



# PETERS TOWNSHIP SANITARY AUTHORITY

## NEWSLETTER

WE'RE ON THE WEB AT [www.ptsaonline.org](http://www.ptsaonline.org)

MAY 2012

ISSUE 6



### Grant Funded Projects Net Large Cost Savings



In 2010 an unprecedented number of grant opportunities became available to wastewater treatment providers, including the H2O PA Grant Program, Local Share Account Program, and the PA Conservation Works! Program, which was a Federal stimulus funded program. The Authority aggressively sought grants in all of the aforementioned programs, and was successful in receiving \$1.4 million in grants so far. The majority of this newsletter is focused on describing the projects funded by the grants. The Authority would like to thank the following for their help and support, that with out we would not have obtained the grants: Senator John Pippy, Representative John Maher, Peters Township Council, the Washington County Board of Commissioners, and Washington County Local Share Account Committee.

#### Brush Run & Donaldsons WPCP Energy Improvements — Conservation Works! Grant Received \$137,250

This \$230,000 energy improvements project was to the Authority's two water pollution control plants (WPCP). The improvements consisted of the addition of Variable Frequency Drives (VFDs) and high efficiency blowers to its process air blowers at the Donaldson's Crossroads WPCP, efficiency improvements to the ventilation system at the Brush Run WPCP's Headworks Building, and the addition of a VFD to the Brush Run WPCP's aerobic digester blower. The VFDs automatically vary the speed of the air blowers in response to signals from dissolved oxygen analyzers in the process stream, thereby slowing the blower speed down during the early morning hours when little, if any, wastewater is entering the treatment facilities. The process air blowers use approximately 80% of the power used at the treatment facilities. The Authority also received a \$16,904 rebate from Allegheny Power for 50% of the procurement cost of the VFD equipment as part of their *Watt Watchers* program. The energy improvements have now been in operation for one year, and the Authority is realizing a 20 to 30% reduction in energy requirements and overall energy savings of \$23,000 annually.

#### Brush Run WPCP Wet Weather Improvements — H2O PA Grant Received \$ 600,000

This \$1.5 million project will increase the capacity of the treatment plant allowing it to serve the community for another 20 years. The project will also provide the ability to remove a portion of the nitrogen from the wastewater. The existing facility removes ammonia from the wastewater, which is toxic to aquatic life, by converting the ammonia to nitrates, which is non-toxic but a nutrient. Nitrates, for example, are found in lawn fertilizer. When the nitrates are discharged to the stream, either through treated wastewater discharges or runoff from lawns, the nitrates contribute to algae and aquatic plant growth in the stream, leading to depressed dissolved oxygen levels and creating water quality problems. This treatment plant upgrade will add anoxic zones where a substantial portion of the nitrates are biologically converted to nitrogen gas and released to the atmosphere, which is 78% nitrogen.

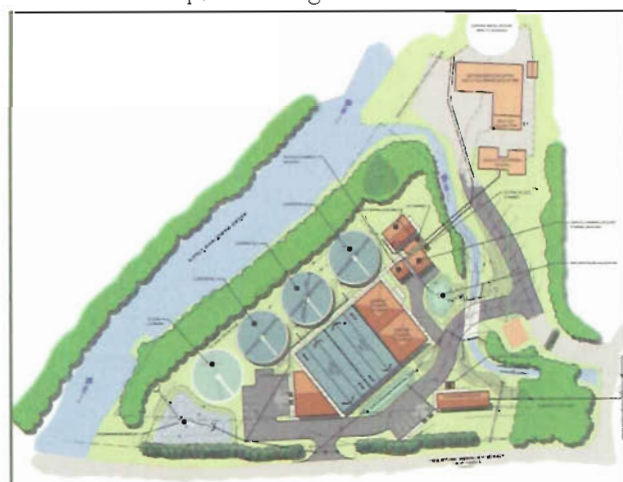
The project is expected to be completed this June.



Construction of the Clarifier Underway

#### Donaldson's Crossroads Water Pollution Control Plant Replacement Project — To date a \$85,000 LSA Grant for design and a \$43,000 PaDEP Planning Grant for a Total of \$128,000

The Donaldson's Crossroads Water Pollution Control Plant, located at 166 Oakwood Road, serves the southwestern portion of Peters Township, including most of the Route 19 commercial corridor. It provides service to approximately 2,600 equivalent residential households.



DC Plant Replacement Concept Plan

The treatment facility was originally constructed in 1962, and portions of the facility are now 50 years old, and in need of major upgrading. The treatment plant is approaching its design organic treatment capacity, and the Authority has established a Tap and Organic Management Plan in order to manage the remaining treatment capacity until a replacement plant is constructed. The Authority began the process of plant replacement in 2004 with the preparation of an Act 537 Sewage Facilities Plan Update, adopted by Peters Township in September 2010. In March 2012, the Authority Board selected the project team of Lennon, Smith, Souleret Engineering and Hazen & Sawyer for the Design and Permitting Phase Services at an estimated fee of \$951,000. The plant design will include a plant capacity increase from 1.2 Million Gallons per Day (MGD) to 1.75 MGD, and will include odor control facilities to contain and treat odors. When constructed in 2015, the total project cost will be on the order of \$15 million.

**Valley View Drive Sewer Extension** — Washington County Local Share Account \$300,000/H2O PA \$225,000/  
Pa DEP \$10,000 — Total Grants Received **\$535,000**

This \$1.3 million project will extend the public sewers to existing dwellings on Valley View Drive and Irishtown Road Extension. The project is underway and is being constructed in two phases. The first phase extends the sewer under Arrowhead Trail and across Sugar Camp Road, and provide sewer service to the Peterswood Park Expansion project. The second phase of the project extends the sewer through the Arabian Empress property, under Arrowhead Trail for a second time, and up Valley View Drive. Both phases are under construction, with an expected completion date by this October.

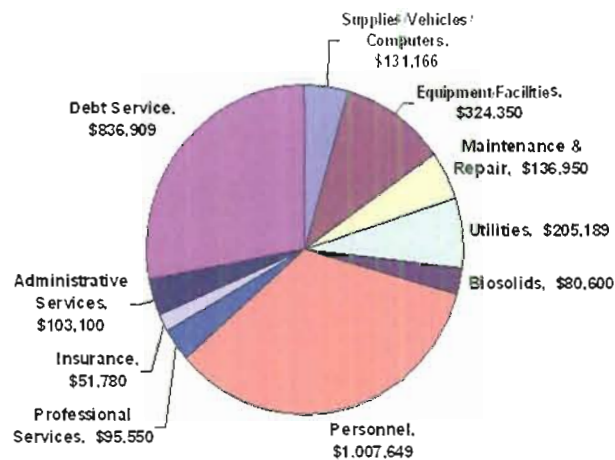
**Wet Weather Sewage Issues — 2011 Friar Lane Pilot Program**

Groundwater migration into the sanitary sewer system puts an undue strain on the Authority's treatment plants and causes sewer rates to increase to pay for otherwise unnecessary plant and interceptor expansion projects. Since 1997 the Authority has aggressively implemented a public sewer main rehabilitation program. While there is convincing data that indicates "background" infiltration is being eliminated, peak flow during significant wet weather events remains unchanged. The available data indicates the vast majority of water entering the sewer system during wet weather events originates from private plumbing below grade. The Authority has identified the Friar Lane Sewershed as an area with the highest wet weather infiltration and has selected it for the pilot program to prove or disprove this data. With the cooperation of many of the residents, we have tested the home's private building sewers using rainfall simulation techniques and found that 42% of the homes tested contributed wet weather infiltration into the sanitary sewers. In exchange for collecting valuable information and the inconvenience of repeated visits during testing and retesting, the Authority will pay for the testing, necessary repairs to the building sewer and for resident's participation in the program. The financial incentive was offered to encourage participation to conduct the program due to unknown repair costs. We are in the process of selecting contractors to repair the defects. After the defects are corrected we will re-test the properties to verify the repairs eliminated the infiltration. Once completed, this information will be compared to pre-rehabilitation data to quantify total flow reduction within this sewershed and the results will be posted on the Authority website. If the program is successful in identifying and eliminating sources of wet weather infiltration, this program can be implemented in other areas that have been identified as contributing high levels of infiltration. The cost savings realized through reduction of wet weather infiltration will help the Authority to provide cost-effective wastewater disposal for years to come.

**AUTHORITY'S 2012 OPERATING BUDGET— \$3.0M**

Operating Revenues:	Sewer Charges	\$2,001,000
	Min. Charge	\$ 875,070
	Penalties	\$34,000

Operating Expenses by Category:



The Current sewer rates are \$5.05/1,000 gallons of water consumed, plus a \$31.00/quarter minimum service charge. The Authority last adjusted its sewer rates in 2009. It is anticipated a rate increase will be required in 2013 on the order of 8-10%.

*Average Residential Quarterly Bill is \$104.23 for 14,500/gallons consumed*

The Authority's charge for sewage service is the 3rd lowest out of eight nearby comparable service providers.

**TOTAL CUSTOMERS  
IN THE PTSA WATERSHED:**  
RESIDENTIAL 5,654    COMMERCIAL 275

**In 2011 the Authority's website was improved and updated.**



The new website includes: Current Projects, Board Meeting Minutes, Budget Report, Audits, Wasteload Management Reports, all the Authority's forms & applications, building sewer specifications, billing policies, and much more.

**BOARD MEMBERS**

David G. Blazek, Chairman                      Terrence G. Byrne, Vice Chairman                      Eric S. Grimm, Secretary  
Michael P. Crall, Treasurer                      Rebecca W. Kaminsky, Asst. Secretary/Treasurer

**BOARD MEETINGS**

Held at the Lower Level of Administrative Building — 111 Bell Drive  
2nd Tuesday of the month at 7:00 p.m. Additional Meeting 4th Tuesday if needed.

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