

The Delaware River and its 216 tributaries are vital sources of fresh water.

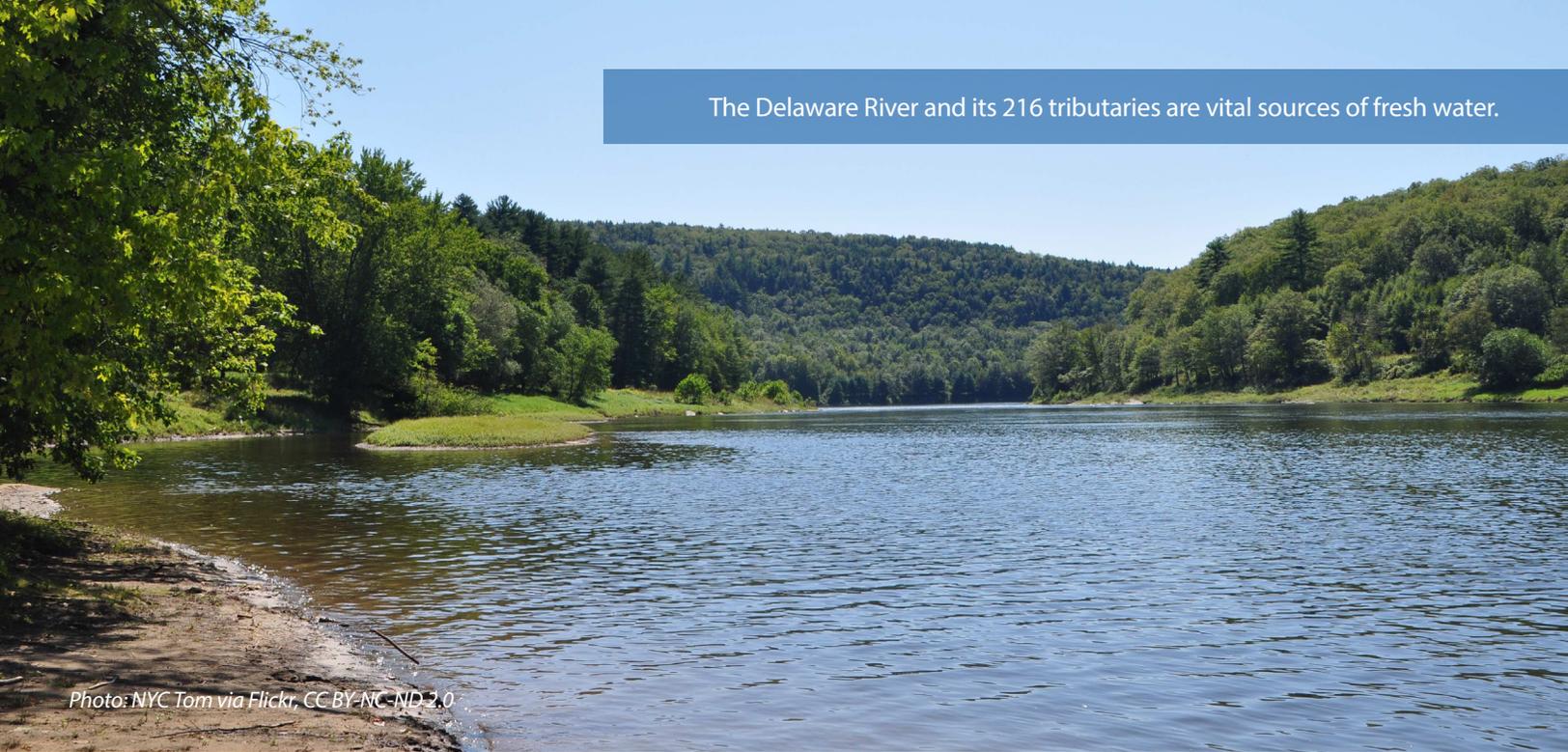


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## Environment America's Delaware River Watershed Project

# Threats to Clean Water in the Delaware River Basin

*The Delaware River basin is an important source of clean water for drinking, wildlife and recreation. However, the basin faces a variety of threats to water quality – from agriculture and mining to urban development and industrial pollution. Environment America's interactive online map allows people to better understand these threats and take action to protect their water.*

*This is one of five fact sheets summarizing data from the map.*

## The Delaware River Basin Is a Vital Natural Resource

The Delaware River basin, which spans 13,500 square miles and encompasses the Delaware Bay, the Delaware River, and the river's 216 tributaries, is a popular recreational area, a critical resource for wildlife, and a vital source of fresh water.<sup>1</sup> Roughly 15 million people, living both inside and outside of the watershed, rely on it for drinking water.<sup>2</sup>

Unfortunately, this important watershed faces a number of threats. Environment America's online map provides residents of the Delaware River basin with a unique tool to explore potential sources of water pollution where they live and across the region. The map is available at [www.delawarewatershed.org](http://www.delawarewatershed.org).

## Delaware River Basin Waterways Face an Array of Threats

A variety of industries and activities within the basin pose threats to water quality, including:

- **Fossil Fuels and Mining:** Runoff from active or abandoned mines, spills from pipelines, trains and tankers carrying fossil fuels, and the future possibility of fracking within the basin all carry the potential to contaminate the basin's rivers and streams.
- **Industrial Pollution:** Releases of toxic pollutants from industrial facilities and legacy pollution from hazardous waste sites pose immediate and long-term threats.
- **Sewage:** The Delaware River basin's public sewage systems play a critical role in keeping our waters clean. Still, wastewater discharges from sewage treatment plants and combined sewer overflows are major sources of pollution, while "contaminants of emerging concern" such as household chemicals and pharmaceuticals often go unmeasured.
- **Runoff Pollution:** Runoff from farmland, construction sites and urban areas carries nutrient pollution, sediments and other pollutants into the basin's waterways.

## A Unique View of Threats Nearby and Upstream

Environment America's interactive online map of the Delaware River basin provides users with a unique view of water quality threats. Residents can select their home address, enabling them to identify polluting facilities nearby as well as upstream threats that may affect the quality of their water. Users can also explore water quality threats in the watersheds that supply their drinking water.

Visitors to the map can also explore waterways in their area that do not currently meet water quality standards and, in some cases, learn more about the reasons why water quality in those rivers and streams is impaired. By enabling users to view information from several different data sets at the same time, the map empowers residents to make powerful connections between the causes and effects of water pollution.

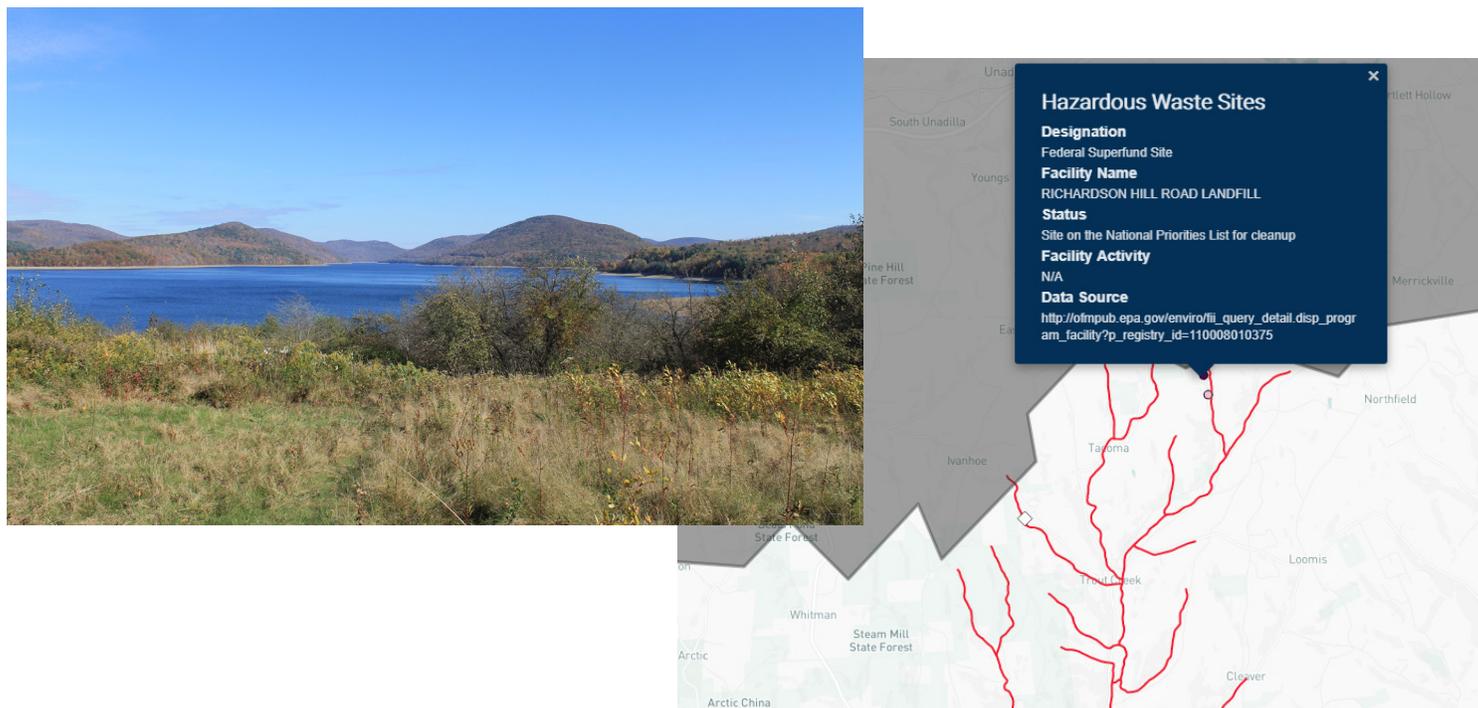
Here are two examples of how the map provides new insights into water quality challenges from two very different parts of the basin.

### Trout Creek, New York

Trout Creek in upstate New York sits in the West Branch Delaware River watershed, an area of wooded hills and scenic countryside that includes the Cannonsville Reservoir, the third-largest reservoir providing drinking water to New York City.<sup>3</sup> The area's bucolic setting, however, conceals water quality problems, some of them of long standing.

The Environment America online map shows that Trout Creek was listed by the state of New York as suffering from impaired water quality in 2012. By going to the web address listed in the map's pop-up box, users can learn that cancer-causing PCBs are the cause of the impairment. The "Industrial Polluters" layer of the map shows that the impaired stretch of creek is downstream from the Richardson Hill Road Landfill, a federal Superfund hazardous waste site at which PCB contamination was known to have occurred.<sup>4</sup>

By combining multiple data sets in an easy-to-use format – and by providing access to additional information from federal and state sources – the online map provides a powerful tool for residents to connect the dots about local water quality threats and learn about the status of cleanup efforts.

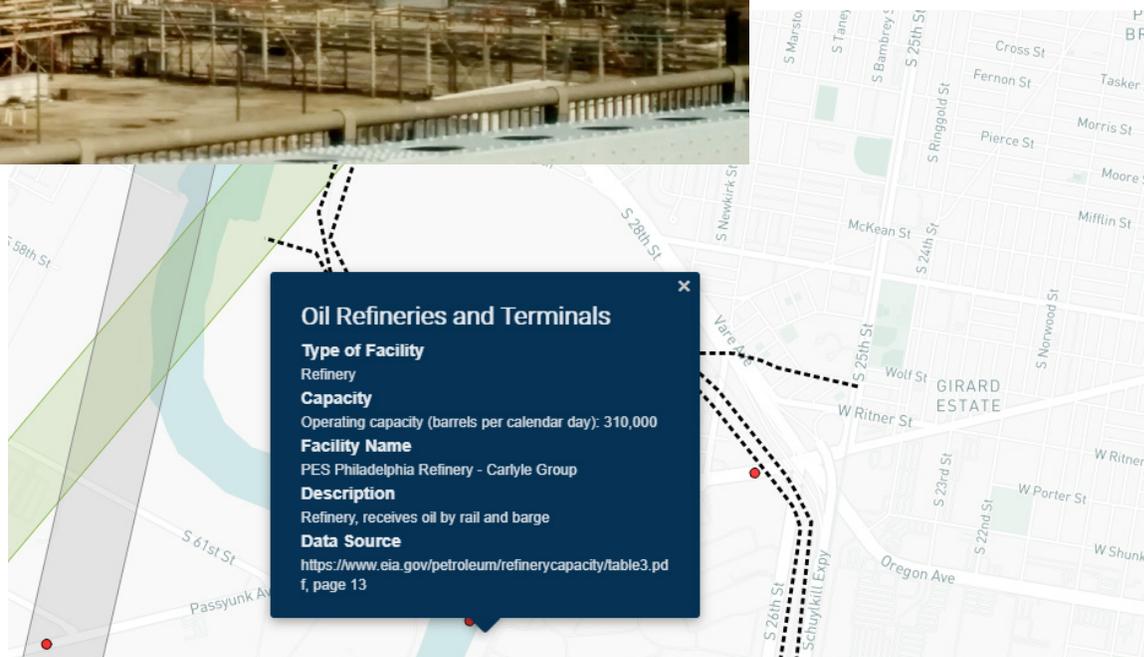


The West Branch of the Delaware River traverses the countryside of upstate New York and includes the Cannonsville Reservoir (above), which serves New York City. But waterways within the watershed continue to face water quality challenges. The Environment America online map enables local residents to explore legacy pollution sources within the region, such as a former landfill that is now a federal Superfund hazardous waste site. *Photo credit: Wikimedia user Vonsky87, CC BY-SA 3.0*

## Schuylkill River, Philadelphia

The area near the confluence of the Schuylkill and Delaware Rivers in Philadelphia is heavily industrialized – the site of several major petroleum facilities, including the Philadelphia Energy Solutions refinery, the largest on the East Coast.<sup>5</sup> Industrial activity in the area has long been a source of health-threatening air and water pollution.

The Environment America online map enables residents to find out more about these facilities. Philadelphia Energy Solutions' Girard Point Processing Area, for example, is shown as having released toxic chemicals to water in 2015 that ranked it among the top 20 percent of facilities reporting to the EPA's Toxic Release Inventory based on the toxicity of those releases. The map also shows that the facility is one part of a massive web of infrastructure that carries fossil fuels across the basin from sources such as the Bakken Shale region of North Dakota to the area's refineries. By allowing users to explore industrial facilities in their neighborhoods – and to see the larger connections between fossil fuel processing, transportation and pollutant releases – the online map enables residents to understand water pollution problems and potential solutions in a new way.



The Philadelphia Energy Solutions refinery along the Schuylkill River in Philadelphia releases toxic chemicals into the river. The Environment America online map enables users to explore the sources of pollution in their area, and also to view the connections between fossil fuel production, transportation (via pipelines and rail lines shown on the map) and refining – all of which pose potential threats to waterways. *Photo Credit: Erica Flock CC BY-NC 2.0*

# Compiling Data from More than a Dozen Sources

Environment America's online map of the Delaware River basin shows water quality threats from many industries and activities – providing residents with a comprehensive view of water quality challenges. Combining disparate data in this way allows people to more fully understand the threats to their own public water supply and make comparisons between watersheds within the basin.

Category	Layer	Data Source
Resource Extraction and Transportation	Fossil Fuel Pipelines	U.S. Energy Information Administration (EIA); pipeline companies; advocacy groups
	Mining	State environmental protection agencies; U.S. Department of the Interior; U.S. Department of Labor's Mine Safety and Health Administration
	Refineries and Terminals	EIA; Oil Change International; Delaware Valley Regional Planning Commission
	Oil by Rail	Federal Railroad Administration
	Shale Formations	EIA
Industrial Pollution	Hazardous Waste Sites	U.S. Environmental Protection Agency (EPA); state environmental protection agencies
	Industrial Dischargers	EPA's Toxic Release Inventory; EPA's Water Pollutant Loading Tool
Sewage Systems	Publicly Owned Treatment Plants	EPA
	Combined Sewer Overflows	EPA, New Jersey Department of Environmental Protection, municipal agencies
Runoff Pollution	Impervious Surface Coverage	Shippensburg University's Delaware River Basin Project and the University of Vermont Spatial Analysis Lab
	Agricultural Nitrogen, Phosphorus and Sediment	Stream Reach Assessment Tool from the Academy of Natural Sciences of Drexel University

# Protecting Water Quality in the Delaware River Basin

To ensure that the Delaware River basin can continue to support industry and recreation, provide healthy ecosystems for hundreds of animal species, and serve as a source of clean and safe drinking water for 15 million Americans, we need to limit the damage from surrounding threats. Necessary steps include:

- Preventing pollution before it occurs by limiting inherently dangerous activities such as toxic chemical production and use, fossil fuel consumption, and factory farming.
- Keeping water quality threats away from waterways by requiring vegetated buffer zones alongside waterways, investing in land purchases, and extending stronger clean water protections to exceptionally valuable waterways.
- Setting tough standards by tightening permitted pollution levels and establishing “pollution diets” for all waterways within the basin that require them to be restored to health.
- Strengthening environmental enforcement by increasing state environmental agency budgets, increasing inspections, and establishing mandatory minimum penalties for permit violations that are sufficient to eliminate economic benefit from polluting.
- Maintaining and strengthening all federal clean water protections.
- Investing in upgrades to sewage infrastructure and in restoration activities across the basin.

## Explore Threats in Your Area

To learn more about pollution threats near your home or water provider, explore Environment America's new interactive map of the Delaware River basin:

[www.delawarewatershed.org](http://www.delawarewatershed.org)



### Notes

1. Delaware River Basin Commission, *2016 Delaware River and Bay Water Quality Assessment*, August 2016, 2, archived at <https://web.archive.org/web/20180619142442/http://www.nj.gov/drbc/library/documents/WQAssessmentReport2016.pdf>.
2. Ibid.
3. “third largest”: U.S. Environmental Protection Agency, *Section 319 Nonpoint Source Program Success Story: Restoration and Protection Activities in the Upper Branch of the Delaware River Protects New York City's Drinking Water Supply*, October 2007, archived at [https://web.archive.org/web/20180621184347/https://www.epa.gov/sites/production/files/2015-11/documents/ny\\_wbde.pdf](https://web.archive.org/web/20180621184347/https://www.epa.gov/sites/production/files/2015-11/documents/ny_wbde.pdf).
4. Corbin J. Gosier and Eric A. Paul, New York State Department of Environmental Conservation, *Richardson Hill Landfill: 2012 Contaminant Trackdown Study Field Investigation Report*, August 2014, 3, archived at [https://web.archive.org/web/20180621184827/https://www.dec.ny.gov/docs/fish\\_marine\\_pdf/rhrlpcbrep.pdf](https://web.archive.org/web/20180621184827/https://www.dec.ny.gov/docs/fish_marine_pdf/rhrlpcbrep.pdf).
5. Largest: Catalina Jaramillo, “Philadelphia Energy Solutions: A Giant Polluter Looms Over the Lives - and Health - of Its Neighbors,” *State Impact Pennsylvania*, 20 February 2018, archived at <https://web.archive.org/web/20180621185407/https://stateimpact.npr.org/pennsylvania/2018/02/20/philadelphia-energy-solutions-a-giant-polluter-looms-over-the-lives-and-health-of-its-neighbors>.