

COMPREHENSIVE CITYWIDE



ASSET



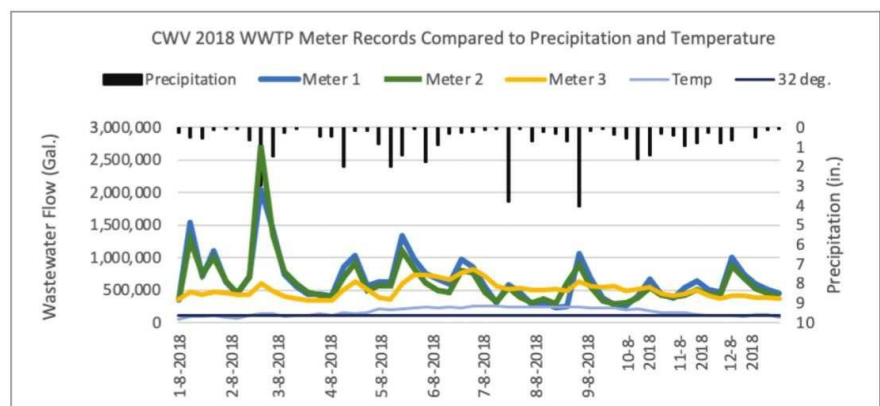
MANAGEMENT

PROGRAM (CAMP) **SUCCEEDS**

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JOINT MWEA/MI-AWWA AIM COMMITTEE

It is widely publicized that America's infrastructure is rapidly deteriorating and reaching the end of its useful life. In its 2017 report on the condition of America's infrastructure, the American Society of Civil Engineers (ASCE) gave America's infrastructure an overall grade of D+ and reported the nation would need to spend an additional \$4.5 Trillion by 2025 to raise the national infrastructure to a state of good repair. With over 15,000 wastewater treatment plants and demand growing by 23% over the next 15 years, the US Wastewater infrastructure also received a grade of D+.



Preliminary Analysis of Watervliet Wastewater Collection System meter records.



Map of Watervliet custom flow meter locations.

With the implementation of the Stormwater, Asset Management, and Wastewater Program (SAW), the State of Michigan provided funding for the assessment of Michigan’s aging stormwater and wastewater infrastructure.

Wastewater, Stormwater, Inflow & Infiltration (I&I), and drainage issues have long plagued the City of Watervliet community. In 2013 we enlisted the services of Wightman to manage our SAW program. As part of the SAW program we were able to assess our wastewater and stormwater assets and collect valuable data, including a 20-year capital improvement plan (CIP).

Following the completion of the SAW program, Wightman proposed the City combine the findings from the SAW program and merge them with asset management plans for our water, roads and other above ground asset classes. By expanding the SAW program into a more comprehensive asset management program with all of the City’s assets, a city-wide asset management program (CAMP) was created.

The CAMP merged the wastewater and stormwater CIPs, analysis, and GIS data with other community asset class CIPs, AMPs, and analysis providing a 20-year program to concurrently manage the forecasting, maintenance, repair, reporting, and funding of all assets. The CAMP is forecasted to provide cost reductions of over \$300,000. These savings are already evident as realized in the \$2.3 million South Watervliet Drain Project, which is currently underway, and a street project set to break ground in the summer of 2021 that was one of 23 communities in Michigan awarded a MDOT Category B Grant.

Mayor Dave Brinker and the City Commission have seen value in this process.

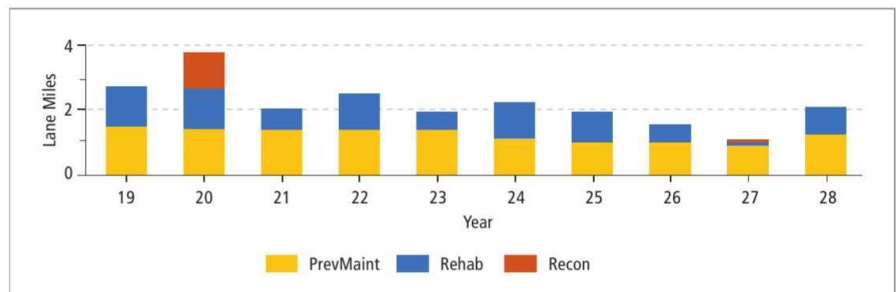
“For the past 10 years, we have been working with Wightman to identify the



Map of water line replacements.



Map of LCR Home Inspections.



Road Repair Analysis with Roadsoft.

wide range of infrastructure problems that continue to grow in the City. With the CAMP program, we are now able to effectively and efficiently provide the highest level of service at the lowest cost to our community,” shared Brinker.

Along with City staff, Wightman assembled a CAMP team that merged the SAW and water CIPs with the analysis of our drainage issues, I&I problems, lead water line mitigation and road repair program.

CAMP program engineer Andrew Rudd presented graphs created from the I&I analysis to help illustrate the preliminary findings to the City Commission.

With the various flow tracking technologies and software, we were able to pinpoint the exact locations of the I&I problems. Eleven flow meter locations were identified based on our preliminary data. The following map reflects where the custom flow meters were placed.

In addition to merging the planning, management and funding of all of our assets, we added the Lead and Copper Rule (LCR) initiative, mandated by the State of Michigan. The following are examples of the

in-depth analysis for water, LCR mitigation, and road repair that were created.

Sam Leatch, Wightman Client Representative explains, “...with the CAMP, we were able to address the many infrastructure issues that Watervliet faced. In the end, we worked with the City’s Municipal Finance Advisor, Baker Tilly, to develop and secure approval for the implementation of creative rate and debt funding for public assets and private water lines. This resulted in a creative combination of USDA, DWSRF, SWQIF, and grant funding programs, forecasted to equate to a combined \$7.5 million in debt funding.”

If you would like more information on the joint MWEA/MI-AWWA AIM Committee, please contact Committee Secretary Maureen Wegener (maureen.wegener@c2ae.com) or Co-Chairs Deann Falkowski (defalkowski@fishbeck.com) and Lindsey Kerkez (lindsey.kerkez@ohm-advisors.com).

If you have questions regarding this article, please contact Watervliet City Manager Tyler Dotson (citymanager@watervliet.org) or AIM Committee member Frank LaPierre, Infrastructure Manager, Wightman & Associates at (flapierre@gowightman.com).