

Project Title: Lower Pennypack Creek Fish Passage & Habitat Restoration

Project Location Pennypack Creek, Philadelphia, PA, Philadelphia Co.

Latitude <u>40.044799 (Frankford)</u>	Longitude <u>-75.020623 (Frankford)</u>
<u>40.048383 (PWD Sewer Line)</u>	<u>-75.020578 (PWD Sewer Line)</u>
<u>40.047639 (Rhawn St.)</u>	<u>-75.033589 (Rhawn St.)</u>
<u>40.066189 (Roosevelt)</u>	<u>-75.042728 (Roosevelt)</u>
<u>40.087222 (Verree Rd.)</u>	<u>-75.06118 (Verree Rd.)</u>

Dams removed Frankford Ave. dam (51-025) and Rhawn St. dam (51-022)

Dams removal assessments Roosevelt Boulevard dam, Verree Rd. dam

Date of removal December 2006

Linear feet restored The Frankford, Sewer line and Rhawn projects combined will restore 6,230 feet of riparian habitat and 3,115 feet of instream habitat.

Stream miles opened 5.8 miles will be opened following completion of a rock ramp fishway over Sewer Line #1 at river mile 2.5

Species to benefit warmwater fishes, migratory fishes (American shad, blueback herring, striped bass, American eel, white perch, hickory shad, & alewife)

Project Costs:

Growing Greener contribution \$42,870 toward design/engineering

Federal contribution \$22,000 from USFWS, \$25,000 from National Fish & Wildlife Foundation, \$15,000 from American Rivers-NOAA Community Restoration Partnership for sewer line rock ramp

State contribution \$30,000 in-kind from PA Fish & Boat Commission

Private contribution \$17,000 from Fairmount Parks Commission, \$60,000 estimated from Philadelphia Water Department for sewer line rock ramp

Project Overview:

A cooperative partnership between the PA Fish and Boat Commission, Fairmount Park Commission, PA Department of Environmental Protection, PA Department of Conservation and Natural Resources, Philadelphia Water Department, American Rivers, National Oceanic and Atmospheric Administration (NOAA), Friends of Pennypack Park, Pennypack Ecological Restoration Trust, Southeast Montgomery County Chapter of Trout Unlimited and others has been created to restore the natural heritage of Pennypack Creek by providing fish passage, restoring stream and riparian habitat and associated organisms, re-establishing diadromous fishes and bringing attention to the rich natural and human history of the watershed.

Several dam removals have already taken place, including the Spring dam (46-014), the Frankford Avenue dam (51-025) and the Rhawn St. dam (51-022). Construction of the rock ramp fishway over PWD Sewer Line #1 is expected to take place in spring 2007. An alternatives analysis for fish passage at the next two upstream barriers, Roosevelt Boulevard Dam and Verree Road Dam was undertaken by URS Corporation in late 2006. That analysis is attached under separate cover. American Rivers and members of the partnership above will continue to work to provide technical and financial assistance to these projects so that fish passage can be achieved through the entire lower Pennypack Creek.



Photo 1. Rhawn St. dam before removal. Summer 2004.



Photo 2. Rhawn St. dam site immediately following removal. December 2006.



Photo 3. Frankford Ave. dam during removal. December 2006.



Photo 4. Frankford Ave. dam site immediately following removal. December 2006.



Photo 5. PWD Sewer Line 1 in December 2006. Rock ramp fishway to be built in 2007.



Photo 6. Roosevelt Blvd dam in December 2006.



Photo 7. Verree Rd. dam in December 2006.

05/04/2006

Funds secured to rehabilitate Pennypack Creek

By: Edward J. Vassallo

Will improve fish migration and reduce flooding

The Pennsylvania Fish and Boat Commission is pouring more than \$500,000 into Pennypack Creek.

The money will fund numerous projects to improve fish migration, restore the stream habitat, reduce flooding, enhance aesthetics, increase recreational usage, and establish educational opportunities through interpretive signage.

"These efforts by our state agencies are not only good for the environment," said State Rep. Michael McGeehan (D-173), "they will provide residents of Northeast Philadelphia with a variety of recreational activities they normally must leave the city limits for."

According to the Fish and Boat Commission, the Frankford Dam, which is owned by the Fairmount Park Commission, is the first blockage to fish migration. While it has been breached, there are plans to remove the remaining portion.

This project is schedule for the summer and is estimated to cost \$20,000. Funding is being provided by the National Fish and Wildlife Foundation, the U.S. Fish and Wildlife Service and the Pennsylvania Department of Environmental Protection, through grants from the FPC, the PFBC and American Rivers.

The second blockage to fish migration is the Philadelphia Water Department's sanitary sewer line. To overcome this obstacle, a rock-ramp fishway has been designed.

A rock-ramp fishway is a kind of fish ladder that uses large rocks and timbers to create pools and small falls that mimic natural structures. The \$50,000 construction will be funded by the PWD and will begin in the summer.

The Rhawn Street Dam, which is the third blockage, will also be cleared this summer. This \$60,000 project is funded by the NFWF, the USFWS, and the PA DEP, through grants from the FPC, which owns the dam, the PFBC and American Rivers.

The FPC also owns the Roosevelt Boulevard Dam, which is the fourth blockage. The recommendation for this barrier is to build a Denil fishway.

This is another type of fish ladder that uses a series of symmetrical close-spaced baffles in a channel to redirect the flow of water, allowing fish to swim around the barrier.

Funding for this project has yet to be obtained but it is estimated to cost between \$250,000 and \$300,000.

The final project in Philadelphia is the Verree Road Dam. This dam, owned by the FPC, is the fifth blockage along the creek. This will require another Denil fishway. Again, funding has yet to be obtained and the project is estimated to cost between \$250,000 and \$300,000.

Along with breaching projects in Montgomery County, a total of 18 miles of the stream will be reopened for migratory and resident fishes.

Meanwhile, the Fish and Boat Commission released three million Hickory Shad Fry into Pennypack Creek last week. It is hoped that next spring, the shad will migrate from the Delaware River to the creek, where they will spawn for the first time in almost 150 years.

"What's most exciting about the return of the Shad," McGeehan said, "is that sport fish, like Striped Bass and Smallmouth Bass that feed on Shad, will also make their way up the creek."

Dam removal begins on Pennypack Creek

By BRIAN SCHEID
Bucks County Courier Times

Lower Moreland - A mammoth excavator began to chop away concrete from the Bethayres Dam Monday morning as Nicholas DeBenedictis announced the dam's destruction probably would set back the Pennypack Creek 100 years.

He meant that in a good way.

"It's all coming back to where we were 100 years ago," he said. "We're bringing this creek back to its natural state."

DeBenedictis is president of Aqua Pennsylvania, the Bryn Mawr-based water utility that provides water to more than 1.2 million customers throughout southeastern Pennsylvania, including parts of Bucks and Montgomery counties.

Joined by political and environmental officials for a "Take Down the Dam" ceremony along the Pennypack Creek, DeBenedictis said removing the dam will improve the creek's water quality and open that section of creek back up to migratory fish that had no path past the dam for nearly a century.

"Probably kids 20 years from now will be fishing on the banks they couldn't fish on today," he said.

Numerous fish species, such as the blueback herring, American shad and white perch, will now have unimpeded access for 20 additional miles along the creek from the Delaware River, according to Mark Pennell. He's an environmental services manager with URS Corporation, the company that engineered the dam's deconstruction.

The dam, located near the bustling intersection of Old Welsh and Terwood roads, was built in 1910 by the then-North Springfield Water Company to serve a water treatment facility. The water company, now Aqua Pennsylvania, treated about 1 million gallons of water a day at the facility until about 1960 when it was taken out of service, DeBenedictis said.

Since 1960, the dam has been essentially useless, DeBenedictis said. When a portion of the 8-

foot-high, 150-foot-wide dam was damaged during Hurricane Floyd in 1999 and again breached in 2002 due to years of erosion, DeBenedictis' company decided to tear it down.

The dam could be completely removed by Wednesday, Pennell said. Aqua will pay for half of the \$200,000 cost to remove the dam while the other half will be paid for with state and federal grants, DeBenedictis said.

The removal of the dam will change the look of the creek at that spot, Pennell said. Its banks will need to be restored, it will become much narrower, and its depth will drop from about 6 feet to less than 2, he said.

"This will bring the creek back to its original condition," said David Robertson, executive director of the Pennypack Ecological Restoration Trust, an environmental group that owns more than 700 acres along the creek they are saving from development. "It's really gratifying to see it come back to its natural condition."

Brian Scheid can be reached at 215-949-4165 or bscheid@phillyBurbs.com.

December 14, 2005 4:48 AM

HOLMESBURG DAM

Constructed circa 1697, the same date as the Frankford Avenue Bridge located behind you, and built on a natural falls of the Pennypack Creek, this dam connected to the still visible remnant of a mill race across the creek. This dam and mill race provided water power for a mill located about a quarter mile downstream on the tidal portion of the Pennypack Creek.

Farmers rowed small boats from the Delaware River directly to the mill door. The original mill complex, "one of the first establishments of its kind," contained a grist and saw mill and a cotton factory. Mills were operational here until the 1960's.

This dam repeatedly suffered heavy storm damage in recent years. Remnants were removed in 2006 to allow passage of migratory fish, including hickory shad, alewife, striped bass, and white perch for the first time since 1697.

Striped Bass



Hickory Shad



The trade network associated with this mill stretched across the Atlantic Ocean.

The Delaware River is a major waterway of the United States. The Delaware River is a major waterway of the United States.

The Delaware River is a major waterway of the United States. The Delaware River is a major waterway of the United States.



RHAWN STREET DAM

Constructed circa 1799, this dam once provided water power to a large mill complex located next to the present-day recreation path. A mill race which directed creek water through the complex is still visible. The first mills on the site were used to produce lumber and grind corn.



Alewife



White Perch

This dam suffered heavy storm damage in recent years. An additional remnant was removed in 2006 to allow passage of migratory fish, including alewife and white perch for the first time since the late eighteenth century.

In 1828 it was converted to a textile-dyeing mill, which became renowned for its printed handkerchiefs. Known as Conley's Print Works, Hartel's Print Works, and the Pennyack Print Works, the mill employed as many as 160 workers, many of whom lived in a small village located near the Rhawn Street Bridge. The mill ceased operations about 1910. The buildings survived until about 1910, when they were demolished by the Fairmount Park Commission.



1799

The foundations of these mill structures still survive today.

Image: Courtesy of the Historical Society of Philadelphia. (For information: The Academy of Natural Sciences, 1400 Locust Street, Philadelphia, PA 19104)



Fairmount Park
Department of Parks and Recreation
Philadelphia, PA 19104
www.fairmountpark.org

Pennypack projects
& Wissahickon



Memorial Hall, West Park
4231 North Concourse Drive
Philadelphia, PA 19131-3719

Robert N.C. Nix, III
President
Debra Wolf Goldstein
Vice President
James J. Bloom
Treasurer
E. Harris Baum
John K. Binswanger
Thomas Carter
Rosanne Pauciello
Philip Price, Jr.
Doris A. Smith
Leon W. Tucker

Ex-Officio
John F. Street
Marcia Makadon
Designee
Anna C. Verna
Mary Mason
Designee
Andres Perez
Victor N. Richard III
Kumar Kishinchand
Joseph R. Synnick

Karen Lloyd Borski
Executive Director

May 7, 2004

Sara Nicholas
American Rivers Mid-Atlantic Office
600 N. Second St., Suite 403
Harrisburg, PA 17101

Dear Sara,

Thanks to you and Scott for coming to Philadelphia yesterday to look at the lower 3 dams on the Pennypack. It was good to meet you both and to get your input on ways to proceed with modification of the dams. The enclosed is a copy off the report done by the consultant STV, Inc. Chad Pindar and I will send information soon to Scott that is applicable to grant applications. Let us know whether you would like us to send copies of everything to you also. My E-mail address is on the enclosed card. Please call or write if you want to discuss anything further.

Sincerely,

Tom Witmer

P.S. Note that on page 4 of STV's report that for Rhawn St. Dam they estimate that "the current stream banks are about 13-14 feet above the pre-dam channel bottom". Thus although the depth of accumulated sediment is not as deep as I had recalled, it is nonetheless very deep.

CC: Scott Carney