

## WATERSHED LAND PROTECTION

Protecting land before it is developed is one of the best ways and most proactive way to preserve water quality. It also provides open spaces for public parks, recreation, and wildlife. Land trusts and municipalities are working to preserve high-quality land for future generations.

### Watershed Area Preserved:

- Nearly 18%
- Some regions, like the Schuylkill Highlands Cluster, have even more area preserved (39%)!

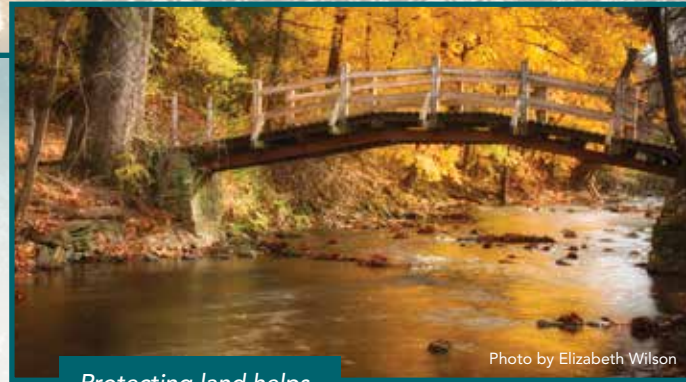


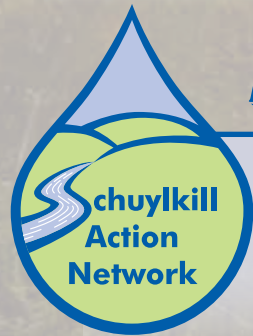
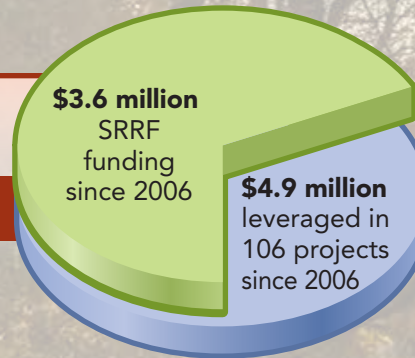
Photo by Elizabeth Wilson

Protecting land helps preserve water quality.

## SCHUYLKILL RIVER RESTORATION FUNDING

Since 2006, Schuylkill River Restoration Funds (SRRF) awarded \$4.9 million in grants to fund 106 projects in the Schuylkill River Watershed.

### 2006-2018 SCHUYLKILL RIVER RESTORATION FUNDING AND LEVERAGED FUNDING



## 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 SAN protects this valuable resource through collaboration, implementation of clean water projects, and promotion of long-term stewardship.

## PLANNING COMMITTEE PARTNERS



Partnership for the Delaware Estuary  
110 South Poplar Street, Suite 202  
Wilmington, DE 19801  
1-800-445-4990  
[www.DelawareEstuary.org](http://www.DelawareEstuary.org)



Anyone can become a SAN member! Visit [www.SchuylkillWaters.org](http://www.SchuylkillWaters.org) and click **Get Involved**.  
Follow us on social media!

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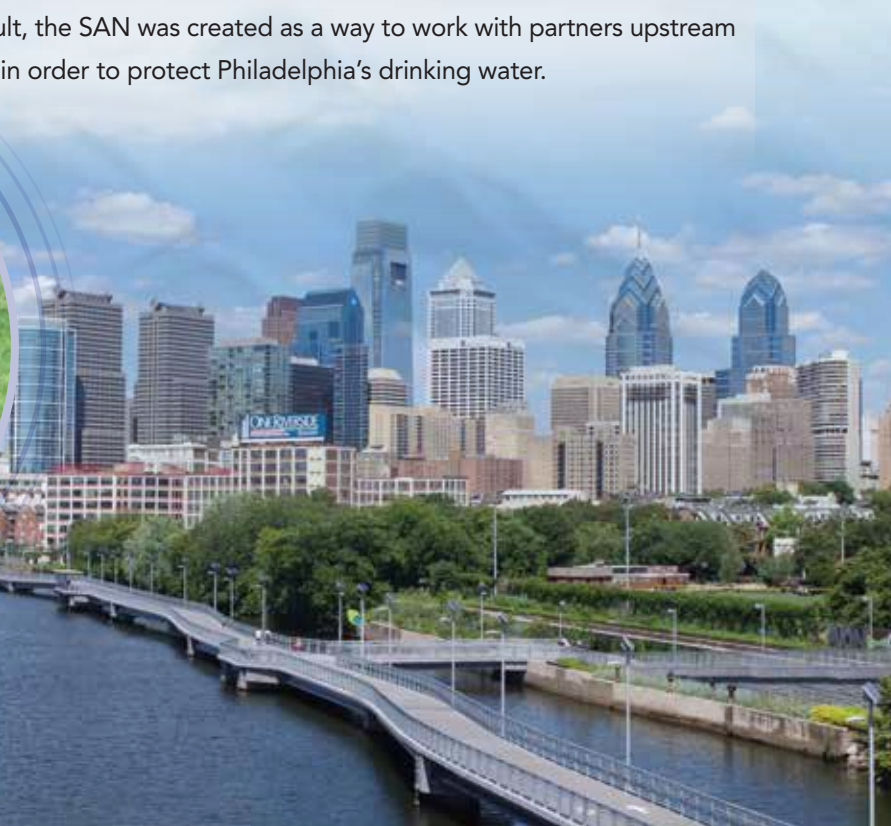


## CELEBRATING 15 YEARS OF PROTECTING SCHUYLKILL WATERS

### HOW DID THE SCHUYLKILL ACTION NETWORK BEGIN?

In 2003, the Philadelphia Water Department (PWD) identified threats to the Schuylkill River Watershed, an area that encompasses 2,000 square miles from Schuylkill County down to Philadelphia and is a drinking water source for nearly 2 million people.

As a result, the SAN was created as a way to work with partners upstream in order to protect Philadelphia's drinking water.



## ABANDONED MINE DRAINAGE

Fishermen in the Schuylkill River near East Coventry, PA.



Photo by Carol Brightbill

Headwaters streams used to be so heavily impacted by abandoned mine drainage that nothing could survive in the water. Now, trout are thriving in many of the headwater streams of the Schuylkill River. Restoring the headwaters is important for protecting clean drinking water downstream for nearly 2 million people!

### \$14.3 million invested in AMD workgroup funding (2003-2018)

- Treatment systems: \$4.8 million
- Stream restoration and habitat projects: \$1.1 million
- Limestone dosing: \$120,000
- Floodplain restoration: \$2.2 million
- Sharp Mountain Reclamation Project: \$4.1 million
- Community projects: \$700,000
- Assessments and studies: \$1.3 million

### WHAT DOES THIS MEAN FOR WATER QUALITY?

#### Annual load reductions

- Iron: 88 tons
- Aluminum: 3 tons
- Manganese: 6 tons

*"The river used to be black with coal dirt, smelly with sewage, essentially a garbage dump. We used to shoot bottles with our BB guns as they floated down the river. Now the river is ALIVE. It is a living thing, with trout, suckers, and nearly crystal-clear water. This is a result of groups working on acid mine treatment and sewage treatment. Now, we just need to get the message out to everyone that the river has improved, so more people can care for it."*

— Leo Lubinsky, long-time Schuylkill County resident and fly fisherman

## AGRICULTURE

In the late 1990s and early 2000s, Berks County had many farms lacking sustainability practices. Since then, SAN Agriculture workgroup partners have installed 166 manure storage facilities, among other farm conservation practices.

#### Conservation practices by the numbers:

- 172 barnyard repairs
- 86 stream crossings
- 475 acres of riparian buffer plantings



Stream crossings help keep cow manure from entering streams.

Photo by PDE

A dry manure storage shed.



Photo by PDE

A liquid manure storage facility.



Photo by PDE

### DID YOU KNOW?

Natural Resources Conservation Service (NRCS) has invested \$24.4 million in agricultural restoration in the Schuylkill River Watershed since 2003!

## EDUCATION & OUTREACH

Knowledge is the first step to behavior change. Over the past 15 years, this workgroup has collaborated to develop outreach materials for teachers, students, and residents that promote the value of clean water and protecting the environment.

#### Schuylkill Scrub Trash Clean Stats (2009-2017):

- 3,584 trash cleanups
- 94,059 volunteers
- 207,858 tons of trash removed from the watershed
  - That's enough to fill nearly 26,000 40-yard dumpsters!

#### Education Techniques:

- Outreach brochures
- New website launched in 2018! [SchuylkillWaters.org](http://SchuylkillWaters.org)
- Social media
- Art contests:
  - Schuylkill Street Art Contest
  - 19,088 entries to the Green City, Clean Waters Art Contest (2003-2018)



Photo by PDE

*"Environmental education for everyone is critical! Young people have a lifetime to make positive, meaningful connections with their natural surroundings. As a middle school teacher, one of my goals is to guide students to make those connections, to ask questions, and to act responsibly on this earth. Live it, learn it, love it!"*

— Cindy Murdough, Conrad Weiser Middle School teacher

## PATHOGENS AND POINT SOURCE

Untreated sewage and improperly functioning septic systems were a common occurrence in rural areas within the watershed. Now, nearly all municipalities have implemented a plan to manage sewage ("Act 537" plans), limiting the amount of sewage and pathogens entering our waterways.

#### Accomplishments:

- Improved communication about spills through the Delaware Valley Early Warning System.
  - 362 events reported, mostly low-risk events
- 30 wildcat sewer dischargers addressed since early 1990s
  - Wildcat sewers discharge untreated or partially treated sewage to waterways, the land, or storm sewer systems.



Photo by Benjamin Zuckerman

Rowers on the Schuylkill River.

## RECREATION NEWEST WORKGROUP

As water quality has improved in the Schuylkill River and its tributaries, there are now more recreational users than in 2003. Efforts are being made to expand and connect the proposed 130-mile Schuylkill River Trail for multi-model use. The SAN recognizes the opportunity to work with recreational users to protect and restore the watershed through the newly formed Recreation workgroup.

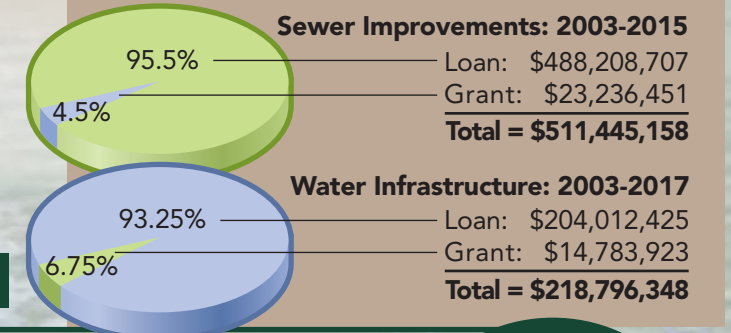
#### Schuylkill River Recreational Activities/Events:

- About 1.2 million trail users annually
- 3,222 participants in Schuylkill River Sojourn (1998-2018)
- Regattas
- Fishing festivals
- Triathlons

**Innovative Program: NaturePHL, a partnership program between the Schuylkill Center, health professionals, parks and recreation agencies, and other organizations, provides "nature prescriptions" to Philadelphia residents to achieve better health through local green spaces.**

**Exemplary Partner: Berks County Water and Sewer Association believes in the One Water approach, where both water and sewer service providers collaborate to protect source water, improve infrastructure and maintenance, and provide outreach to the community.**

### PENNVEST INVESTMENTS IN WATER AND SEWER:



### DID YOU KNOW?

The Schuylkill River Trail in Philadelphia was voted the Best Urban Trail by *USA Today* in 2014.

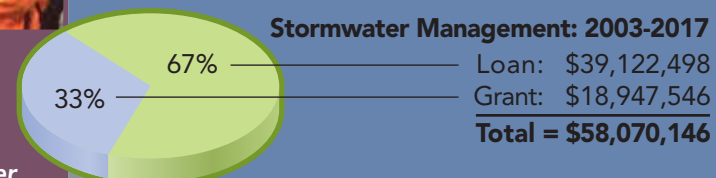
## STORMWATER

Stormwater runoff pollution is a widespread concern for municipalities within the Schuylkill River Watershed. In 2003, there were virtually no regulations or practices in place to manage stormwater. Now, through the municipal separate storm sewer system (MS4) program, municipalities are required to manage stormwater. Partners throughout the region have secured millions of dollars to implement stormwater best management practices.

#### Schuylkill Action Students – a program working with schools to install green infrastructure:

- 25+ schools engaged in green infrastructure

### PENNVEST INVESTMENTS IN STORMWATER MANAGEMENT:



#### Examples of Green Infrastructure Implemented by SAN Partners:

- Naturalized stormwater basins
- Rain gardens
- Green roofs
- Rain barrels
- Downspout planters
- And more!

Green roof.



Photo by PWD

Downspout planter.



Photo by PWD

**Green City, Clean Waters: In 2011, the City of Philadelphia kicked off this 25-year initiative to green the city in order to manage stormwater runoff and combined sewage overflow. To date, the City has greened 1073 acres on public and private property. Green City, Clean Waters is a model for communities upstream to adopt!**