



Flooded Park Benches in Philadelphia © Reggie/Creative Commons

## Challenge: Soaking Up Stormwater

Repairing Philadelphia's water infrastructure requires a break with tradition.

Last year, during an especially severe summer storm, torrential rains moved through Philadelphia, flooding streets and clogging stormwater drains. With nowhere to go, the dirty water rushed into the Schuylkill River, and ultimately, the Delaware Bay.

City agencies are not alone in addressing this challenge. Stormwater runoff is one of the nation's leading causes of water pollution.

"Many of our aging cities face water infrastructure challenges," says Julie Ulrich, director of The Nature Conservancy's urban conservation program in Philadelphia. "Heavy rains flow rapidly off hard surfaces to overwhelm systems before flooding and polluting streets, homes, businesses and local waters."

In fact, Philadelphia and hundreds of other cities are legally obligated, under the Clean Water Act, to mitigate stormwater pollution by 85 percent

over the next two decades. According to Ulrich, the daunting and disruptive task of overhauling Philadelphia's current stormwater management system comes with a \$10 billion price tag that would take many decades to repay.



Stormwater Culvert © Sicker6/Creative Commons

In response, the Philadelphia Water Department (PWD) launched Green City Clean Waters, aimed at putting soil, grasses, plants and trees to work

naturally absorbing stormwater. PWD's goal is to transform 10,000 acres into living landscapes—rain gardens, permeable pavements, green roofs, pocket parks, planters and other projects capable of storing and filtering water that would otherwise cause harmful, costly, and disruptive flooding and pollution around the city.

In order to accomplish this, PWD is engaging the Conservancy and other partners to accelerate the process of greening the city.

"Thanks to PWD, Philadelphia is the only U.S. city committed to solving this problem *entirely* through green stormwater infrastructure," says Bill Kunze, the Conservancy's Pennsylvania executive director. "I am excited about this big, bold and unprecedented step in exploring whether green infrastructure can compete with traditional approaches to water pollution management."



Waterworks Project in Philadelphia's Kensington Neighborhood © Halkin Mason Photography

## Solution: Unleashing the Power of Nature

A new grant advances efforts to employ nature in combating stormwater pollution.

Efforts by The Nature Conservancy to help the Philadelphia Water Department (PWD) transform 10,000 acres of hard surfaces into natural, green stormwater solutions by 2036 received a tremendous boost thanks to a \$2 million grant from the William Penn Foundation.

“Cities around the world are watching to learn whether this approach might work for them,” says Bill Kunze, the Conservancy’s Pennsylvania executive director. “We are excited by the chance to prove what nature can do.”

Delivering on this promise requires increasing the scale and pace of these efforts. Working with its conservation investing unit, NatureVest, the Conservancy aims to create financial incentives for private landowners who can leverage this work around the city.

“Adding more nature to the built environment delivers benefits that reach beyond pollution control,” says Julie Ulrich, director of the Conservancy’s urban conservation program in Philadelphia. “It also beautifies neighborhoods, enhances public and recreational spaces and even spurs job creation—all at a lower cost than traditional engineered solutions.”

Likely beneficiaries include vulnerable communities that suffer from flooding and a lack of green space.

“We are excited to help improve environmental and human health in the neighborhoods we serve,” says Andrew Anderson, executive director of the Friends Rehabilitation Program, an affordable housing and social service provider in the region. “We know that natural stormwater remediation reduces flooding; it also improves air quality, increases biodiversity, stabilizes temperatures and supports the health of our low-income tenants.”

Anderson’s enthusiasm is contagious. “This is going to take decades of work,” adds Ulrich. “But when it’s done, we’ll have reduced the stormwater pollution entering Philadelphia’s waterways by 85 percent, leaving them swimmable, fishable and drinkable on a level most of our citizens have never known.”

## NATURE PENNSYLVANIA

### Field Notes

The William Penn Foundation grant will go a long way to address Philadelphia’s stormwater challenge while also helping to clean the air, beautify neighborhoods and provide a healthier city where people can live, work and play.



Courtesy of Bill Kunze

Since stormwater management starts in your backyard, you can also play a role in reducing the amount of debris and polluted water entering local waterways no matter where you live. In addition to supporting this work financially, consider implementing the following at home, at work or within your community:

- Control erosion with native trees, plants and grasses.
- Direct down spouts away from paved surfaces.
- Use pesticides and fertilizer sparingly.
- Create a rain garden.
- Capture roof runoff with a rain barrel.
- Pick up after your pet.
- Don’t litter!

They say that “many hands make light work.” With your help, that can be the outcome with regard to stormwater pollution in Philadelphia and other cities around Pennsylvania.

See you outside,

*Bill Kunze*