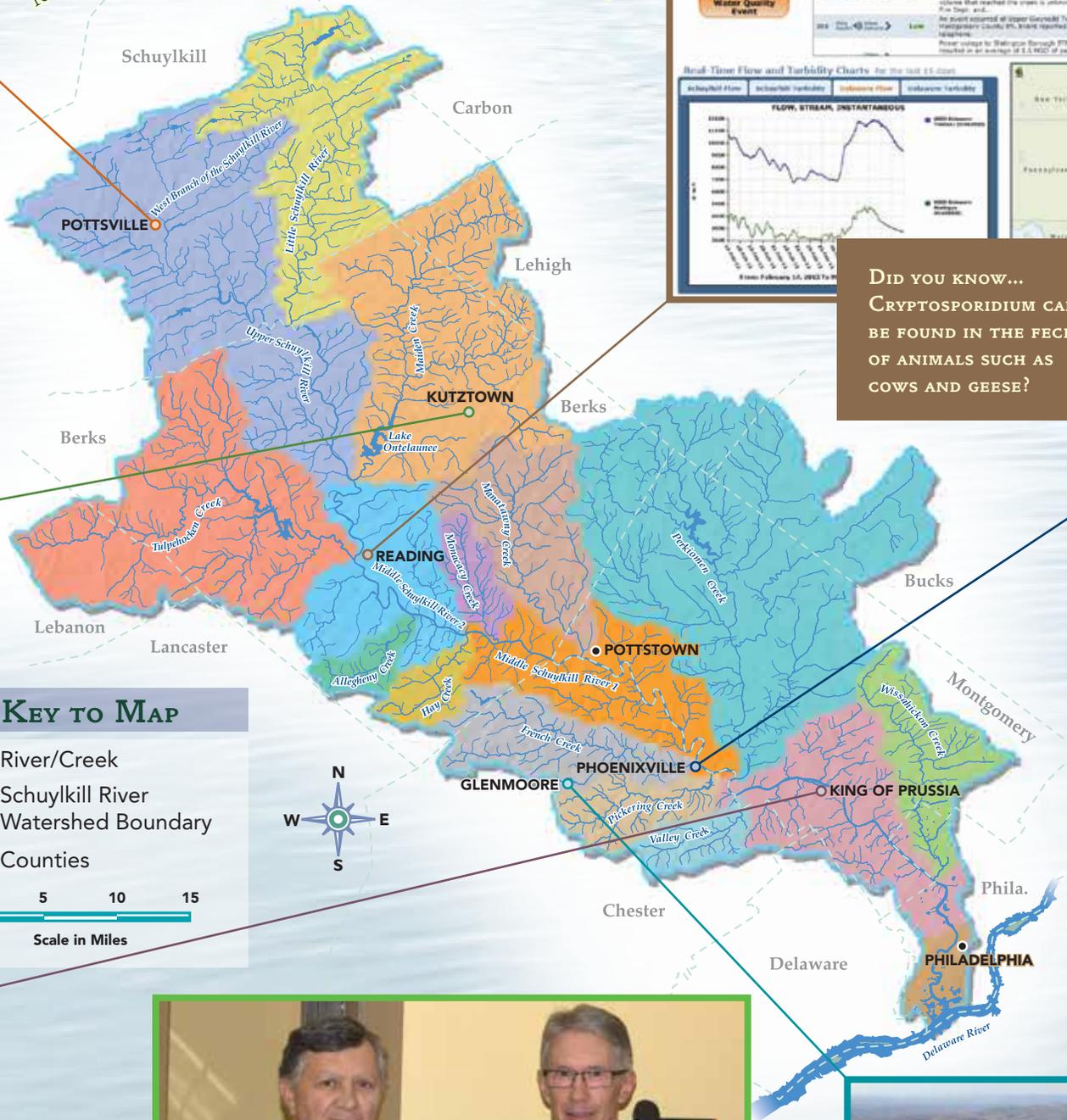
**WHAT WE'RE DOING:** Through the Schuylkill Scrub, a watershed-wide cleanup from March 1 to May 31, over 1.2 million pounds of trash was removed from our land and waters in 2015. This hands-on experience is also a huge eye-opener for participants, and often their first step to making a change in the environment.

### 2015 ACCOMPLISHMENTS:

- The Saucony Creek Brewery donated 10% of sales from their Stonefly IPA to watershed restoration work.
- Presented 3 schools with awards for protecting drinking water sources through the Schuylkill Scholastic Drinking Water Awards program.



# Map of the Schuylkill River Watersheds



**DID YOU KNOW...**  
CRYPTOSPORIDIUM CAN BE FOUND IN THE FECES OF ANIMALS SUCH AS COWS AND GEESSE?

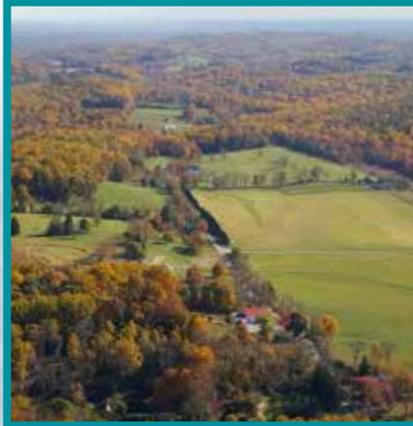
### KEY TO MAP

- River/Creek
- Schuylkill River Watershed Boundary
- Counties

0 5 10 15  
Scale in Miles



SPECIAL THANKS TO BILL MUSZYNSKI AND KURT ZWIKL FOR THEIR EFFORTS AND INVOLVEMENT IN THE SCHUYLKILL ACTION NETWORK. KURT AND BILL WERE AWARDED THE KEVIN MUNLEY (SAN MVP) AWARD AT THE ANNUAL WORKSHOP IN NOVEMBER 2015.



**DID YOU KNOW...** THAT OVER 2 MILLION PEOPLE LIVE WITHIN THE SCHUYLKILL WATERSHED? COLLECTIVELY, WE CAN MAKE A BIG DIFFERENCE IN THE WATERSHED!



## Pathogens/Compliance

**PROBLEM:** Pathogens and other pollutants harmful to our health enter and contaminate our waterways or groundwater (our drinking water sources).

**SOLUTIONS:** Prevention of pollutants entering waterways is the best way to ensure that we have clean, safe drinking water. This often starts with good communication and working together to track/investigate pollution.

**WHAT WE'RE DOING:** Philadelphia Water and Lehigh University are working together to track where *Cryptosporidium* ("Crypto"), a parasite that causes stomach pains and nausea when ingested, is coming from. This will allow us to develop strategies to limit the amount of Crypto found in our waterways.

### 2015 ACCOMPLISHMENTS:

- Compiled data on wastewater treatment plants and wildcat sewers (illegal sewers discharging untreated waste) to assess where improvements are needed.
- Continued to notify downstream water suppliers and industrial intake operators about any water quality events through the Delaware Valley Early Warning System.

## Stormwater

**PROBLEM:** Increased development in the watershed means more roads, buildings, and parking lots. These impervious surfaces (or surfaces where water cannot penetrate) do not allow water to soak into the ground and can lead to more stormwater pollution and flooding.

### SOLUTIONS:

- Rain gardens, naturalized basins, and bioswales absorb and filter stormwater before reaching our waterways.
- Rain barrels store rainwater which can be later used in the yard or house, reducing the amount of stormwater entering our streams and creeks.

**WHAT WE'RE DOING:** By working with schools to install stormwater best management practices, through our Schuylkill Action Students program, we can reduce the amount of stormwater pollution entering streams and creeks, while also educating students about stormwater. This year, Green Valleys Watershed Association worked with Phoenixville Area Middle School students to install an 850 square foot bioswale, a natural feature that is designed to let rainwater soak into the ground.

### 2015 ACCOMPLISHMENTS:

- Hosted a tour of stormwater projects, including basins, rain gardens, and bioswales.
- Received funding to install 3 new Schuylkill Action Students stormwater projects.



**STORMWATER IS RAINWATER THAT RUNS OVER HARD SURFACES, SUCH AS ROADS AND SIDEWALKS, PICKING UP WHATEVER CONTAMINANTS IT COMES ACROSS.**

## Watershed Land Protection

**PROBLEM:** Forests and other natural areas are important in cleaning our waters and giving us natural places to enjoy the watershed through recreation, but sometimes gets displaced by development.

**SOLUTIONS:** Permanently protecting land through conservations easements ensures that important natural areas are not lost to development. Many times, these easements or areas are turned into public parks for anyone to enjoy their natural beauty.

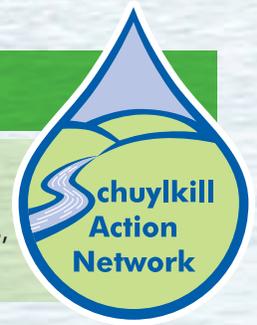
**WHAT WE'RE DOING:** The French & Pickering Creeks Conservation Trust helped to conserve a 560-acre swath of land in Glenmoore that is rich in cultural history and important for watershed protection. In an area where increasing impervious surface threatens to degrade water quality, this project will protect one of the largest remaining tracts along the South Branch of the French Creek.

### 2015 ACCOMPLISHMENTS:

- Preserved 2,000 acres.
- Conducted outreach to municipalities to improve ordinances and zoning to improve water quality.
- Worked with landowners to be better stewards of their properties.
- Engaged over 25 volunteers to help monitor the health of streams through the Schuylkill Water Stewards program.



# About the Schuylkill Action Network



The Schuylkill Action Network (SAN) is a collaborative network with over 150 partner organizations all working together to protect and restore the Schuylkill River and its tributaries. The Schuylkill Action Network protects this valuable resource through collaboration, implementation of clean water projects, and promotion of long-term stewardship.



## 2016-2020 SAN Strategic Plan

Protecting our watershed is only possible when we work together towards a common goal. This all starts with a clear plan to achieve a shared vision for a clean and healthy watershed. In 2015, the SAN worked with the watershed community to develop a new 5-year strategic plan. Through listening sessions, meetings, and surveys, over 400 watershed partners shared their vision for moving forward as a network to protect and restore this wonderful resource. As a result, the SAN now has a new strategic plan to guide us into the future as we continue our work to protect the river that we all care about.

## Schuylkill River Restoration Fund

In 2015, nearly \$275,000 in grants was awarded to organizations to implement projects that improve water quality in the Schuylkill Watershed through the Schuylkill River Restoration Fund. The grants focus on three major sources of pollution: stormwater runoff, agricultural pollution, and abandoned mine drainage. Funding for these projects was provided by Exelon's Limerick Generating Station, Philadelphia Water, Aqua PA, Coca Cola, and MOM's Organic Market. Learn more at [www.SchuylkillRiver.org](http://www.SchuylkillRiver.org).

### 2015 GRANT AWARDS:

- **Berks Nature:** Donald Rice Farm Project – \$47,250
- **Berks Nature:** Biehl and Kurtz Farms – \$81,663
- **The Dobson School:** Native Meadow and Woodland Walk – \$37,710
- **Montgomery County Conservation District:** Perkiomen Township Basin – \$30,000
- **Schuylkill Headwaters Association:** Porter Floodplain – \$40,000
- **West Philadelphia Coalition:** Greening Lea Project – \$26,000
- **Berks Nature:** Miller Woodland – \$4,000
- **Berks Nature:** Gehris Property – \$4,000
- **Natural Lands Trust:** Yoder Property – \$4,000



### CONGRATULATIONS AND THANKS TO HOWARD NEUKRUG!

"Howard retired from the Philadelphia Water Department (PWD) at the end of 2015 after having served as Commissioner for 4 years and worked for the PWD for 37 years. The Schuylkill Action Network (SAN) was formed in 2003 when Howard and his team from the PWD briefed the Environmental Protection Agency (EPA) on key threats to Philadelphia's drinking water. It was noted that Philadelphia's drinking water supply, for over 1.5 million people at the time, was at the base of the 130-mile long Schuylkill River watershed. The PWD, EPA, and other partners came together to work in a regional watershed context to improve drinking water quality. Through this collaboration, the SAN was created. Thanks to Howard for his leadership and vision which has produced a nationally recognized source water partnership focused on results."

– Jon M. Capacasa, Chair, SAN Executive Steering Committee



Photo by Carol Brightbill

## Sponsors & Partners



Connecting people,  
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for a healthy Delaware  
River and Bay.

Partnership for the Delaware Estuary  
110 South Poplar Street, Suite 202  
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1-800-445-4990  
[www.DelawareEstuary.org](http://www.DelawareEstuary.org)



**SCHUYLKILL RIVER**  
NATIONAL & STATE HERITAGE AREA

Schuylkill River National & State Heritage Area  
140 College Drive, Pottstown, PA 19464  
484-945-0200  
[www.SchuylkillRiver.org](http://www.SchuylkillRiver.org)

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Delaware River Basin Commission  
[www.state.nj.us/drbc](http://www.state.nj.us/drbc)



**pennsylvania**  
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[www.depweb.state.pa.us](http://www.depweb.state.pa.us)



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**Anyone can become a member!** Just visit [www.SchuylkillWater.org](http://www.SchuylkillWater.org) and click **Get Involved**  
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