Office of the Interim
Chief Executive Officer
735 Randolph Street, Suite 1900
Detroit, Michigan 48226

February 23, 2022

The Honorable
Board of Directors
Great Lakes Water Authority

RE: Interim CEO's Report – February, 2022

Dear Chairperson Quadrozzi and Directors:

A recurring theme in my communication with this Board as Interim Chief Executive Officer has been a commitment to improving the resiliency of the regional system.

In keeping with that commitment, I am pleased to share with you that after months of hard work, the underground work and diversion testing has been completed on what we call the Grand Connection. This tunnel, approximately 1,000-foot in length, runs under West Grand Boulevard and connects the Detroit River Interceptor (DRI) to the North Interceptor East Arm (NIEA). By operating gates at both the DRI and the NIEA, dry weather flow can be diverted from the DRI to the NIEA, allowing maintenance and inspection entries into the lower reaches of the DRI for the first time in over 80 years. In addition to the significant improvement in ability to maintain the DRI, this connection affords our operators increased operational flexibility for work at the WRRF. Both of these significant improvements increase the wastewater system's resiliency in a tangible way. You can find more information on pages 14 through 16.

We continue to think about new and creative approaches to an industry-wide challenge of recruitment and retention. Recently, Organizational Development, Public Affairs and Water Operations participated in a collaborative effort with WXYZ-TV 7's Workers Wanted segment. The segments aired in multiple newscasts over the course of two weeks and focused on critical positions that GLWA is recruiting for, including Maintenance Technicians, Field Service Technicians, Plant Technicians and Water Technicians. The partnership involved live-air reads by station anchors accompanied by on-screen graphics highlighting the positions being sought and key GLWA benefits offered. The on-air reads were immediately followed by 30-second promotional videos featuring GLWA team members talking about how the work they do makes a difference in the community, and how those interested can apply for a rewarding career at GLWA.

There has been a positive public response to these promotional segments. Over the past six weeks, Organizational Development has experienced an increase in potential candidate inquiries, as well as an increase in foot-traffic to our Careers webpage (with a total of 2,265 page views). We plan to extend our partnership of this project to include other GLWA Teams. A link to one of the videos can be found on page 19.

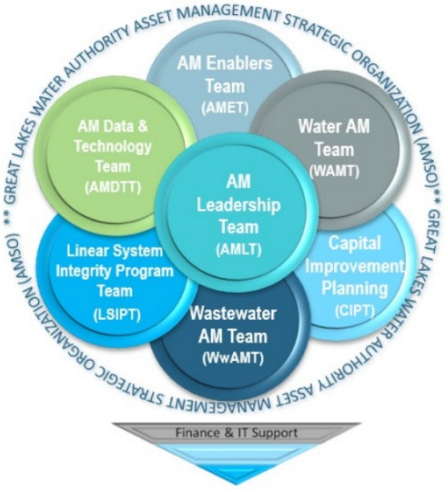
I am proud to share the recognition of two GLWA Teams. The Michigan Chapter of American Public Works Association (APWA) announced that the GLWA Springwells Filter Rehabilitation project was awarded Project of the Year in the category of: Historical Restoration/Preservation $25 Million to $75 Million. Also, the Water Works Park Water Treatment Plant High Lift Pump Station Roof Rehabilitation project was awarded Project of the Year in the category of: Historical Restoration/Preservation $1 Million to $5 Million. I want to specifically recognize the Water Engineering Team Members who were the Project Managers for these two projects; Eric Kramp (SPW Filter Rehabilitation Project) and Nicholas Hoffman (Water Works Park High Lift Pump Station Roof Replacement), in addition to Water Operations Management Professional Nichole Sajdak for submitting the application with support from Public Affairs Specialist Jason Matthews. I'm so pleased to see this recognition of our Team Members' good work from APWA. Congratulations!

The Michigan Chapter will recognize both projects as award winners during the Annual Conference in May of this year. Both projects were forwarded to the APWA National office for competition at the national level.

PLANNING SERVICES

Asset Management Group (AMG)

As GLWA begins making plans for the next fiscal year, one of the tasks is to perform an annual assessment of where we are along our asset management journey, where we want to go and how do we get there. One of the most productive ways to do this is to seek input from GLWA's Asset Management Strategic Organization (AMSO) cross-functional team members through an annual survey. The responses will help assess year-on-year progress of AMSO and the Enterprise Asset Management Group (EAMG) and assist in the development of future Asset Management priorities and improvements. The survey is anonymous and will be distributed in March 2022 and the results will be available in May 2022.



PLANNING SERVICES (continued)

GLWA's Linear System Integrity Program (LSIP) is continuing to work on improving the reliability of our water transmission and wastewater collection services. On October 31st, the 14 Mile transmission main experienced a failure, and the LSIP team sprang into action. We had our contractor on the site the next day to assist Field Services in project management and next step planning. The LSIP has supported the emergency response by providing internal inspection services to determine if the condition of the pipeline has changed since its original inspection in 2019, and to recommend and support repairs to 18 distressed pipe segments, which were completed just before the end of 2021. The work on the 14 Mile Road main will continue, as we install a continuous structural monitoring system (acoustic fiber optic cable), which will allow for real-time monitoring of the critical main. Other completed tasks include forensic analysis of failed pipe section, stray current evaluation, and preliminary report of findings. Currently in progress is the coordination of renewal of pipelines outside of the failure site along the 14 Mile Transmission main.

The program is quickly picking up momentum, as we are coordinating with many other groups to evaluate and address other potential opportunistic assessments. Most notably, the LSIP team is working with Water Engineering to develop a plan to assess and renew the 96-inch diameter transmission main during its planned outage, as part of the relocation project planned for 2025.

By taking advantage of the project synergies, GLWA will experience a significant cost and resource savings. The LSIP team is also coordinating work on the 14 Mile and the Downriver Transmission loops currently in progress to determine feasibility of inspections and renewals.

Capital Improvement Planning Group (CIP)

The CIP Delivery team's extensive efforts and hard work over the past eight months flourished with the presentation of the FY23-27 CIP plan to the GLWA Board on January 26, 2022.

PLANNING SERVICES (continued)

This tremendous effort would not have been possible without the collaboration and support of the Chiefs, Directors, and Project Managers. A special thanks to everyone who contributed to this deliverable!

The CIP team participated in three vendor presentations for the Project Management Information

System (PMIS) selection. The evaluation process continues to advance with anticipated vendor contract award in March 2022 and completed contract negotiations in September 2022.

Last month the team evaluated the quality of CIP data and established a roadmap for quality review and database update. The CIP team is continuing to streamline the online portal user experience. The enhancements will improve the cost and schedule forecasting. The CIP delivery team is committed to exploring opportunities for continuous improvement of GLWA's CIP.

Lastly, we are actively working to expand the CIP team to support CIP project delivery and contribute to the unified cross-functional CIP Delivery team. We are in the process of interviewing candidates for open positions. These positions include but are not limited to, Controls Manager, Budget Management Professionals, and Schedule Management Professionals.

Systems Planning Group

On January 5th, the Watershed Hub Work Group met to plan the fourth Watershed Hub Stakeholder Webinar, which took place on January 25th. At the webinar, GLWA and its partners provided updates on a number of diverse water quality monitoring efforts, focusing most of the time on the ongoing development of a work plan for a regional investigational sampling program.

PLANNING SERVICES (continued)

The Member-led program, whose design is being funded by a grant from the Michigan Department of Environment, Great Lakes, and Energy, calls for coordinated grab sampling across southeast Michigan to help communities identify sources of E. coli impairments and improve the efficiency of future water quality mitigation and compliance activities.

The Charges Rollout #4 meeting was held on January 20, 2022. The focus of this meeting was to answer questions raised at the Charges Rollout #3 meeting held on January 6, 2022, including how bad debt is accounted for in the development of charges and the 4% promise.

The Member Outreach team continues to be flexible to meet the needs of large and small groups alike. To that end, we held two meetings with members specific to the east side of the sewage collection system in January. On January 7th, operators in the east part of the system met to build a shared understanding of how flow travels through the local and regional systems, with a special focus on how flow moves through the Conners Creek and Freud Facilities. GLWA also presented information about its network of level sensors, which are used to measure and understand flows throughout the regional system. On January 13th, managers from these same systems on the east side came together to catalog the various flood mitigation projects that members are undertaking.

On January 14th, the Wastewater Analytics Task Force (WATF) met to review the annual report of member wastewater flows, called the flow balance report, and to hear about GLWA's most recent inspections of the backwater gates at its wastewater outfalls.

During the Water Management Best Practices meeting on January 19th, members evaluated two topics that may be helpful to create best practices guidance related to:

- the use of technology in water operations, and
- the benefits and disadvantages of various billing rate structures.

Additionally, the group discussed the challenges and impacts of recruiting and retention in the water sector and gave feedback on a draft agenda for an Emergency Response Workshop, planned for later in the year.

On January 26th, the Wastewater Best Practices Work Group met to share information about their systems' power feeds, backup equipment, metering, and related concerns. Members also discussed potential public messaging about the limits of the system following the summer rain events.

Systems Analytics and Meter Operations Group (SAMO)

On January 14, 2022, at the WATF meeting, the group presented FY 2021's sewer flow balance. The flow balance identifies various elements of wastewater flows including member partner-specific contributions and the data is used to update sewer shares. At one year into the process, this evaluation provides member partners a glimpse of data trends and allows them to consider actions if unexpected flows or anomalies are noted.

PLANNING SERVICES (continued)

The key takeaways from FY 2021 flow balance report are:

- Precipitation was slightly higher than FY2020
- Annual flow at WRRF was lower than the long-term average
- Dry weather flows are trending downwards (a similar trend is observed in the annual water balance report). Please see Figure 1 below.
- Detroit River levels dissipated. Peak levels in 2021 are approximately 10 inches lower than in 2019 and 2020. Please see Figure 2 below.

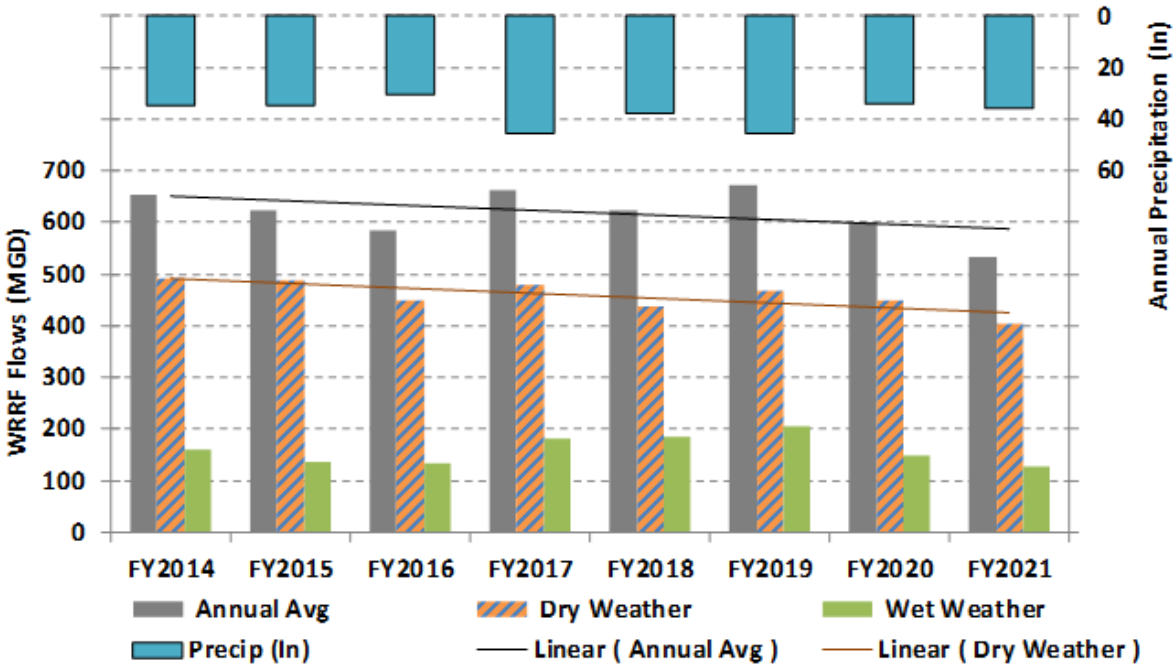


Figure 1: Flows at WRRF and Precipitation for the Past 8 Years

PLANNING SERVICES (continued)

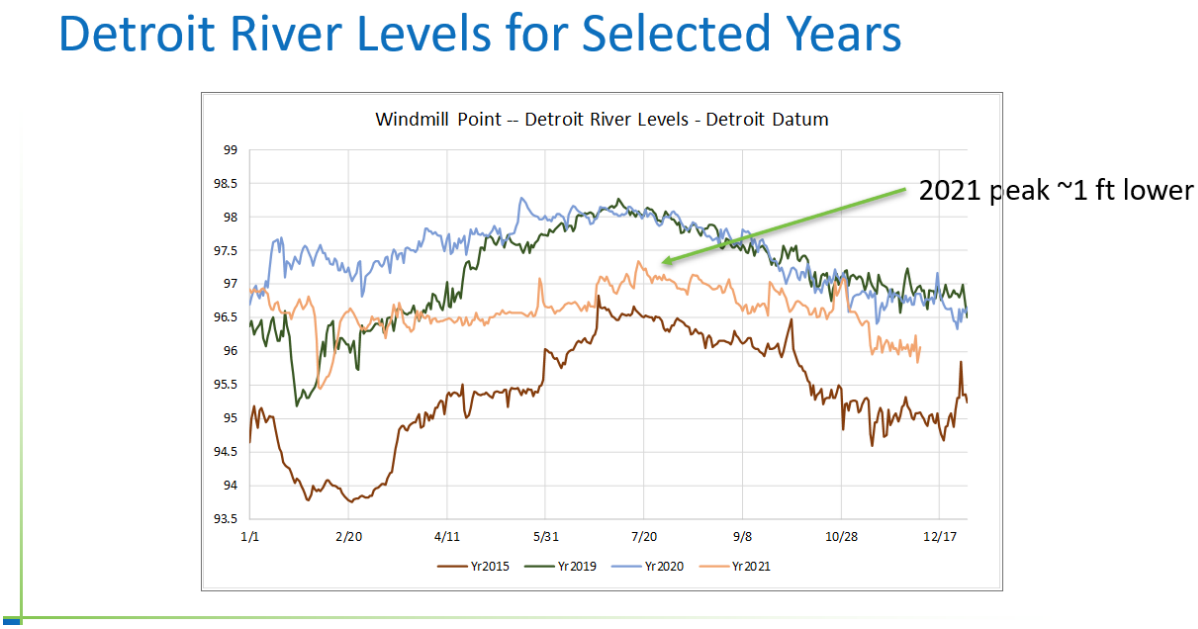


Figure 2: Detroit River Levels – Windmill Point

In the next WATF meeting scheduled for March 17, 2022, a presentation will be made on the hypothetical impact of FY2021 flow data on sewer shares calculations. This element of our flow balance reporting makes a direct tie from wastewater flow analytics to shares. It is a hypothetical evaluation because the flows will only be used to update shares formally after three years in service.

WASTEWATER OPERATING SERVICES

Wastewater Operations

Water Resource Recovery Facility (WRRF) operations complied with the Water Quality Standards for January 2022 with the following exceptions:

The All-carbonaceous biochemical oxygen demand (CBOD) values for January 29th and 30th 2022 are invalid. Oxygen depletion in most samples was insufficient according to the method, and quality assurance results were out of the acceptable range. The cause of this error is unknown at this time. This error will create a reporting error on the DMR (Discharge Monitoring Report) system which will generate 10 violations for non-reported results.

WASTEWATER OPERATING SERVICES (continued)

Maintenance

In coordination with the Pump Station 2 Screenings and Grit Removal Design Project, the Primary Team worked together to test every gate in the Pump Station 2 area. The purpose of this exercise was to gather a list of any needed repairs for the gates, to determine which areas of Pump Station 2 rack and grit could be isolated and drained without issue, and to aid with the scheduling of inspections required to develop a great design. Based on the results of this exercise, repairs are being scheduled to the gates that had identified issues, and the desired inspections are being scheduled in conjunction with the repairs. The picture (shown right) shows a 120-ton crane rented to rapidly reopen a gate if it failed in the shut position during testing.

The critical pumping functions have redundancy built in. On some occasions, however, the maintenance teams are tested despite this redundancy. Filter Feed Pump 1 developed an unanticipated oil leak and had to be taken out of service. Since the redundant Filter Feed of Pump 2 was already undergoing a longer repair, the Dewatering Team needed to restore pumping as quickly as possible. Understanding the urgency of the repairs, the Dewatering Team and Primary Team worked together to promptly replace Filter Feed Pump 1 and restore incineration to normal operation. The quick actions and fantastic teamwork of the maintenance teams restored sludge pumping capacity and ensured compliance with our NPDES permit. The picture (shown right) shows Wesley Brent, a Maintenance Technician working for the Primary Team, assisting the Dewatering Team in the replacement of Filter Feed Pump 1.

The Central Maintenance Team has been involved in an ongoing project to refurbish meter vaults at the WRRF. We are working hand in hand with DWSD to replace and upgrade some 1940s era piping and valving before and after the water meters to ensure reliability. The picture (shown left) shows the interior of one of the WRRF's 1940 era meter vaults.

Finally, the Precision Maintenance Team has been involved with several initiatives to become more efficient "Water Warriors." Maintenance Teams are focusing on Preventive Maintenance (PM) optimization by removing non-value added tasks and redefining frequency.

WASTEWATER OPERATING SERVICES (continued)

Visual management projects in Pump Station 2 and disinfection are ongoing. One of visual management's goals is standardizing and communicating clear visual cues when assets are not within normal operating parameters.

Process Control Center (PCC)

A network switch and Programmable Logic Controller (PLC) at the Hubbell-Southfield CSO Facility was replaced and upgraded. The switch and PLC are in the headworks building. They are required to control the equipment in that area including screens, mixers, and gates.

The switch and PLC failed late on a Friday afternoon. Staff stayed over to install a temporary switch in kind to restore service to Operations. The Team returned the following week to install an upgraded switch as a permanent replacement. The new switch includes built-in fiber optic modules and enhanced security features.

The Process Automation and Control System Team (PACS) upgraded two Programmable Logic Controllers (PLC) in the Primary process area. The Primary clarifiers remove fat, oil, and grease from the influent for disposal off-site. The process equipment used to process and convey this waste include grinders. The grinders are controlled locally by obsolete PLCs supplied from the original equipment manufacturer which are no longer available.

The PACS Team replaced the PLC with newer models that can be purchased. The upgrade tasks included programming of the new PLC, installation, startup, and testing.

Laboratory

We are in the process of validating automated solid-phase extraction (SPE) devices for Polychlorinated biphenyls.

We are meeting with the Asset Management team for training in the utility's Work and Asset Management (WAM) software since we are implementing the use of WAM to manage routine maintenance of plant equipment and assets and set up contract renewal reminders.

The Laboratory Information Management System (LIMS) upgrade to version 13.2 is to occur on February 24, 2022. Once completed, this will allow work on LIMS enhancement projects to restart.

Industrial Waste Control (IWC)

The Local Limits Re-evaluation Study was finalized in May 2021 and submitted through the MiWaters Reporting System on June 1, 2021. Revisions were made to the report and submitted through MiWaters on January 13, 2022. Michigan EGLE staff have approved the report and sent a letter dated January 25, 2022, indicating they will process the report as a Substantial NPDES Permit Modification and schedule a public notice.

WASTEWATER OPERATING SERVICES (continued)

Engineering & Construction Engineering

Design Engineering

The Design Engineering Team is working on the following projects:

JOC 54, Contract 2001401 – Complex B Thickened Waste Activated Sludge (TWAS) Header Reconfiguration. Two of the three headers and several isolation valves have been installed already. Construction is about 50% complete.

JOC 75, Contract 2104166 – Building Demolition at WRRF. This involves the removal of three storage buildings that are in extremely poor condition and pose a safety risk. Design work has just begun.

Construction Engineering

The Pumping Station No.1 Rack & Grit and MPI-1 and Jefferson Sampling Stations Improvements project under Contract PC-789 (CON-250) was completed by the contractor (Weiss Construction Company). Major elements of the work of PC-789 (CON-250) included the following:

PS -1 Rack & Grit (R&G) Building and New Building Additions:

- Replacement of the existing eight bar racks, sixteen grit collection units, screenings, and grit belt conveyors.
- Replacement of existing grit cross conveyors #1 and #2, grit flight conveyors #1 and #2, and screenings cross conveyor #2.
- Construction of new south off-load and north conveyor buildings including electrical, lighting, HVAC, and plumbing work.

MPI-1 Sampling Station:

- Replacement of two existing sample pumps and all related plumbing, electrical, instrumentation & controls (I&C), and HVAC work to ensure a functional sampling system.

Jefferson Sampling Station:

- Replacement of two existing sample pumps and all related plumbing, electrical, I&C, and HVAC work to ensure a functional sampling system.

The project was awarded to Weiss Construction Company with a start work date of November 18, 2013, a required substantial completion date of January 31, 2017, and a required final completion date of July 30, 2017.

The PC-789 (CON-250) contract completed the 30-day demonstration testing of the equipment and systems, and substantial completion of the project was achieved on June 10, 2019. Training of GLWA operations and maintenance staff has been completed for the new systems. Turnover of spare parts to GLWA has been completed. The contractor has submitted final as-built drawings and the operation and maintenance manuals.

The final change order to close out this project was approved by the Board on January 26, 2022, and the final completion date of the project was established as February 15, 2022.

Underground Grit Channel

New Rack & Grit Equipment

New South Offload Building

Construction of the Sludge Conveyance Improvements project (CON-197), Rehabilitation of various sampling stations and Pump Station No.2 Ferric Chloride system (Contract 1802410), Pump Station No.2 Pumping Improvements Phase 1 (PC-795), and Rehabilitation of Ferric Chloride system at Pump Station No.1 and Complex B Sludge Lines (Contract 2002190) projects are all progressing at the site. Several Job Order Contract Tasks are also under construction now.

CSO Control Program

The CSO Team is working on the following projects:

CIP 260614, Contract 1902224 – CSO Facilities Structural Improvements Program. Structural repairs have slowed down some due to the extreme cold and snowy conditions. We are anticipating repairs to accelerate as the spring weather begins to break.

CIP 260618, Contract 2003330 – Oakwood HVAC Improvements. Structural work has begun for the odor control vessel access and the supply fans.

WASTEWATER OPERATING SERVICES (continued)

CIP 260621, Contract 2004666 – Conner Creek Dike Improvements. Concrete wall progress has slowed due to very cold weather. As weather breaks, we anticipate finalizing wall construction around the end of March 2022. Final restoration will occur in Spring 2022.

CIP 260622, Contract 2100575 – CSO Emergency Generator Improvements Project. Bids were received for this project, and it is tentatively scheduled for Board approval February 2022.

Contract 2100136 – Hubbell-Southfield Hanger Replacement Project. The contract for this project was finalized, and the kickoff meeting is being scheduled to begin construction work.

The CSO team is currently performing a basis of design on Hubbell Southfield CIP 273001 to supplement the RFP for a design that will be provided to Procurement in July or August of 2022, with formal advertisement taking place sometime thereafter. The basis of design will help advance the design schedule by beginning a model of the facility and advancing the basis of the design of the flushing system, the chemical feed system, and various other ancillary items to be addressed by this project.

WATER OPERATIONS

APWA - Michigan Chapter 2022 Project of the Year Awards

The Michigan Chapter of American Public Works Association (APWA) announced that the GLWA Springwells Filter Rehabilitation project was awarded Project of the Year in the category of: ***Historical Restoration/Preservation $25 Million to $75 Million***. In addition, Water Works Park Water Treatment Plant High Lift Pump Station Roof Rehabilitation was awarded Project of the Year in the category of: ***Historical Restoration/Preservation $1 Million to $5 Million.***

At the Annual Conference in May of this year, the Michigan Chapter will recognize these projects as award winners. Both projects were forwarded to the APWA National office for competition at that level.

Water Works Park Water Treatment Plant

EGLE Approved SimPlate Method for WWP Operations Laboratory

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) approved the use of heterotrophic plate count (HPC) SimPlate Method by Water Works Park Operations Laboratory on November 30, 2021, for the detection of heterotrophic bacteria in water. HPC is the public health standard for water at the distribution point with a regulatory limit of less than 500 counts/mL.

Heterotrophic bacteria levels also provide information on effectiveness of plant treatment process and on disinfection efficiency in the distribution system when chlorine levels are less than 0.2 mg/L.

The bacteria are detected as fluorescent wells on SimPlate. The SimPlate provides a counting range of 738 colony forming units (CFU) compared to 300 CFU bacteria using agar plates. Difficulties of counting the bacteria colonies on the agar plates with the Pour Agar Plate Method are eliminated by counting the fluorescent wells on SimPlate.

Since January 1, 2022, Water Works Park Operations laboratory has successfully used the SimPlate Method that replaced the Pour Plate Agar Method. SimPlate Most Probable Number (MPN) technique is approved by the US EPA for compliance testing of drinking water, as an alternative to the HPC Pour Plate Agar Method. SimPlate media are ready to hydrate, eliminating time consuming agar preparation and quality control with the Plate Agar Method, reducing cost.

Lake Huron Water Treatment Plant

Rebuild of the Lake Huron Liquid Chlorine Header

The Lake Huron team recently completed a rebuild of the liquid chlorine header. This critical system has been in continual service since the last rebuild by contractors in 1999. This project is being highlighted for two reasons. First, this project shows the high level of leadership of the maintenance team leaders. While no changes to the system were made, the leadership team took on a huge task planning, sourcing materials, and executing the work in a safe and professional manner. Second, the high level of confidence the leadership team has in the skill set of the maintenance team. Tackling a project with this level of risk, requires having a team that strives for perfection and not just completion. Anyone can replace a valve, but to do it with no leaks and in a high-risk environment takes a whole new level of confidence which the Lake Huron maintenance staff possesses.

Filter Performance Evaluation Study

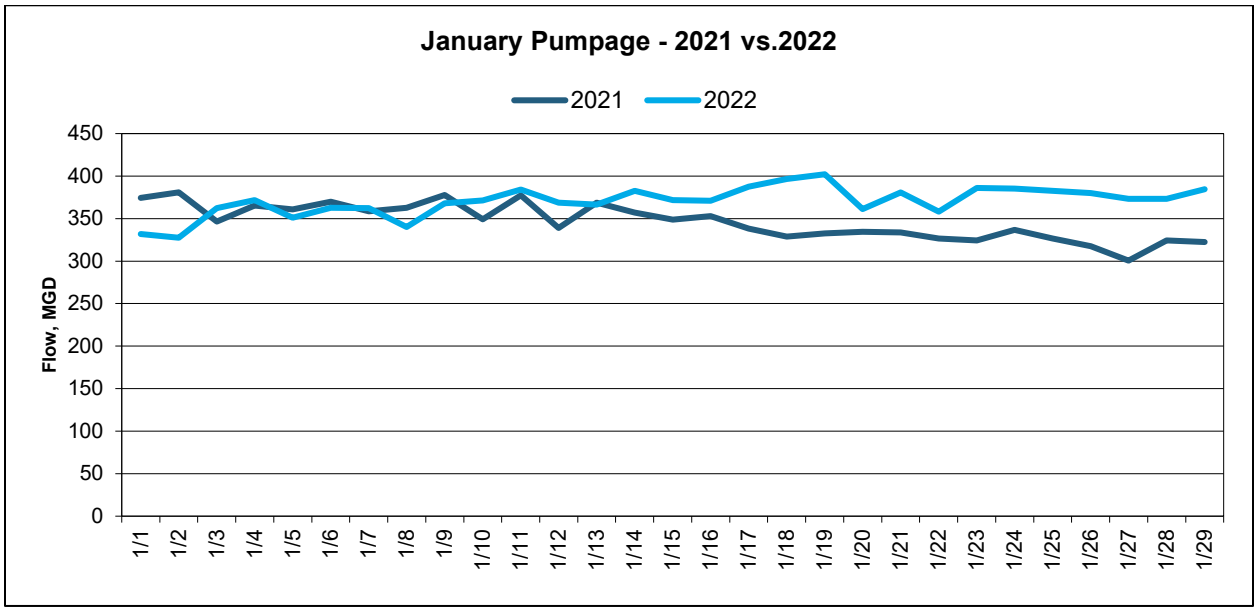
The Lake Huron Water Treatment Plant uses filtration to remove suspended particles from water. The Lake Huron filter media consist of gravel, sand, and anthracite on top of wheeler underdrains and were installed almost 50 years ago and have required very little maintenance since then. Over the years, media can degrade and the effectiveness of the media to filter the impurities can diminish. EGLE requires water treatment plants to perform regular filter media inspections to ensure their effectiveness to produce high quality drinking water.

WATER OPERATIONS (continued)

Lake Huron's laboratory team, operations team, and the maintenance team recently completed a filter evaluation study on filters 4, 13 and 27. The team took several media depth measurements, collected core samples, and inspected the filter media. To do this, they sank a 4-foot x 4-foot poly carbonate box and excavated the media all the way to the filter bottom and inspected the underdrains. This study helped the Lake Huron team gain a lot of information about the overall condition of the filters. The laboratory team also performed other tests like uniformity coefficient of the anthracite, a floc retention analysis, and mudball analysis. A detailed report will be created soon for all three filters.

Systems Control Center (SCC)

January 2022 pumpage was 0.2% higher than 2021



The Grand Connection

In the last few months, underground work and diversion testing has been completed on the Grand Connection. This tunnel, approximately 1,000-foot in length, runs under West Grand Boulevard connects the Detroit River Interceptor (DRI) to the North Interceptor East Arm (NIEA). By operating a system of gates at both the DRI and the NIEA, dry weather flow can be diverted from the DRI to the NIEA, allowing maintenance and inspection entries into the lower reaches of the DRI for the first time in over 80 years. In addition to the significant improvement in ability to maintain the DRI, this connection affords operators increased operational flexibility for work at the WRRF.

WATER OPERATIONS (continued)

The Grand Connection began with the construction of two shafts, one near the intersection of Fort Street and W. Grand Boulevard (the "Launching Shaft"), and the other at W. Jefferson and W. Grand Boulevard (the "Receiving Shaft").

These shafts were excavated to a depth of around 40 feet and were constructed with enough room to accommodate a tunnel boring machine, which was launched on October 14, 2020 and broke through at the receiving shaft on December 1, 2020. As the machine excavated soils, crews lined the tunnel with steel ribs and timber lagging to provide temporary earth support. Upon completion of tunneling, a permanent 9-feet 2-inch diameter liner was grouted in place. This liner was fabricated from glass fiber reinforced polymer plastic mortar pipe (GFRPMP) and with its extensive design life will serve the Grand Connection for many years with minimal maintenance. In early 2022, crews finalized the permanent gate structures by making the final connection to the DRI and successfully testing the diversion gates under live flow conditions. Site restoration efforts are ongoing and in coordination with City of Detroit's efforts to revitalize nearby Riverfront Park. The Grand Connection is just one part of a larger DRI Rehabilitation effort that has been ongoing since 2018. This rehabilitation project will ultimately repair over 12 miles of the DRI.

In addition to the Grand Connection, this work has included the construction of two gate shafts (one at Franklin and Rivard Streets, and one at W. Jefferson and 8th Street), an access shaft at E. Jefferson and Conner, and extensive repairs and cleaning within the DRI itself. With all the necessary flow control pieces nearly in place, crews will continue to clean and repair the DRI into 2025.

DRI, NIEA, and Grand Connection Alignments

WATER OPERATIONS (continued)

Section of tunnel boring machine being lowered into the launching shaft

Tunnel boring machine breaking through at the receiving shaft

Grand Connection primary liner under construction

Progress on lining and grouting of Grand Connection

DRI gate installed during test and flow directed to NIEA through connection

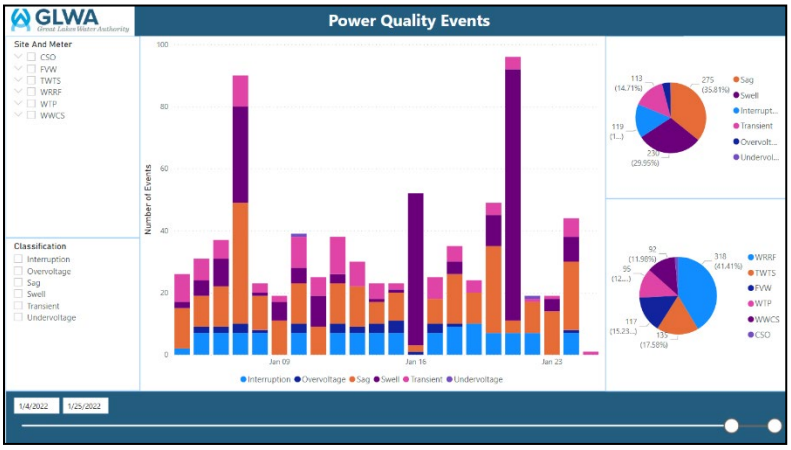
Permanent gate structure under construction at DRI end of Grand Connection

WATER OPERATIONS (continued)

Energy, Research & Innovation

Energy

Power Quality Data – Extract, Transform and Load (ETL)



An extract, transform and load data process was developed for the new Schneider Power Monitoring Expert (PME) system on the control network to populate the Energy database on the business network.

The extract process was finalized this week and the transform and load process is being tested now. This will enable dashboarding and daily or weekly summaries to be generated for power quality events. PowerBI reports are being developed with the data. This insight into power quality events is the first step in developing an ongoing program of tracking and investigating power quality issues.

Research

Water Quality Monitoring in Lake Huron

The Water and Field Services team is working with LimnoTech to deploy a second buoy this upcoming spring in the vicinity of the Lake Huron raw water intake. Located in the open waters of Lake Huron, this buoy will require a much larger hull compared to the Detroit River buoy but will cover the same water quality parameters: pH, temperature, conductivity, dissolved oxygen, and 'Total Algae.' The team is also considering adding wave and current sensors and other parameters that would be of value in this sparsely monitored area (*e.g.,* boating, rescue, lake models).

Energy, Research & Innovation team members invited to join Pacific Northwest National Laboratory External Advisory Board

Dr. Xavi Fonoll and Dr. John Norton were invited to attend the first External Advisory Board (EAB) meeting for the Pacific Northwest National Lab's (PNNL) biosolids research efforts. The EAB structure is set up to review and guide research efforts by the national laboratories. The national laboratories, funded by the Department of Energy, are beholden to the public to pursue research efforts beneficial to society.

WATER OPERATIONS (continued)

PNNL is pursuing a range of biosolids related research efforts, including pyrolysis, hydrothermal liquefaction, anaerobic digestion, and other efforts to investigate the transformation of agricultural and waste products into beneficial chemicals and energy.

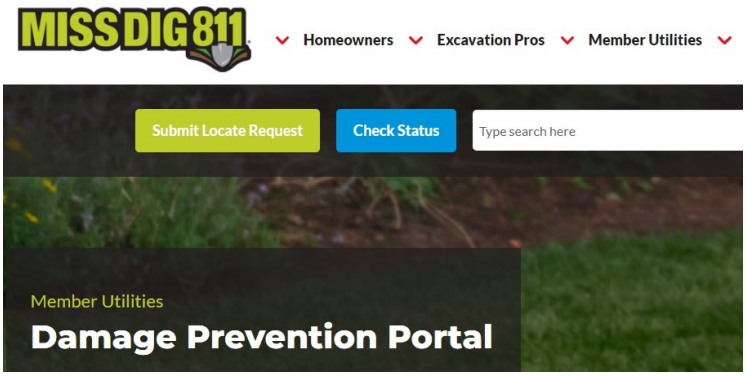
This effort is significantly relevant to GLWA due to our significant need to assess our future biosolids disposal options. GLWA's research team is leading efforts to improve energy extraction, destroy pathogens and pollutants, and to improve overall treatment efficiency, and our engagement with PNNL is a significant component of our research and collaborative efforts. Other members of the EAB included petroleum refineries, engineering consultants, academic institutions, and chemical and commodity management firms.

INFORMATION TECHNOLOGY

In the past month, the IT Security Team has proactively blocked or thwarted 21,109 spam messages, 4,728 spoofed messages and one virus. Additionally, 982 phishing attempts have been caught and 210 malware attempts have been blocked.

The IT Security Team has completed a penetration test from a 3rd party vendor which tested and analyzed our security posture from an external and internal access perspective. This analysis identified five critical findings which were all remediated.

The IT Customer Service Delivery Team completed the first successful hybrid Board meeting in the Boardroom using the new "Follow Me" camera technology. This new technology allowed the Board of Directors to participate in the board meeting in-person and remote, which allowed the public to see and interact with all onsite board members as they participated in the meeting remotely.



The IT Enterprise Asset Management Systems Team, in conjunction with the Field Services, Utility Review and Permitting (URAP) team, completed a successful migration to MISS DIG 811's new Damage Prevention Portal platform for underground utility locating and design ticket completion. This transition was completed in less than a month leading into the holiday season. The new platform resulted in a redesign of the Trimble Unity integration to receive the tickets from MISS DIG and post positive responses back. Thanks to the URAP team for their flexibility during this successful transition!

Currently, the IT PMO is managing 24 active projects and is processing 16 project requests.

PUBLIC AFFAIRS

GLWA Pilot "Workers Wanted" Recruiting Partnership with WXYZ-TV

GLWA recently entered into a pilot recruiting project with WXYZ-TV 7 via their "Workers Wanted" segment. The segments aired in multiple newscasts over the course of two weeks and focused on critical positions that GLWA is recruiting for, including Maintenance Technicians, Field Service Technicians, Plant Technicians and Water Technicians. The partnership involved live-air reads by station anchors accompanied by on-screen graphics stating the position being sought and key GLWA benefits offered. The on-air reads were immediately followed by a 30-second promotional video featuring GLWA team members talking about how the work they do makes a difference in the community, and how those interested can apply for a rewarding career in the water sector at GLWA. You can see one of the videos HERE.

NACWA National Environmental Achievement Awards

The Great Lakes Water Authority was honored to receive two National Association of Clean Water Agencies (NACWA) National Environmental Achievement Awards.

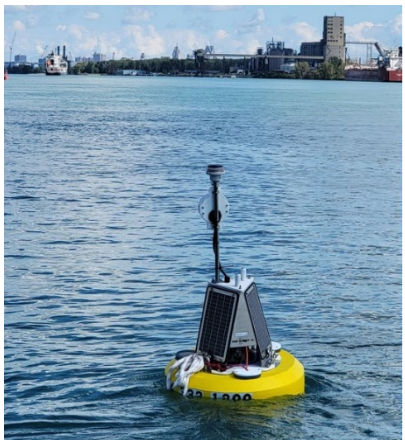
The first award was for GLWA's Regional Operating Plan video. *The Public Information & Education Award Video* honors agencies for their inventive efforts to educate the public on the effects of wastewater treatment and pollution control on the environment. You can watch the video by clicking HERE.

The second award was for GLWA's Watershed Hub. The W*atershed Collaboration Award* is presented for an outstanding watershed-based collaborative management initiative or program focused on cost-effective solutions to environmental challenges.

PUBLIC AFFAIRS (continued)

One Water News Drop Videos

The Public Affairs team produced two short videos highlighting GLWA projects for member partners and the public.



The first is on the buoy deployed into the Detroit River to enhance water quality monitoring of our source water. (Pictured right). The buoy, equipped with a near real-time accessible camera, will provide data ahead of GLWA's Southwest Intake and can serve as an early warning for changing water quality. You can watch that video by clicking HERE.

The second video focused on GLWA building resiliency into its regional system by proactively renewing segments within a 1.5-mile stretch of water transmission main along 14 Mile Road in Oakland County, adding as much as 50 years to the main's service life. You can watch that video by clicking HERE.

Lead Service Line Harvesting Video

Public Affairs has produced an instructional video in collaboration with our Water Operations team and the Water Research Foundation (WRF) highlighting best practices for the harvesting and preservation of a lead service line pipe for use in a corrosion control optimization study.

The video lays out the process in an easy-to-follow step-by-step format. This video will be used as an educational tool for utilities across the country. WRF plans to roll out the video in June 2022. You can see the video by clicking HERE.

SECURITY AND INTEGRITY

The Hazmat Unit coordinated and completed a total of 139 hours of training during the month.

The Security and Integrity Group continues to participate in the daily Emergency Operations Center's ongoing COVID-19 Pandemic briefings.

The Group is drafting procedures for GLWA's Emergency Mass Notification system, and continuing to construct GLWA's backup fusion center at WWP.

Lastly, the Group participated with DPD in the Downtown Detroit Partnership meeting.

ORGANIZATIONAL DEVELOPMENT

Performance, Progression and Apprenticeships

Performance

The Mid-Year Performance Review for Union Team Members opened on January 26, 2022 and is due on February 23, 2022. The Mid-Year Performance Review is an opportunity for Leadership Team Members and Union Team Members to review performance goals and discuss goal progress.

Progression

The 2021 Progression Cycle launched on November 18, 2021, and closed on January 12, 2022. Ninety-six percent of the progression assessments have been completed. As of the date of this report, 35 team members are progressing at least one level. One of the 35 team members is progressing two levels.

Apprenticeships

EICT-E apprentices will celebrate their two-year anniversary during February. EICT-E apprentices have completed approximately 3200 hours of on-the-job learning. Classroom learning has included the following subjects: conduit fill, code standards, calculating ampacity of conductors, sizing pulled electrical boxes, and code calculations.

Maintenance technician apprentices are preparing to take the EGLE exams to become familiar with the EGLE certification process.

Candidate interviews began at the end of January for the new Water Technician Apprenticeship. Interviews will continue into February.

ORGANIZATIONAL DEVELOPMENT (continued)

Talent Management

Staffing

The table below provides a breakdown of GLWA Team Members since the last CEO report:

January 2022 Hires	8
January 2022 Separations	16
Headcount as of January 23, 2022	984

Benefits/Wellness

The One Water Wellness team introduced The Drop 5 Challenge on February 1, 2022. The Drop 5 is a free, virtual, weight-loss community of team members trying to lose weight in five-pound increments over four weeks. Team members meet virtually every week during the Transformation Thursday Virtual Well-Being webinars and can choose to focus on hydration, nutrition, mindfulness, or exercise.

This month, additional wellness webinars included the second virtual cooking workshop with local Michigan chef Michelle Bommarito and weekly 10-minute meditation and mindfulness practices.

Financial wellness webinars included *"Student Loan Forbearances are Coming to an End Soon. What Are Your Options?*" The webinar reviewed making student loan payments affordable, leveraging income-based repayment plans, bringing past-due loans current, rebuilding your credit, and the Public Loan Forgiveness Loan program.

Training

During the month of **January, 90** GLWA team members completed **15** safety courses and **three** non-safety courses. A total of **12** GLWA team members completed **20** online 360Water courses.

FINANCIAL SERVICES AREA

January 2022 Audit Committee Recap

The most recent Audit Committee meeting scheduled for January 28, 2022 was cancelled in lieu of a Special Audit Committee meeting held on Friday, January 21 2022. That meeting focused on

FINANCIAL SERVICES AREA (continued)

FY 2023 budget and charges development. The GLWA Audit Committee binders are publicly available at www.glwater.org. The meeting specifically included the following topics.

- ✓ Continued Discussion of the FY 2022 & FY 2023 Biennial Budget and Five-Year Plan, Proposed FY 2023 Charges with Supporting Materials, and Updated Long-Term Plan
- ✓ Distribution of the latest Procurement Pipeline (attached)

Transformation Update

The Transformation Team has been working on building more training tools as they embark on more Root Cause Analysis projects. At the beginning of each project, the Transformation Team has been concentrating on making sure the team defines the project objectives, problem statement, and the right Key Performance Indicators (KPIs) and Key Result Areas (KRAs). Laying this groundwork upfront helps keep the entire team focused on accomplishing the same goals.

A KPI is a quantifiable metric that reflects how well an organization or project team is achieving its stated goals and objectives. When used well, KPIs support the organization's goals and strategy. They allow you to focus on what matters most, and to monitor your progress.

KPIs at the project level use data to measure factors that make a project successful. They help pinpoint how work is progressing and show areas of weakness in your process. They're a great way to uncover areas that could lead to failure, and to make corrections before it's too late. Unlike subjective project indicators, KPIs use quantitative data to determine the health of your projects.

Most Common Types of KPIs

KPI Type	Description
Process	Measure the efficiency or productivity of a business process.
Input	Measure assets and resources invested in or used to generate business results.
Output	Measure the financial and nonfinancial results of business activities.
Leading	Measure activities that have a significant effect on future performance.
Lagging	An indicator that reflects the success or failure after an event has been completed.

Why KPIs are Important

- Act as a scorecard for project health.
- Measure progress through the tracking of metrics.
- Help identify when to make adjustments.
- Recognize and analyze patterns.

FINANCIAL SERVICES AREA (continued)

Steps to Developing Effective KPIs

- It all starts with strategy, so begin with your very top-level strategy and review your GLWA's mission (purpose) and vision (ambition) statements.
- Then, with your mission and vision in mind, create a simple one-page plan that captures your most important strategic objectives.
- Develop SMART goals.
    - Consider also external and internal customer goals, operations goals, resources goals, and competition and risk goals.
    - The Transformation Team prefers to use the SMART goal method to communicate to the team, the purpose of the project.
        - SMART is a mnemonic acronym, giving criteria to guide in the setting of goals and objectives, for example in project management, employee-performance management, and personal development. The letters generally mean specific and measurable, achievable (or attainable), relevant, and time bound.
- For each goal, define the KPIs that will allow you to monitor and measure success.
- Then for each KPI, set clear targets that define what success looks like.
- Make sure you create an action plan that sets out how you will achieve your targets. (The Transformation Team uses the Lean Six Sigma tool, Plan, Do, Check, Act – PDCA Cycle; a simple and effective approach for solving problems, tracking actions, and managing change.)
- Monitor the KPIs against your targets on a regular basis.
- Review and adjust your goals, KPIs and targets at regular intervals or whenever there's an important change during the project.
- Finally, celebrate success and reward the achievement of targets and goals.

Procurement Pipeline

The January Procurement Pipeline edition is attached. This month features tips on viewing past public opportunities and public contracts in GLWA's Bonfire Procurement Portal, reminders on visitor COVID-19 access requirements and safety protocols, and a listing of upcoming solicitations.

The General Counsel's February, 2022 Report is an attachment to the Interim Chief Executive Officer's Report.

Respectfully submitted,

Suzanne R. Coffey

Suzanne R. Coffey, P.E.
Interim Chief Executive Officer

SFM/dlr
Attachment

- Procurement Pipeline
- General Counsel February, 2022 Report

Procurement Pipeline

Great Lakes Water Authority (313) 964-9157 www.glwater.org **January 2022 - Volume 34**

Welcome to the January edition of *The Procurement Pipeline*, a monthly newsletter designed to provide updates on doing business with the Great Lakes Water Authority (GLWA).

***Procurement Tip of the Month*: Viewing "Past Public Opportunities" and "Public Contracts" in GLWA's Bonfire Procurement Portal**

Did you know that in addition to viewing a full list of GLWA's "Open Opportunities" in our Bonfire Procurement Portal, vendors can also view both "Past Public Opportunities" and "Public Contracts"? Making this information available is not only reflective of GLWA's commitment to transparency in procurement, but also enables vendors interested in doing business with the Authority the ability to gain greater familiarity with GLWA past and present projects, as well as the GLWA procurement process. Read below to learn more about this information in the Bonfire Portal.

Past Public Opportunities

By clicking on "Past Public Opportunities" in GLWA's Bonfire Portal, vendors can view a searchable list of projects that were previously advertised as open opportunities. Selecting "View Opportunity" will allow vendors to see the project details, open and close date, supporting documentation, and all past communications to vendors from the GLWA Buyer of Record.

Public Contracts

By clicking on "Public Contracts" in GLWA's Bonfire Portal, vendors can view a searchable list of GLWA's public contracts. Selecting "View" on any contract will allow vendors to see the awarded vendor, the contract's start date, end date, status (whether active, expired, pending, or terminated), and if it is extendable. In addition, vendors can also review a copy of the executed contract, as well as any supporting documentation, including change orders, amendments, or extensions.

Lastly, please note that a Bonfire Vendor Profile is ***not*** required to view Open Opportunities, Past Public Opportunities, or Public Contracts in GLWA's Bonfire Portal. Any questions or difficulties in navigating the GLWA Bonfire Procurement Portal, may be directed to Bonfire Technical Support.

Reminder: Visitor COVID-19 Access Requirements and Safety Protocols to Remain in Effect Until Further Notice

On August 24, 2021, GLWA issued Coronavirus Update #137 to the vendor community stating that all current Visitor COVID-19 Access Requirements will remain in effect until further notice. For a full overview of GLWA's Visitor COVID-19 Access Requirements, please review Coronavirus Update #137. Any additional questions may be directed to Michael Lasley and Megan Savage.

Virtual Vendor Introduction Meetings with GLWA

If you are interested in learning more about doing business with GLWA, contact us at GLWAVendorOutreach@glwater.org to schedule a vendor introductory meeting. Topics include helpful information on submitting a competitive bid or proposal to a GLWA solicitation, as well as the requirements for GLWA's Business Inclusion and Diversity (B.I.D.) Program.

Keeping up with GLWA

Our Interim Chief Executive Officer (ICEO) Monthly Report provides a wealth of information and news about important initiatives within GLWA's service territory area that impact GLWA, its member partners, and the public. To read the December 2021 Monthly Report, please click here.

What's Coming Down the Pipe?

Current Solicitations: Be sure to register in GLWA's Bonfire Procurement Portal for new solicitations and contract award information.

Upcoming Procurements: Next Three to Nine Months—See newsletter page 2.

Visit GLWA online!

To see the GLWA Vendor homepage, please visit www.glwater.org or contact us via email at procurement@glwater.org.

Upcoming Solicitations January 2022

Category	CIP #	Description/Project Title	Budget Estimate
Water System (next four to nine months)			
Materials & Equipment	114002	Springwells WTP Pumping Unit Procurement Package (Contracts E thru G)	$51,000,000
Materials & Equipment	114002	Springwells WTP Process Valve Procurement Package (Contracts H thru I)	$14,000,000
Wastewater Systems (next four to nine months)			
Construction	211006	Pump Station #1 Screenings Building HVAC Improvements	$1,000,000
Construction	211006	WRRF Pump Station #1 Improvements	$55,000,000
Design	273001	Hubbell Southfield Flushing and Facility Improvements (CSO)	$5,500,000
Design	260617, 270005, 270006	CSO Facility Improvements #2	$3,002,500
Construction	232002	Freud Pump Station Improvements	$75,000,000
Water Systems (next three months)			
Progressive Design Build	111006	Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements	$24,428,000
Wastewater (next three months)			
Construction	216010	HAZMAT (Hazardous Material) Building Renovation	$1,500,000
Request for Qualifications	212008	WRRF Rehabilitation of Intermediate Lift Pumps (ILPs) 1 & 2 and Modifications to Aeration Decks 1 & 2 to Incorporate Biological Phosphorus Removal and Step Feed	$60,000,000
Request for Proposals	O&E	2023 Task Order Engineering Services	$10,000,000
Construction	260207	Rehabilitation of Woodward Sewer Systems	$18,994,000
Study/Design-Build	260204	Conveyance System Engineering Services	$50,051,000
Projects moved to Procurement Team (Preparing for solicitation on Bonfire)			
Professional Services	O&M	SCADA System Professional Services	$5,500,000
Progressive Design Build	111006	Lake Huron Water Treatment Plant: Progressive Design Build of Instrumentation and Control Improvements	$22,000,000
Design Build	216011	WRRF Structural Improvements	$12,000,000
Professional Services	O&M	Virtual Tour and Laser Scanning Services	$1,500,000
Professional Services	O&M	Elevator Preventative Maintenance	$1,645,728
Professional Services	O&M	As Needed and Emergency Roof Repairs	$3,000,000
Design	213006	WRRF Improvements to Sludge Feed Pumps	$1,500,000
Professional Services	O&M	External Auditor Services	$800,000

Vendors should continue to monitor Bonfire for solicitation updates.

Acronyms		
WRRF: Water Resource Recovery Facility	**CSO:** Combined Sewer Overflow	**WTP:** Water Treatment Plant

Office of the General Counsel
735 Randolph Street, Suite 1900
Detroit, Michigan 48226

Office of the General Counsel – February 23, 2022

- ***COVID-19:*** The Office supports GLWA's response to the COVID-19 pandemic, including participating in GLWA's COVID-19 Task Force, review of COVID-19 related laws, rules and public health orders.

- ***NPDES ACO Dismissal*:** The Office assisted in preparing documents to have the ACO's dismissed.

- ***Legislative Updates*:** The Office is also monitoring infrastructure spending bills at the federal and state level.

- ***Gordie Howe International Bridge*:** GLWA submitted its relocation reimbursement request to MDOT and received MDOT's response. GLWA is appealing MDOT's decision.

- ***June and July Rain Events:*** The Office is providing legal support in response to the significant rain events in June and July. To date, 11 lawsuits were filed against GLWA related to the rain events. The newest lawsuit relates to the July 16th Rain Event.

- ***Trenton Water Main*:** The Office is negotiating the transfer of the 24-inch water main to GLWA.

- ***Training*:** Office members attended the following training opportunities "Center for Watershed Protection's PaveDrain and LandLogics Seminars;" and the "EGLE Improving PFAS Site Characterization through Emerging Technologies Seminar."

- ***Contract Negotiations:*** GLWA will attempt to secure long term contracts with all communities that are not on the model contract. The Office is working with member partners to draft a new model sewer contract. Office staff completed the Designated Management Agreement with SEMCOG. The water contract negotiation team has begun preparations for the 2022 contract alignment/reopener process for all 84 member partners plus Detroit. Negotiations begin in March and continue through October.

- ***Environmental and Workplace Safety Compliance*:** The Office continues to work with the COO and team leaders from both the water and sewer systems to comply with regulations and to respond to any alleged violations.

- ***Record Retention Policy*:** The Office is drafting a record retention policy for GLWA.

- ***Industrial Pretreatment Program*:** The Office continues to work with the Industrial Waste Control ("IWC") Group and external stakeholders on finalizing and implementing an updated IPP. To date, 99% of the communities have passed a concurring resolution and GLWA made a presentation to the City of Highland Park's City Council, which is the only community that

has not passed a concurring resolution. The Office is also providing assistance on PFAS and PFOS matters.

- ***Real Estate:*** The Office is negotiating easements related to support the Baby Creek CSO infrastructure improvement project. The Office is negotiating the acquisition of property for the Newburgh pump station. The Office is negotiating easements related to 96" watermain relocation and the Woodward Sewer Project. The Office is negotiating a purchase agreement for 235 McKinstry.

- ***Member Outreach*****:** The Office continues to be an active participant in Member Outreach sessions.

- ***Main Relocations*****:** The Office continues to support water operations in its discussions with community stakeholders regarding water main relocations.

- ***Civil Litigation and Arbitrations*****:** The Office continues to vigorously defend actions against GLWA, including a class action lawsuit regarding IWC charges.

- ***Labor Relations*****:** The Office continues to provide legal advice to Organizational Development on labor relations and employment matters.

- ***Procurement*****:** The Office continues to assist GLWA's Procurement Team negotiate contracts, change orders and amendments and interpret contractual provisions. The Office is also assisting with the Procurement Policy's Procedures and updating GLWA's template contracts. The Office is part of a cross-functional team working to complete significant revisions to the GLWA construction contract, including consideration of using an entirely new contract format.

- ***Statistics*****:**

	#
Contracts approved as to form:	42
Contracts drafted or revised:	82
Subpoenas/Information requests received:	6
Subpoenas/Information responded to:	2

- ***Panelist:*** Sarah Ahn was a panelist at the State Bar of Michigan's **Government Law 2022 Winter Educational Seminar.**

- ***Appointment:*** **Lavonda Jackson was appointed SEMCOG's Water Infrastructure Task Force.**