

Passaic River Restoration Reporter

Passaic Valley Sewerage Commissioners

WWW.PVSC.COM

Spring 2004

Volume 4, Issue 1

PVSC BEGINS CLEANUP OF PATERSON'S HISTORIC RACEWAY SYSTEM

Early American history and the environment are uniquely combined at Paterson's Great Falls National Landmark Historic District. After the revolutionary war in 1791, the Passaic River played a seminal role in the industrial development of the United States by supplying water-power to some of the nation's first manufacturing mills. The idea to harness the power of the Great Falls first came to Alexander Hamilton during a luncheon at the base of the falls with George Washington. This ambitious plan met Hamilton's vision to convert the U.S. from a largely agricultural society to one that was more diverse by encouraging a strong industrial base.

To help bring this vision to fruition, Hamilton and a group of investors formed a corporation called the Society for Establishing Useful Manufacturers (S.U.M.). These investors achieved what had never been done before in the Americas, they harnessed the power of an entire river! The drop in elevation at the Great Falls made this possible. Water was diverted from the river above the falls into a series of three descending canals or raceways. Flumes fed waterwheels whose power was then transmitted through a system of shafts, gears, and belts which drove the machinery in each mill. This unique system of raceways, allowed the power of the river's water to be reused three times before returning to the Passaic River.

The water-powered mills of the S.U.M. drove production throughout the 19th and 20th centuries. These early industries reinvented our nation with the development of Samuel Colt's repeating revolvers, the first practical submarine by John Holland, the Roger's steam locomotives and the extensive weaving of cotton and silk goods from which Paterson derived its nickname "Silk City". This dynamic business activity also brought about social change with the nation's earliest organized labor movement.

Recognizing the importance of restoration efforts in this historic manufacturing district, the PVSC River Restoration Department (RRD) sought out a working relationship with David Soo, Executive Director of the Paterson Friends of the Great Falls. Last year, at the request of Mr. Soo, they began clearing the raceways of unwanted trees and bushes. This effort, which required a working crew of seven men over a period of nearly eight weeks, brought under control years of plant growth in and along the raceways. *See Raceways, Next Page*



Upper Raceway with spillway into Middle Raceway in the 1800's



Same area today after much neglect

Passaic River Restoration Reporter

RACEWAYS

Continued From Page 1

This unbridled growth had been causing damage to the retaining walls as well as obstructing views of the raceways themselves.

"We want to present a view of this system that is as close as possible to the working raceways of the 1800's. The whole thing became so obscured by vegetation that it became impossible to get a sense of the system as a whole, aside from the fact that the retaining walls were being destabilized" said Mr. Soo.

The River Restoration crew began a two month project to complete the clearing of the upper raceway. The unwanted vegetation was taken out down to the roots, taking care not to damage the historic raceways and several large shade trees were left in place as part of the eventual landscape plan. This spring the RRD will be tilling the ground and planting wildflowers above the channeled waterway for aesthetics and soil retention.

Michael Wing, Executive Director of the Paterson Historic Preservation Commission, says the City of Paterson has obtained funds from the Urban History Initiative (UHI) to line the upper raceway with an impervious liner to prevent seepage. The UHI funding will also provide other amenities, such as benches and signage. Mr. Wing says Paterson is in the process of obtaining additional funding for restoring the middle and lower raceways as well.

"We hope the visiting public can get an idea of what this engineering marvel once was," said Mr. Wing.

As a show of gratitude, the City of Paterson presented the "Good Graces" award to the River Restoration Department of PVSC this past December.



Another view of Middle Raceway powering mill

DID YOU KNOW?

The first steam engine in America was built at the Belleville Engine Works located on the Second River in what is now Belleville, New Jersey. This led to the development of the first steamboat in 1790 by Colonel John Stevens who teamed with Nicholas Roosevelt (ancestor of two presidents) to build a sixty foot steam powered boat christened the "Polacca". Technical advice was obtained from Josiah Hornblower, a Scottish immigrant and protégé of James Watt, inventor of the steam engine, who first brought this technology to the U.S. As a great many onlookers gathered on the banks of the Passaic River in Belleville, the Polacca was launched and traveled successfully for three miles under its own power on October 21, 1798. The trial run opened the book on the first chapter of steam navigation. Among those interested was Robert Fulton, who in 1807 made a successful trip on the Hudson River. The world was ready for steam powered navigation and the Passaic River and its tributary the Second River played crucial roles.

Passaic River Coalition Prepares to Roll Out "Face the River, Fix the River" Campaign

Because of a unique situation where river dredging, streambank preservation and economic development are all coming together at the right time, the Passaic River Coalition (PRC) is preparing a new campaign for the Lower Passaic called "Face the River, Fix the River" that will be formally launched in May.

"The idea is that it's time for residents, business people, and municipal leaders to see the Lower Passaic for the asset that it is" said PRC Executive Administrator Ella Filippone. She adds, "The symbol of our campaign is a park bench turned around to face the Passaic, instead of looking away from it. At the same time we must move ahead aggressively to fix the river by dredging out polluted sediments and developing and improving a network of parks and river walks along both banks of the river."

"We've been working on the lower river since 1980, and this year we're going to shift into higher gear to make the Passaic a valued resource, starting with renovations to the Great Falls Park in Paterson" said Filippone. Watch your local newspapers for more information on streambank clean-ups and other exciting activities this year.

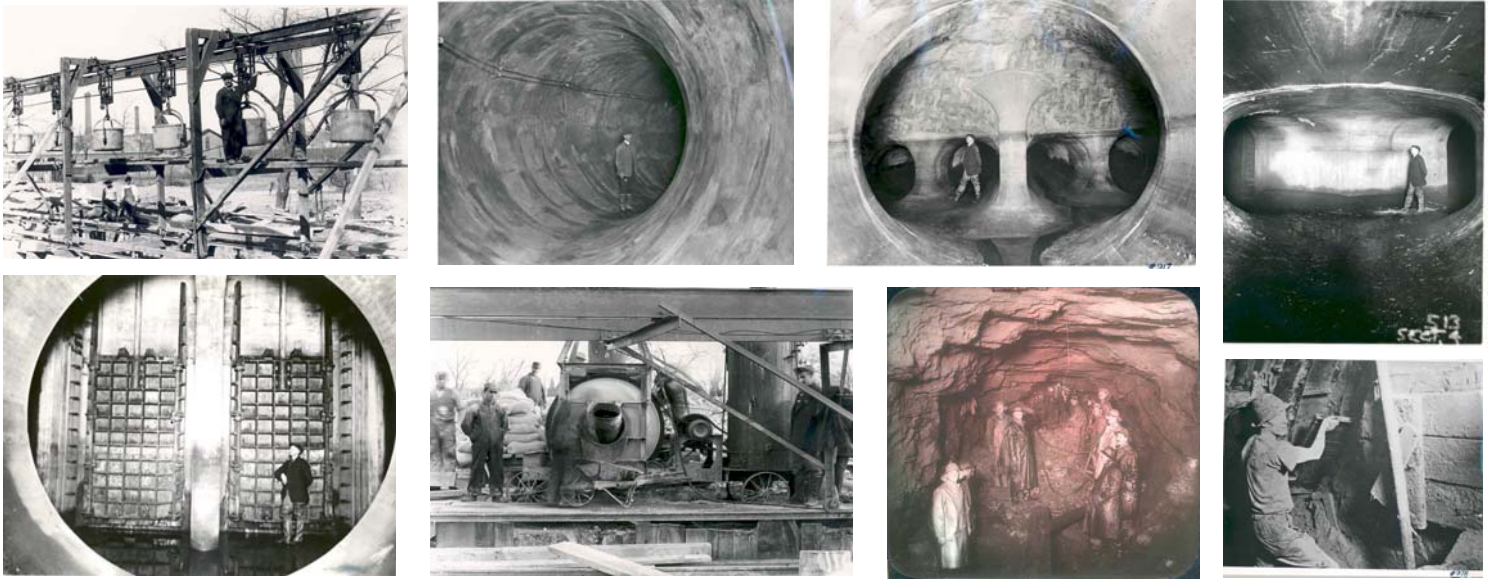


**Passaic Valley
Sewerage Commissioners**

Passaic River Restoration Reporter

PASSAIC VALLEY-PAST...

This new addition to our newsletter is comprised of vintage photos of the construction of our treatment plant and collection system. These photos show the turn of the century construction of the Paterson to Newark main trunk line designed to carry wastewater to our treatment plant.



PASSAIC VALLEY-PRESENT

PVSC's treatment plant removes a minimum of 85% of the pollution from the incoming wastewater, this treated water is then disinfected to remove disease causing organisms prior to its final discharge into New York Harbor. The pollutants that are removed from the raw wastewater are concentrated into what is referred to as sludge. Sludge is a soil like substance that has been sterilized through a specialized process that utilizes heat and pressure rather than chemicals. The final sludge product is mixed with sand or soil and beneficially reused at landfills which are required to cover their fill material on a daily basis.

In the 1990s, PVSC's Industrial and Pollution Control Department instituted a local limits program to regulate metals that are discharged into the wastewater stream by industries in its service area. Due to the success of the local limits program, PVSC was able to reduce the concentrations of metals in its sludge enough for it to be classified by the USEPA as "Exceptional Quality." In addition to the environmental benefits of this reclassification PVSC saves an enormous amount of money through this disposal method. These savings are passed on to district ratepayers who enjoy some of the lowest rates in the country.



Centrifuges removing water in preparation for the heat treatment process

GET INVOLVED!!

For Information contact:

Bob DeVita

River Restoration Program Manager

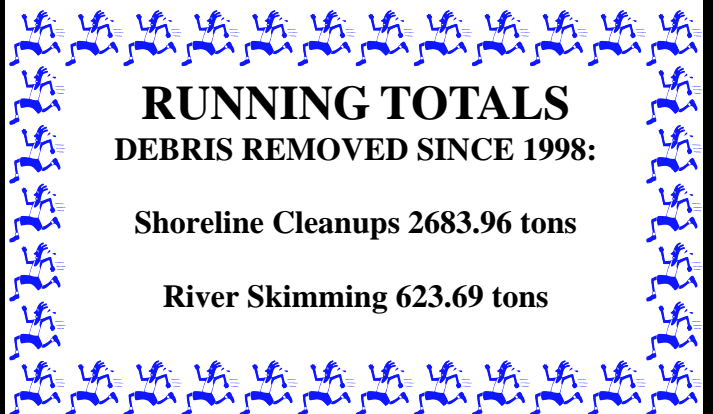
Phone: 973-466-2714

Fax: 973-344-7114

Email: bdevita@pvsc.com

Visit us on the web!

WWW.PVSC.COM



RUNNING TOTALS

DEBRIS REMOVED SINCE 1998:

Shoreline Cleanups 2683.96 tons

River Skimming 623.69 tons

Passaic River Restoration Reporter

GARFIELD TO BUILD HISTORIC DUNDEE DAM PEDESTRIAN WAY AND PRESERVE

The City of Garfield has unveiled an ambitious plan to build a park along nearly a mile of Passaic River frontage. The project will be known as the Historic Dundee Dam Pedestrian Way and Preserve. This new park will be built along the top of the 30 foot high riverbank from Outwater Lane to the Dundee Falls. Features include an 8 foot wide pedestrian walkway/bikeway with lookouts providing dramatic views of the Dundee Falls, the rapids just below and historic sites along the route including:

- ◆ **Dundee Dam built in 1861, one of the largest engineering feats of its day, is 20 feet high and extends 450 across what is known as the Dundee 'Lake' part of the Passaic River.**
- ◆ **Post Ford Revolutionary War Monument where the British followed in pursuit of General George Washington and his troops after they crossed the Passaic River.**
- ◆ **V-shaped rock inlets where the Lenni-Lenape Indians caught their fish**
- ◆ **Ancient Indian Petroglyphs on a boulder clearly depicting a bear paw and jumping fish.**
- ◆ **Other improvements including decorative lighting, benches, historic markers and railings along the overlook.**



Dundee Dam will soon be easier to observe



Bear Claw Petroglyph

The park will provide educational outings which area schools are looking forward to with excitement. Each visitor will see first hand the history and natural beauty that they only read about in classrooms. The Garfield Board of Education will soon work on a plan to incorporate the proposed facility into its field visit curriculum of natural and historic places. As an added bonus, this park will replace what is now home to abandoned weed strewn lots and used car dealerships which provide convenient hidden places for illegal trash dumping. This same area, because it is at the base of a steep riverbank and obscured from view, has long been a refuge for the homeless who set up their encampments in this densely wooded area. This has been a huge social problem for the City of Garfield and has added enormously to the litter that finds its way into the Passaic River. To address this situation police and religious leaders will encourage these people to move to local shelters. Constant vigilance by the Garfield Police along with lighting and fencing should guarantee that this area remains free of this problem for the long term.

“This is a win-win situation for the City of Garfield” says Mayor Frank Calandriello. “A largely blighted area will be replaced by a picturesque multipurpose facility that will highlight historical and natural elements of the Passaic River with funding that comes almost entirely from State and County agencies”.

The park will be situated along the top of a high riverbank providing wonderful views of the river. The Passaic Valley Sewerage Commissioners River Restoration Department, which has been involved for years in keeping this area clear of debris, will create a walkway at the bottom of the riverbank to provide access for fishing to what has become a particularly good spot for striped bass.

If all goes as planned, work on this project could begin in spring 2004. For a detailed view of artist's rendering of proposed park, go to www.pvsc.com and click on River Restoration, then Newsletters.

Passaic River Restoration Reporter

PASSAIC RIVER ROWERS FIND NEW HOME

The Passaic River Rowing Association (PRRA), a community based rowing club, has worked out an agreement with Bergen County to lease space in Riverside County Park South located on the border of Lyndhurst and North Arlington. The leased facility consists of an existing earth covered concrete structure that was previously used to store trains for a children's train ride in the 1970's. Long since vacant, this facility will serve as a boathouse for the PRRA. The structure is well suited to the storage of rowing shells (boats) due to its length (103' long), dual overhead doors on each end and its proximity to the Passaic River.

The facility will require the construction of new docks prior to shifting any of the clubs operations to this location. The permitting process for these new docks is currently underway and the PRRA anticipates initiating expanded rowing programs from this location in the Spring of 2005. In the interim, improvements to the boathouse facility are anticipated and the PVSC River Restoration Department has pledged its assistance to enhance and improve the facility by removing trees and brush currently covering the earth covered concrete building. PRRA is responsible for the cost of the new docks and all improvements to the facility.

The PRRA also continues to lease space within the Kearny Boathouse where it has been operating its adult and youth rowing programs for the past four years. The new facility is needed in part due to the successes of all the PRRA's rowing programs. With three high schools (Kearny, Belleville and Nutley) all operating from the same boathouse, space for equipment storage is at a premium. The new location will offer additional boat storage,

room for increased membership and the potential to introduce Bergen County park-users to the sport of rowing.

PRRA President Mark Cenit states that "Riverside County Park South is an ideal location for a rowing program. The park has all of the necessary facilities and with over 2000 feet of river frontage, is a perfect location for regattas, from both a participant and spectator point of view." Mark also points out the terrific support that the PRRA has received from the Bergen County Freeholders and Parks Department staff. "Everyone from County Executive Dennis McNerney to Freeholder Chairwoman Valerie Huttle and Freeholder/Mayor Bernadette McPherson has been extremely supportive and I'd like to personally thank Parks Director Frank DeBari for all the assistance we have received."

PRRA is a public not-for-profit 501c3 organization. It offers a variety of cost-effective rowing programs including learn-to-row classes, youth programs, recreational rowing and competitive programs. PRRA's membership consists of 150 of which approximately 65 are youth rowers. For more information about PRRA check out their website at www.prra.org.

Who We Are

The Passaic Valley Sewerage Commissioners (PVSC) was established in 1902 in response to a public outcry to alleviate pollution in the Passaic River and its tributaries. Today, PVSC services the wastewater treatment needs of commercial, industrial and residential users in 48 municipalities across Essex, Hudson, Bergen, and Passaic Counties. Currently, the fifth largest wastewater treatment facility in the nation, PVSC continues to be a true leader in environmental progress.

In 1998 PVSC began the Passaic River/Newark Bay Restoration Program as a means to return the Passaic River system to its potential as a source of recreation and pride in the communities that we serve.

The Passaic River Restoration Reporter is a publication funded by the Passaic Valley Sewerage Commissioners. It is intended to provide information on the progress of the Passaic River/Newark Bay Restoration Program.

Passaic Valley Sewerage Commissioners

DONALD K. TUCKER
CHAIRMAN

CARL S. CZAPLICKI JR.
VICE-CHAIRMAN

ANTHONY W. ARDIS
FRANK J. CALANDRIELLO
ALAN C. LEVINE
ANGELINA M. PASERCHIA
KENNETH R. PENGITORE
THOMAS J. POWELL
COMMISSIONERS

BRYAN J. CHRISTIANSEN
EXECUTIVE DIRECTOR

JAMES KRONE
DEPUTY EXECUTIVE DIRECTOR



Proposed boathouse in Riverside County Park, Lyndhurst

PVSC AND ACHEIVEMENT AWARDS **'PERFECT TOGETHER'**

The Passaic Valley Sewerage Commissioners has once again achieved awards in recognition of a variety of innovative environmental programs.

- ◆ PVSC's Industrial Department has won the Environmental Protection Agency's 2003 National Clean Water Act Recognition Award for Pretreatment Excellence from the EPA. What this rather lengthy award title means is that through increased enforcement of and cooperation with district industries, a huge reduction in harmful heavy metals has been achieved. This is good news for the waters of the New York Harbor (where PVSC discharges its effluent) and allows for disposal of sludge in a less costly way.
- ◆ For the fifth time in the last six years PVSC has won the Association of Environmental Authorities (AEA) Wave Award, in this instance for the Water Quality Monitoring Program that was featured in our fall 2003 newsletter.
- ◆ The Education Outreach Program won the Association of Metropolitan Sewerage Agencies (AMSA) 2004 National Environmental Achievement Award for Public Information and Education.
- ◆ Last but certainly not least, the River Restoration Department won the Golden Broom Award from the NJ Clean Communities Program for the highest collection total in a Newark city-wide cleanup competition.



RRD Foreman Frank Dumschat and Clean Communities Director Sandra Huber with Golden Broom. RRD crew in background

Passaic Valley Sewerage Commissioners
600 Wilson Ave.
Newark, N.J. 07105
973-344-1800

PRSR STD
U.S. Postage
PAID
Trenton, N.J.
Permit# 1117

