

# MONTGOMERY AWARDS

Environmental Stewardship  
*2022 Award Winner*



## Perkiomen Creek Dam Removals and Stream Restorations Upper Hanover Township

The Perkiomen Creek Dam Removals and Stream Restorations project received a 2022 Environmental Stewardship Award for the removal of obsolete dams, resulting stream restorations, and an extensive collaborative

process with many community partners. This significant effort by Aqua Pennsylvania, Inc. has successfully resulted in improved water quality, enhanced habitat biodiversity, and restored stream channels.



## Background

Philadelphia Suburban Water Company created Green Lane Reservoir in the 1950s by building a 65-foot dam across the Perkiomen Creek with the goal of ensuring adequate water supply for the region. This reservoir became the central element for what is now Green Lane Park, which is owned by Montgomery County and operated by the Montgomery County Parks, Trails, and Historic Sites department. As part of that project, two smaller concrete weir dams were installed upstream on the Main Branch and the West Branch of the Perkiomen Creek to measure stream flow entering the area that became the reservoir. Historically, dams can have negative impacts to streams, including reduced fish passage, degraded water quality, recreational hazards, and sediment accumulation, which degrades aquatic habitat. According to American Rivers, “There is no faster or more effective way to bring a river back to life than removing a dam.” Recognizing the dams were no longer needed, Aqua Pennsylvania, Inc., the current owners of the dams and reservoir, decided to decommission the obsolete dams with the ultimate goals of enhancing the quality of its drinking water supplies and improving habitat and biodiversity of the streams.

## Project Description

In February of 2022, both dams were removed by Flyway Excavating using a back hoe with a hydraulic hammer bit. A rock ramp was created initially for the backhoe to enter the stream at a stable point to prevent erosion of the stream bank. The deconstruction was done by punching a small hole in the center of the dam to de-water the impoundment behind the dam, and then the concrete structure was carefully chiseled into smaller pieces and the debris was removed with the back hoe bucket and placed on the bank. This was done up to the edge of the embankment to create a stable channel with the least amount of disturbance. Any eroded areas of the stream bank near the dam abutments were filled in and stabilized during construction, and all disturbed areas were seeded and matted to protect water quality and stabilize the stream banks.



Aqua Pennsylvania, Inc. and its engineering consultant, Ramboll, navigated the complexities of numerous permits to ensure this dam removal project was protective of the adjacent wetlands and would not impact sensitive species, including bald eagles, bog turtles, and red-bellied turtles. They coordinated with Montgomery County Parks, Trails and Historic Sites and Upper Hanover Township on site access and construction schedule, as well as with United States Geological Survey to prepare their gaging station equipment for the deconstruction process.

## Recreational and Environmental Benefit

On March 29, 2022, Aqua volunteers joined folks from the Montgomery County Conservation District, the Perkiomen Valley Trout Unlimited, and Montgomery County Master Watershed Stewards to install 200 live stake plantings to stabilize the newly exposed stream banks. As the plants grow, they will provide necessary shade and leaf litter to improve aquatic habitat, as their roots stabilize the soil of the stream banks. As a long-time partner of Trout Unlimited and Montgomery County Parks, Trails and Historic Sites, Aqua also saw the value of the project for recreation in Green Lane Park. One of the dams was located at the park’s “fly-fishing area,” where the partners have previously stocked trout. Without the barrier of the dam, the aquatic habitat and fishing area could be extended another half mile upstream.

The stream channels have already begun to return to a natural condition, and over time, sediment will disperse to recreate a gravel bottom and shrink the channels down to their natural width, which was negatively impacted by the dams. The sites will also offer great opportunities for environmental education. Aqua will continue to work with the Perkiomen Valley Trout Unlimited on this habitat and stream corridor enhancement work. Water quality measurements and macroinvertebrate sampling will gradually start to show the true benefits of the project for years to come.

At a total project cost of \$275,000 and with support from community partners, this project by Aqua Pennsylvania, Inc., which involved the removal of these two dams and subsequent stream restorations, will improve water quality for the region, aquatic habitat for these two branches of the Perkiomen Creek, and for Green Lane Park, an important recreation area.



## Owner/Developer

Aqua Pennsylvania, Inc.  
762 Lancaster Avenue  
Bryn Mawr, PA 19010

## Engineer

Ramboll  
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## Contractor

Flyway Excavating, Inc.  
4070 Old Harrisburg Pike  
Mount Joy, PA 17552

## Environmentalist

Perkiomen Valley Trout Unlimited  
350 Main Street  
Red Hill, PA, 18076

## Project Partners

Montgomery County Parks, Trails and Historic Sites  
Montgomery County Conservation District  
U.S. Geological Survey  
Upper Hanover Township  
PA DEP – Bureau of Waterways, Engineering and Wetlands  
Penn State Extension – Montgomery County Master Watershed Stewards



*Volunteers from Aqua and the Montgomery County Conservation District, the Perkiomen Valley Trout Unlimited, and Montgomery County Master Watershed Stewards installed 200 live stake plantings to stabilize the newly exposed stream banks.*

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The program acknowledges the high-quality work and commitment of communities, organizations, and professionals.

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