



PWSA's 5-Year Plan

Summary: The Pittsburgh Water and Sewer Authority (PWSA) was placed by the state Legislature under the oversight of the state Public Utility Commission (PUC) in 2017. The PUC was tasked with making sure the PWSA brought its operating procedures up to its guidelines and with forcing the agency to craft a long-term plan to replace/upgrade its aging infrastructure. The first five-year plan has been released and this *Brief* looks at some of its details.

2017 was a momentous year for the PWSA. After a couple of water system issues spotlighted a frail and aging system that would be very costly to repair, the state Legislature placed the PWSA under the regulatory oversight of the state PUC (see *Policy Briefs Vol. 17, Nos. 14, 29 and 49*). Act 65 of 2017 compels the PWSA to do two things: 1) bring its operating system into compliance with the rules and regulations of the PUC, and 2) put together a long-term infrastructure improvement plan for the replacing/upgrading of its systems, both water and sewer conveyance.

PWSA's plan, covering the first five years, 2018 to 2023, was submitted to the PUC in September 2018 and is now being reviewed by the PUC. News reports note that after obtaining public input, the PUC has until November 2019 to accept outright, accept pending the PUC's recommended changes or reject the plan.

The proposed plan spells out the details of the two systems' infrastructure components. The water system is very old and much of it is well past its expected life span with an estimated average age of over 80 years. Forty percent of the system was installed prior to 1920 and 86 percent was built prior to 1970. It is comprised of over 1,000 miles of water lines of which 964 miles are water mains.

While the entire system has not yet been adequately cataloged and updated, the PWSA says it is using a Geographic Information System that is constantly being updated to get a more accurate picture of the system's health. However, given the extreme age of much of the system, estimates of needed immediate and near-term replacements are just that. It is almost impossible to know with certainty where potentially calamitous breaks might occur.

The water system contains two treatment plants (one rapid sand and one microfiltration), eight distribution pump stations, four reservoirs (three covered, one not), 10 distribution

storage tanks/reservoirs, two finished water pumps, one raw water pump on the Allegheny River, 24,900 valves and 7,450 public fire hydrants.

While the PWSA does not treat sewage—the Allegheny County Sanitary Authority (ALCOSAN) does—it does have a conveyance system to ALCOSAN that needs to be looked at as well. There are 1,213 miles of sanitary, storm and combined sewer lines in the system. The system also has four wastewater pump stations, 30,000 inlets, 29,000 manhole covers, 185 storm sewer outfalls and 38 combined sewer overflow outfalls. Approximately 77 percent of the sewer system is combined with storm water, which by federal consent decree, must be separated. There are 24 neighboring municipalities that convey wastewater through PWSA lines for which they do not provide a cost share to PWSA.

Obviously, the system is immense and will take many years and billions of dollars to fix it in its entirety. The proposed five-year plan covering 2018 through 2023 will be the first of several such plans. Recall that a similar comprehensive plan by an engineering firm from 2012 proposed a 40-year time frame recommending eight five-year plans, for overhauling the entire system.

According to the five-year capital improvement plan submitted to the PUC, the top priorities are “the Aspinwall Water Treatment Plant, replacement or rehabilitation of the two major (treated) or finished water pumping stations, upgrades to storage facilities; replacement of critical transmission lines; continuation of the lead service line replacement program; and acceleration of the small diameter water main replacement program with an overall five-year budget of approximately \$775 million.” Small diameter pipes (8 inches or smaller) are scheduled to be replaced in one percent of the system (720 miles) in the next five years. The lead service line replacement program has been well underway, replacing more than 2,700 lines from 2016 to 2018 and plans to be finished by 2026. It has been under a Pennsylvania Department of Environmental Protection order to do so since 2016.

As was mentioned in a state Auditor General’s report from 2017, the city had an agreement with PWSA to provide bulk water to city properties (600 million gallons per year) and that many city properties were not metered. As part of this plan, the PWSA will also be installing meters at approximately 200-400 sites that are currently unmetered along with another 500 properties that pay a flat rate but do not have a meter. The cost of this part of the program will be billed to these customers and is expected to take five years to complete. The PWSA does not provide an estimated cost per meter.

This five-year plan also includes wastewater system renewal priorities that have a budget of \$155 million over the five years. The total budget for the three project areas comes to \$930 million.

In sum, this plan calls for spending a very large amount of money. And it represents only the first five years of repairs and replacements. As was noted in an earlier *Policy Brief (Vol.17, No. 14)*, the PWSA carries a large amount of debt. In 2015 the amount of net total bonds and loans stood at \$763 million before increasing to \$866 million at the end of 2017 (2017 audited financial statement). The net position of the PWSA at the end of 2017 was negative \$43.8 million—up from 2015’s negative \$35.7 million but better than 2014’s negative \$59.1 million net position. And this figure depends on what can only be an estimated value of the system’s infrastructure.

In the plan, the PWSA states that “current planned improvements will be funded through both current rates and rate increases, as well as through revenue bonds, a capital line of credit, pay-as-you-go funding, and PennVest low interest loans.” It will also explore federal funding through the Water Infrastructure Finance and Innovation Act of 2014, which offers low fixed-interest rates and flexible terms. It will also look to potential private-public partnerships where possible—and if allowed by the mayor and council who have been unalterably opposed to privatization.

In September 2018 it was reported the PWSA petitioned the PUC to increase rates across its customer base, including 17 percent on residential customers and 10 percent on educational and health care organizations. In 2018 the PWSA’s budget show receipts from water totaled \$109.7 million. With an estimated composite average rate hike of 13.5 percent, those receipts should climb another \$14.8 million. If approved the new rates will take effect in April 2019 and remain through 2020. It will likely be the first of a several rate increases for PWSA customers in the coming years.

And, of course, the plan’s estimates of costs are just the direct monetary cost of the replacement and repair to be borne by the PWSA. There will be other huge costs, some non-monetary, imposed on the citizenry as streets are closed during work on the water lines. Add to that the lost revenue and output of businesses whose patrons and employees cannot get to them. Nor do the PWSA’s costs include the serious inconvenience of water service being cut off to communities for extended periods.

According to the plan, in 2014 through 2017 annual capital spending was under \$40 million per year. Spending increased to \$70 million in 2018 and is projected to balloon to \$330 million by 2021 before dropping a bit to \$265 million in 2023—in all \$1.35 billion over five years.

But this is the price that has to be paid because of years of failing to address the problem of antiquated system components. Bear in mind, too, that PWSA funds were misused by past administrations to shore up city budgets rather than investing in needed repairs.

Still this plan, though too long in coming and purposely delayed, is the first step of many to insure a properly functioning reliable water and sewer system for Pittsburgh.

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