



Office of the Chief Executive

735 Randolph Street, Suite 1900
Detroit, Michigan 48226

February 26, 2020

The Honorable
Board of Directors
Great Lakes Water Authority

Dear Chairman Munfakh and Directors:

Regarding: CEO's Report – February 26, 2020

February has been an important month of achievements for GLWA. As I advised the Board today, each year the National Association of Clean Water Agencies' (NACWA) presents National Environmental Achievement Awards (NEAA) which honor public clean water utilities that act as forward-thinking stewards of the environment, ensuring compliance with the Clean Water Act while also displaying unparalleled dedication and commitment to serving their ratepayers.

Public Information and Education. The Workforce Development honor recognized the Authority's Apprenticeship Program, which has launched three apprenticeships that are closing the gap in the availability of highly trained talent to adequately fill skilled trade roles that are imperative to the Authority's operations. The Public Information and Education honor was received for the Regional One Water Public Education Campaign which raised awareness of and generated appreciation for water resources and infrastructure topics including drinking water, wastewater, stormwater, and the connection of these to the blue economy, recreation, quality of life, and economic prosperity in Southeast Michigan.

In addition to the NACWA awards, I would like to recognize our Financial Services Area and our Budget Team which received the Government Finance Officers Association's Distinguished Budget Presentation award for the two-year period beginning July 1, 2019. Congratulations FSA team for winning this award on your first submission!

February 2020 also saw an important step in GLWA's regulatory relationship. GLWA operates the WRRF (Water Resource Recovery Facility) and the regional wastewater system under the regulatory framework established by the Clean Water Act including the National Pollutant Discharge Elimination System ("NPDES") permit program. The NPDES permit program is administered by the EPA through the EGLE. GLWA and the City of Detroit hold the NPDES Permit as co-permittees and the current NPDES permit was issued July 1, 2019 and runs through October 1, 2022.

As co-permittees, in addition to the NPDES Permit's requirements, GLWA the City are bound by the requirements of the Administrative Consent Order (ACO) previously entered into by the City and the EGLE on July 8, 2011. The ACO contains timetables for completing certain corrective measures and imposes certain operational requirements on the utility such as staffing levels at the Water Resource Recovery Facility.

GLWA and the City believe that we have satisfied the ACO's requirements and, on February 7, 2020, we requested that the ACO be dismissed. If this request is granted and the ACO is dismissed, the last vestiges of the almost 35 years of oversight of the wastewater system's operations will be removed and the utility will be placed on the same operational footing as other Michigan wastewater utilities. We look forward to EGLE's response.

Another February first occurred on February 18, 2020, when we held our first ever meeting between GLWA's member outreach team, GLWA's One Water Partnership co-chairs and GLWA's executive team. It was a great opportunity to reflect on where we have come from, where we are headed and how we share information as we move forward on our mutual water of unquestionable quality journey.

Speaking of the One Water Partnership, the Member Outreach Team is gearing up for the first **One Water Partnership meeting** of 2020! The meeting will take place on **March 19, 2020** from 9:00 a.m. to 12:00 p.m. at the Outdoor Adventure Center in Detroit. Lunch will be provided. Email outreach@glwater.org for more information.



Also in March, in conjunction with the Asset Management Team led by Jody Caldwell, Member Outreach is planning to host an Asset Management Workshop on March 26, 2020. The purpose of the workshop is for members to learn about GLWA's Strategic Asset Management Plan and to provide clarity on members' most important performance indicators to support service levels in the water and wastewater system. The workshop will be held from 9:00 a.m. - 1:00 p.m. at SEMCOG located at 1001 Woodward Ave. Detroit, MI Suite 1400. Lunch will be provided. We are asking member partner representatives to come prepared to share their perspectives on service level



March 26, 2020, 9:00 am - 1:00 pm

objectives and performance indicators for the water and wastewater systems. This is a great opportunity for members to provide thoughts and feedback to us. Attendance from all member communities is highly encouraged! Contact Member Outreach at outreach@glwater.org with any questions.

PLANNING SERVICES

In the last month, Planning Services has spent a significant effort on understanding elements of our CIP execution, communicating with member partners about water meter upgrades, finalizing the framework for a program known as the Linear System Integrity Plan and working in a cross-functional team to develop a solicitation for the preparation of our Long Term CSO Control Plan. Additionally, we continue the important work of providing technical support to the negotiations with Dearborn for a model water contract.

PLANNING SERVICES (continued)

Asset Management Group (AMG)

Recently, the Asset Management Group completed work associated with a consequence of failure model for the water transmission mains. Our Systems Control and Field Services Groups have assessed the condition of the sewer collection interceptor system including manholes using National Association of Sewer Service Companies standards, performing Pipeline Assessment Certification Program and Manhole Assessment Certification Program inspections, respectively. With these models and assessments performed, we now need to solicit world renown services to assist us in furthering the proactive management of our linear water and wastewater infrastructure.



The solicitation for this assistance has been advertised and includes services to develop, coordinate, and perform a Linear System Integrity Program (LSIP). The approach to the LSIP is to apply asset management principles to proactively evaluate and manage our water transmission and sewer interceptor systems. This selected vendor will work with a cross-functional team comprised of Field Services, Systems Control and Asset Management team members and will further develop and coordinate our LSIP, provide on-going decision support for water and sewer system inspections, condition assessments, monitoring and renewals, conduct water transmission system inspections and condition assessments, and develop and update a sewer system risk model to support decision making.

The solicitation for the LSIP became available on February 17, 2020 on Bonfire. Vendor questions are due February 28, 2020 and the advertised solicitation due date is April 17, 2020.

CIP

The effective execution of the Capital Improvement Plan is on the top of the list of priorities for the CIP Group. The Group is working diligently with internal business partners to understand and address issues which may be creating impediments to deliver projects as planned. To this end, we have rolled out some internal tools that give team members project metrics that will assist them. Additionally, we are having internal discussions regarding how to expedite work on projects that have been identified as being delayed for various reasons.

PLANNING SERVICES (continued)

The AECOM program management contract continues to make progress toward developing recommendations for streamlining and improving CIP execution. Last month, the CIP Group and AECOM conducted an As-Is Business Process Discovery workshop with a cross-functional team of GLWA team members who are involved in CIP delivery. During this workshop the current and options for modified project delivery models were discussed.



Presentation of the As-Is process

Systems Planning

The Water Analytical Work Group (AWG) met for the first time this year and heard from the Water Engineering Team about the upcoming Corrosion Control Optimization Study. Vittoria Hogue shared an overview of the project, how members can expect to stay engaged and what we will be asking of member partners, as their participation is necessary for a successful study. The group also heard an overview of the Water Balance Program, a program that was developed by the Phase 3 Units of Service and System Water Audit Scope Development Team in 2019. AWG participants can expect to hear ongoing updates regarding the various elements of the program at future work group meetings.

The Wastewater Analytics Task Force (WATF) met for a dedicated Annual Flow Balance Analysis meeting on February 6, 2020. CDM Smith walked through the various anomalies in flows that they worked through with the corresponding communities and presented the updated flow balance tables to the group. The group also heard from Sherri Gee, GLWA Systems Planning Manager and Carl Johnson, CDM Smith about the Wastewater Master Plan and the role of the WATF in executing in the plan.

As you know, we are continuously evaluating ways to increase value to our member communities through the services we provide. In 2018, GLWA began offering a tool called AURA, a Smart Water technology platform offered by Aquasight LLC. that assists communities with water quality analytics. Previously, members could opt-in to using the application for a fee. We have expanded the application to a full-service model that is available at no charge for all member communities. By offering the full-service model to all member communities, we are providing a simple pathway to utilize best practices and assist members with their water quality concerns. The Member Outreach team is taking the lead on rolling out the full-service model to members and sharing how members can take advantage of this newly expanded tool. For more information contact outreach@glwater.org.

PLANNING SERVICES (continued)

January 2020 Member Outreach Meeting Attendance	
Meeting	# Attended
Charges Rollout #3 (1/9/20)	80
CIP Work Group (1/14/20)	36
Wastewater Best Practices Work Group (1/15/20)	27
Charges Rollout #4 (1/23/20)	96
Water Analytical Work Group (1/28/20)	40
Communication & Education Work Group (1/30/20)	28

The Group has been deeply engaged with the CSO Program Group, Field Services and Systems Control to finalize an RFP for assistance in developing the next Long Term CSO Control Plan. The Control Plan is a requirement of our NPDES permit. It is a natural extension of the Wastewater Master Plan project as it will take the Master Plan concepts and turn them into an executable plan with preliminary design for the near-term projects. The solicitation was kicked off with an initial advertisement on Bonfire of a number of related documents.

This step was taken to provide additional time for interested vendors to dig deeply into the volumes of documents that frame the regional system's history of CSO control work.

Systems Analytics and Meter Operations

The Group continues its progress working on the wholesale water meter pit rehabilitation and meter replacement program. You likely recall that the scope of work includes construction work at 50-meter pits with metering and/or meter pit condition concerns with a scheduled target of September 2021. Last month coordination meetings were held with Burtchville Township, City of Farmington Hills, City of Grosse Pointe Shores, City of Hazel Park, City of Inkster, Macomb Township, City of Melvindale, City of Saint Clair Shores, Saint Clair County, City of Sterling Heights, West Bloomfield Township, and City of Westland. The planned work has been completed at 15 of the meter pit locations and is underway at another 12 locations.

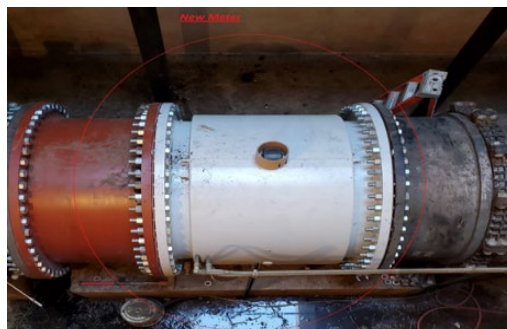
The Water Units of Service project team had a Phase 3 project kick off meeting with DWSD on February 18, 2020. Three key tasks were discussed, they included: planning and implementing of two additional district metered areas; review of small and large meter test data; and developing a master metering plan.

As noted in the Systems Planning section above, at the February 6, 2020 Wastewater Analytics Task Force (WATF) meeting, CDM Smith presented the annual flow balance analysis and results report for Fiscal Year 2019 along with the final resolution of outliers and issues. In Fiscal Year 2019 the issues were identified and resolved for the following member partners: Highland Park, Dearborn, Grosse Pointe Park and Oakland's Evergreen-Farmington Sewage Disposal System and George W. Kuhn Drainage District.

PLANNING SERVICES (continued)

This annual analysis and report determine the quantity of sanitary and dry weather inflow and infiltration flows in the GLWA regional sewage collection system. The data is used to support the calculation of SHARES for each contract holder. The final report will be published on the outreach portal. The next WATF meeting is scheduled on March 6, 2020.

The group managed a project to upgrade the sewage flow meter for George W. Kuhn Drainage District (SE-S-1). The new meter is a 66-inch magnetic meter. Construction and the meter installation were completed on December 23, 2019. It is online and reporting flows to our Greater Detroit Regional Sewer System data portal.



New 66-inch magnetic sewage flow meter SE-S-1

To enhance the member partner experience, the Group added an “Administrator” function to the Wholesale Automated Meter Reading (WAMR) portal. Now member partners can easily view emails automatically generated by the system. This new function will also help the WAMR support team check the member partners’ alerts configuration during troubleshooting calls.

Site	Location	Timestamp (EST)	Pressure P (PSI)	Alert Range (PSI)	Contract Range (PSI)	Intrusion Flag	Site Flag
SG03	Fort & Eureka	01/30/20 05:50:00	56.4	57 - 79	57 - 79	N	N
SG04	Eureka & Allen	01/30/20 05:46:14	53.2	54 - 76	54 - 76	N	N
SG04	Eureka & Allen	01/30/20 05:50:00	52.4	54 - 76	54 - 76	N	N

This notification only indicates that the WAMR pressure reading P is above the user-configured limit. Performing field work may result in outages or inaccuracies of pressure information. This data is closely monitored by Great Lakes Water Authority (GLWA) System Analytics & Meter Operations (S&MO). There is no need to contact GLWA S&MO concerning this information unless it is deemed faulty or is affecting your water service. This alert can be configured or disabled via the Wholesale Automated Meter Reading (WAMR) portal. If you have any questions you can contact the WAMR Team at 313.267.1474 or wamr@glwa.org

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WASTEWATER OPERATING SERVICES

Wastewater Operations

The Water Resource Recovery Facility (WRRF) operations were in-compliance with the Water Quality Standards for the month of January 2020. The Chlorination Facility recently experienced a new problem with chlorine solution entering the gaseous chlorine supply line. The PCC Controls Team is working with the operations and maintenance teams to install pressure transmitters on different points along the Evaporator/Chlorinator process.

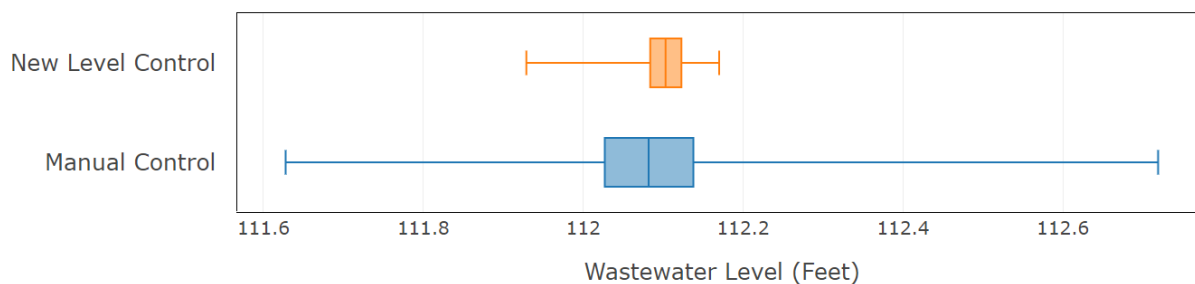
WASTEWATER OPERATING SERVICES (continued)

Process Control Center (PCC)

This will include two chlorinators to assist in troubleshooting the cause of this problem. The additional instrumentation provides the tools necessary to adequately troubleshoot the equipment and provide the necessary reliability and resiliency needed from the system.

The team continues to work on aeration basins level control automation. The objective of this project is focused on automating the process of balancing wastewater flows in and out of the basins. The balancing of these flows ensures that the wastewater depth within each basin is at the appropriate level for energy-efficient mixing and optimal uptake of oxygen into the wastewater. Additionally, the team has developed new control logic and graphics to enable Plant Operations team members to monitor and control key process parameters. Plant Operations are also allowed to select the desired level where the control logic will modulate the necessary assets to maintain the set level.

Furthermore, the PCC Team completed a full month of testing of the new aeration basin level-control logic under routine operating conditions. The figure below shows the distribution of wastewater depth data recorded during the commissioning of the new logic (“New Level Control” in orange) compared to the distribution during manual level control (“Manual Control” in blue). Comparison of the shaded boxes (wider = worse control) shows that the new level control logic significantly reduces variation in wastewater level compared to manual control.



Within the coming weeks, the PCC Team will work to finalize deployment of the new level control logic (making it the default for 24/7 operations), at which point the focus will shift to design of new oxygen-supply control logic.

Laboratory

The Grit Characterization Team, also known as GRUNT (Grit Removal Using Novel Technologies), will be meeting to begin draft testing plans and setup of newly acquired VICAS columns. The findings of this project will provide valuable direction and parameters for the upcoming Capital Improvement Project for pump station 2 rack and grit replacement.

WASTEWATER OPERATING SERVICES (continued)

Industrial Waste Control

In October 2019, 1,760 dental facility notices were mailed wherein they are required to submit a compliance report on or before October 1, 2020. As of January 31, 2020, 22% of the facilities (397) have provided responses. Responses have been updated into the database for documentation purposes. A second mailing is scheduled for April 2020.

On January 30, 2020, EGLE approved the PFOS and PFOA Minimization Program.

Subsequently, a meeting was held with laboratory staff to finalize plans for the 2020 Local Limits Technical Data Collection for WRRF samples. We are collecting data for the Technical Evaluation of Local Limits in accordance with permit MI0022802. The report is due by June 2021.

Engineering & Construction

The WRRF Engineering team continues to provide support to the WRRF operations and maintenance teams on small capital outlay projects, including scope development and advertisement for design of several large capital improvement projects. The Engineering Team is happy to report the completion of the Pre-procurement for two major CIP projects:

CIP# 211007- Pump station 2 Screening and Grit collection rehabilitation improvement
CIP#216006 - Assessment and Rehabilitation of WRRF yard piping

Additionally, the team has successfully completed seven (7) design projects that are in various phases of procurement utilizing the job order contracting (JOC) delivery and the successful award of one of the projects.

Construction Engineering

One of the WRRF's larger construction projects: PC-757, Rehabilitation of the twelve Rectangular Primary Clarifiers (Package A), Rehabilitation of Electrical/Mechanical Buildings and Pipe Gallery of Rectangular Primary Clarifiers (Package B), and Replacement of Rake Arm Assembly for Circular Clarifiers Nos. 15 and 16 (Package C) has entered its last phase of construction. The scope of package B also includes removal of existing make up air units and replacement with 8 new MAUs, demolition of 12 existing sludge pumps and their replacement with new pumps.

The contract was awarded July 18, 2016 for \$51,905,000 and the revised final completion date is November 14, 2020.

WASTEWATER OPERATING SERVICES (continued)

In addition, Circular Primary Clarifiers Nos. 15 and 16 have been rehabilitated and are in service. Rehabilitation of Rectangular Primary Clarifier Nos. 5 through 12, and installation of 8 makeup air units (MAUs) have also been completed and are currently in operation. More recently, rectangular primary clarifiers 1, 2 and 3 were completed in January 2020 and are currently in a 30-day commissioning period. Rectangular Primary Clarifier No. 4 is the only remaining clarifier that is still undergoing contract work, in addition to other minor contract and change order work:

- the installation of stair platforms,
- the replacement of cross over sludge piping 2-1B,
- underground valve replacement,
- concrete repair work of the pipe gallery ceiling,
- road repair work between Clarifiers Nos. 4 and 5.

As of the end of January 2020, approximately \$49,200,000.00 has been spent, equivalent to 94.6% of the contract amount. The contract is expected to finish under budget and within the revised contract times.

CSO Control Program

The CSO Team is managing sixty-three (63) active tasks. These tasks range from operations and maintenance support items (such as ordering new pumps) to capital improvement projects at various facilities. Some of the projects consist of generating NPDES required reports such as the Consolidated Annual Report for calendar year 2019, which we anticipate submitting by April 1, 2020.

Moreover, we are happy to announce that the Task Order Engineering Services (TOES) contract was successfully executed and was ready for use at the end of January 2020. Currently, there is one task presently in procurement for TOES, and two are in the scope development stages. The average time to award a task under job order contracting (JOC) is approximately 60 days, which is from the day it goes into procurement until a notice to proceed is issued. We anticipate a similar time for TOES tasks.

CS-299 – CSO Facilities Assessment Project: The CSO Team has been hosting needs assessment meetings with Operations and Maintenance staff through the month of January and into February 2020. Needs from sites are being reviewed by Jacobs Consultants along with input from GLWA staff to ensure the assessment is comprehensive.

At the end of January 2020, the first major asset update and new asset creation exercise was completed. We are presently sorting through the newly created data to ensure the data was transferred into the WAM database accurately, and we will plan to make another final update in February 2020.

Parallel to this effort, the CSO Team will update the Planner for all assets to ensure work requests go to the proper planners. We will also add the accounting codes to assets to ensure JOC and TOES task costs can be tracked back to our assets.

WATER OPERATIONS

Lake Huron Water Treatment Plant (Facility Tour)

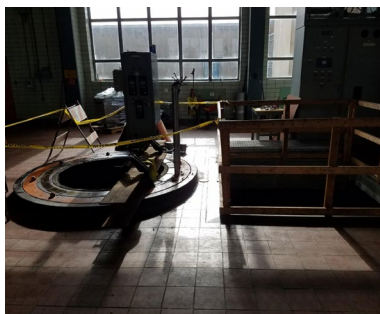
On January 29, ten people from St. Clair County Homeland Security and Emergency Management teams came for a site visit of the Lake Huron Water Treatment Plant (LHWTP). During the tour, the St. Clair County team talked about emergencies that could occur in the LHWTP and how to respond to them. Plant Manager Christopher Steary explained that the LHWTP team members are trained and equipped to handle emergency scenarios. The St. Clair County team was impressed with the facility and personal protective equipment (PPE) that was on-hand for emergency response.

Northeast Water Treatment Plant

With efforts focused on increasing asset reliability, Northeast Water Treatment Plant (NEWTP) identified High Lift Reservoir Pump #20 (HLP #20) as the next unit to undergo rehabilitation. Due to its location and reliability, it has been one of the workhorses in the High Lift over the years and showed signs of heavy wear.

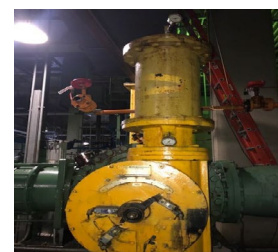


To combat the issue of heavy wear and to prevent catastrophic failures, the NEWTP team began removal of HLP #20 for rehabilitation. This process required the removal of the motor, which weighs approximately 37,000 lbs., the intermediate shaft, and the pump. The motor has been shipped out for repair, and the pump will soon follow.



Southwest Water Treatment Plant

The existing oil-pneumatic system that operates the high-lift cone valves and high-lift header valves at the Southwest Water Treatment Plant (SWWTP) has been in service for over 50 years and has deteriorated with various system components that developed leaks and have become unreliable during operation. New updated high-lift pump electric discharge cone valve actuators (GLWA-CON-281) have recently been completed, and the replacement of the old cone valve actuators on pumps #1, #2, and #3 have been completed and tested. Additionally, adjustments are being made with the Ovation controls during the system update.



Old Oil-Pneumatic Actuator

WATER OPERATIONS (continued)

The new valve actuators are working well and allow easier control of the pump's cone valves and can be operated remotely (ovation station in the control room) and locally (manually at the pump). Pressure fluctuations no longer occur during pump changes when operating this new equipment. Four more cone valves remain to be updated. We look forward to continued progress as this project has increased the reliability and effective operation of major pumping equipment at the SWWTP.



New Electric Actuator

Water Works Park Water Treatment Plant

The Water Works Park Water Treatment Plant (WWPWTP) laboratory monitors various plant processes through chemical analyses. Process monitoring allows chemists and water technicians to evaluate and maximize the efficiency of the treatment process to assess compliance with regulatory requirements, and to predict and implement changes in treatment required to address variations in source water quality.

Maintenance of Emergency Response Equipment

During an emergency event, the Water Operations team is trained to be the plant's first responders. Knowing how to respond during an emergency is critical to ensuring the safety of those involved, while having the necessary PPE is just as important. The operations team routinely checks our self-contained breathing apparatus (SCBA) harnesses, the 5-minute escape air packs, full-face masks (SCBA), and Level A suits to ensure our equipment is in good standing in the event of an emergency. Level A suits are designed to protect wearers from eye or skin damage from hazardous vapors, gases, particulates and sudden splash, and are worn with SCBA or supplied air systems to provide ultimate respiratory protection.

Recently, our emergency response equipment underwent an annual maintenance check. To confirm the integrity of the SCBAs, hydrostatic testing on the cylinders is performed every five years. The last test was performed in November 2016. Six new Level A suits and SCBAs were ordered.

The WWPWTP team worked with GLWA Environmental Health and Safety Coordinator Marcus Askew to obtain spectacle kits for team members to use corrective lenses while donning the Level A suits and SCBA.



Chlorine Emergency Response Scenario on January 25, 2020. Pictured left to right: emergency response equipment, team members and team leader in the hallway of South Chemical Room, and team member in Chlorine Room.

WATER OPERATIONS (continued)

T-Pol Dosing Enhancement

To continually optimize plant processes, operations staff suspected that the dose of thickener polymer (T-Pol) was not optimized and that there may be an opportunity to improve the process. Plant staff from operations, instrumentation, and engineering began a document review process and an investigation into the Ovation control system.

Filter backwash wastewater enters the equalization (EQ) basins where it is stored temporarily and then pumped by the EQ pumps, preferably at a constant rate, to the residual thickeners. T-Pol is added to the water from the EQ basins just prior to the water entering the residual thickeners to bind the suspended solids particles together. The solids then settle to the bottom of the residual thickeners and are eventually processed in the plant's residuals facility. Operators can select the dose of T-Pol (in ppm (parts per million)) that is needed to bind the suspended solids together.

The team discovered that the Ovation control system commanded the T-Pol pumps to run whenever the EQ pumps were on, regardless of flow from the EQ basin, resulting in a scenario where the T-Pol pumps were not able to reduce pumping low enough to maintain the proper chemical dose, culminating in an over application of polymer.

On January 6, a modification in the Ovation control system was made to set a required flow, from the backwash EQ basins to the residual thickeners, that triggers the T-Pol pump to run. The modification has resulted in a 42% reduction in daily polymer usage (January 2019 averaged 198 ppd (pounds per day); January 2020 averaged 114 ppd). Monitoring of downstream points has not shown any negative impacts related to the polymer reduction. The team continues to work on dialing in the proper dose by collecting grab samples and analyzing the solids content. By understanding how many solids are entering the residuals thickener, the team can make recommendations to the amount of polymer that should be dosed.

Water Quality

Franklin Pumping Station Valve Repairs and Replacements

On January 7, the Franklin Pumping Station underwent a two-week shutdown for major valve replacements. Fourteen valves were replaced within the two-week period, which included dewatering, disinfecting the line, and bacteriological testing after completion of the valve installation. Crews worked 24 hours to meet the deadline to replace six gate valves, the main butterfly valves under mezzanine, the butterfly valves on the suction and discharge sides, and the reservoir butterfly valves.



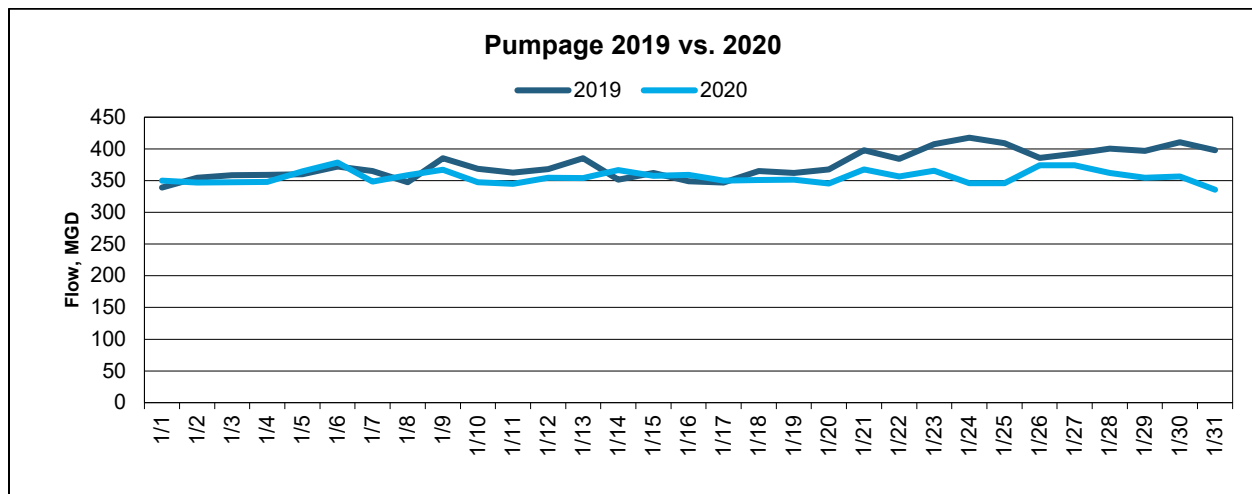
*Pictured top to bottom:
Valves that were removed, and
new valve replacement*

WATER OPERATIONS (continued)

During the initial shutdown, a 16-inch gate valve that was not part of the project broke and required repair. GLWA was able to maintain pressure to member partners through a bypass outside the station. GLWA Water Quality was onsite and performed the disinfection and sampling of the suction and discharge lines.

Systems Control Center

January 2020 pumpage was 4.4% less than 2019

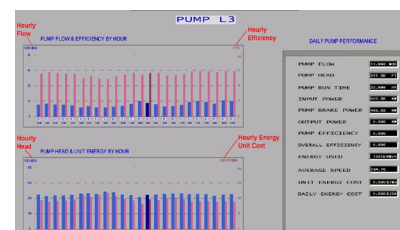


Real-Time Pump Efficiency Evaluation Program

GLWA operates one of the largest water systems in United States and pays a very high cost in energy bills – about 85% of which is paid for pumping. GLWA has been seeking ways to make its system more efficient. To evaluate real-time pumping efficiency, GLWA has developed a program called real-time efficiency evaluation for pumping stations (REEPS).

REEPS utilizes records from various intelligent meters installed at its water pumping stations to evaluate real-time efficiency for each of the pumps on duty. The installed meters include a power monitoring meter and a differential pressure transmitter for each pump, as well as a station flow meter. Real-time meter measures are sent to GLWA's SCADA (supervisory control and data acquisition), the Emerson Ovation Distributed Control System (DCS). The REEPS program has been developed in Ovation to automate real-time pump efficiency calculations.

REEPS is being referenced by GLWA's operators as a guide to run the system more efficiently and to identify the pumps that are oversized or associated with low efficiency. The REEPS outcomes are also used to update the pump head and efficiency curves in a hydraulic model used for GLWA's ongoing project of real-time pumping energy optimization.



Example of REEPS SCADA screen

INFORMATION TECHNOLOGY

In the past month, the IT Security team has proactively blocked or thwarted 9,101 spam messages, 4,776 spoofed messages and 43 viruses. Additionally, 740 phishing attempts have been caught and 123 malware attempts have been blocked.

The Infrastructure team has created a patch management process to mitigate vulnerabilities attributed to the Microsoft Operating systems on GLWA devices. The process follows best practice guidelines of deploying monthly patches to all Windows operating systems. As a result, we have increased our baseline patch level of fully patched Windows Operating Systems to 95% of fully patched systems.

The IT Business Productivity Systems team in conjunction with Organizational Development and Finance, published a Request for Proposals (RFP) for software and implementation services for an Enterprise Resource Planning (ERP) system to replace our financial and HRIS systems (BS&A and Dayforce, respectively). Proposals are due back by the end of March.

Key considerations for the new ERP include:

- ✓ Easy-to-use, workflow-driven, cloud-based Software as a Service (SaaS), and mobile-friendly.
- ✓ Incorporates Human Resources and Financial functions within a single solution
- ✓ Easily integrates and/or interfaces with other GLWA applications and third-party systems
- ✓ Includes rigorous change management and user training

The IT Customer Service Delivery Team successfully completed the replacement of device data encryption software on 900 GLWA desktops, laptops, tablets, and All-in-ones (AIOs). The new platform, Microsoft BitLocker Encryption, works seamlessly with our existing environment and provides better security by fully encrypting the hard drive and operating system of the device.

In the event that a GLWA device is lost or stolen, BitLocker prevents cyber criminals from accessing confidential data that could be stored on that device.

The IT Enterprise Asset Management Systems team, the Enterprise Asset Management Group, in conjunction with other Areas and Groups across GLWA are evaluating responses received for the RFP for a replacement Enterprise Asset Management (EAM) or Computerized Maintenance Management System (CMMS). Currently, GLWA uses Oracle's Work Order and Asset Management (WAM) system. The successful proposer will provide innovative and creative solutions to support our water and wastewater asset management initiatives.

Key considerations for the new EAM include:

- ✓ Easy-to-use, workflow-driven, cloud-based, and mobile-friendly application suite for information-based decision support
- ✓ Solutions for vertical (treatment and pumping facilities) and horizontal (water and sewer networks) assets
- ✓ Integrated work management, inventory, and mobile functions

INFORMATION TECHNOLOGY (continued)

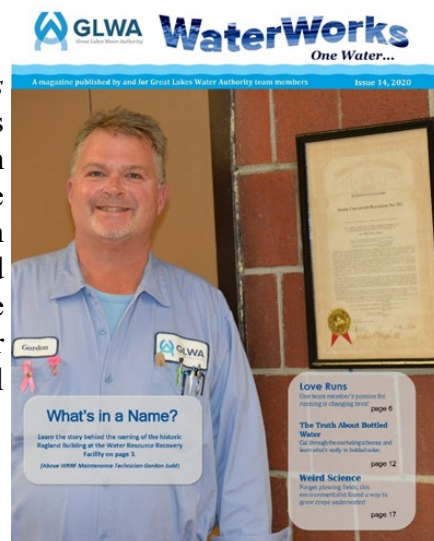
- ✓ Integration and/or or interface with other GLWA applications including GIS
- ✓ Change management and user training

Currently, the IT PMO is managing 22 active projects and is processing nine project requests. Three projects requests were approved by the IT Steering Committee.

PUBLIC AFFAIRS

Water Works Magazine

The 14th edition of GLWA's quarterly news magazine, *WaterWorks Magazine*, written by team members for our team members was published in early February. The cover story features a history lesson on the naming of the historic Ragland Building at the Water Resource Recovery Facility. Also included in this edition is a feature on team member Lisa Prysock, whose passion for running has supported efforts to combat human trafficking through "Love Runs" at the Detroit Free Press Marathon last year in September. She raised over \$1,400 for the cause. Also included was a celebration of National Apprenticeship Week and a story on underwater gardening.



MWEA/MI-AWWA Operators Day

Each February, the Michigan Water and Environmental Association (MWEA) partners with the American Water Works Association Michigan Section (MI-AWWA) to host the Joint Expo and Operators Day in Lansing, Michigan.

As a part of their involvement in the MI-AWWA Communications Council, Public Affairs team members Aftab Borka, Curtis Burris-White and Jason Matthews designed and conducted a session, titled, "How to Give a Media Interview." This session focused on how to craft an effective story in the water sector, tips for building relationships with local media personnel and maintaining an engaging social media channel. Participants had an opportunity to craft their own stories and participate in mock interviews.

Reinforcing the GLWA Brand

As a part of GLWA's ongoing brand awareness efforts, Public Affairs created a pocket-size "About Us" informational card that contains highlights not only our vision, mission and values, but also our new water and wastewater system fact and figures.

PUBLIC AFFAIRS (continued)

The cards will be used both internally and externally – including at recruitment and vendor events, as well as throughout our facilities.



SECURITY AND INTEGRITY

The Hazmat Unit coordinated and completed a total of 173 hours of training during the month.

Security and Integrity continued discussions and planning for Emergency Tabletop Exercises at the Southwest Water Treatment Plant in the spring of 2020 and at WRRF in the summer of 2020.

EPA electronically submitted certification emails to GLWA Security and Integrity for both the "Risk and Resilience and Emergency Response Plan as certified by the EPA.

ORGANIZATIONAL DEVELOPMENT

Apprenticeships

EICT-E: GLWA selected 20 candidates to participate in the five-year EICT-E apprenticeship program. Fourteen candidates onboarded on February 10, 2020. An additional six candidates are scheduled to onboard on February 24, 2020.

EICT-I: EICT-I apprentices are completing their final hours to fulfill their apprenticeship requirements.

ORGANIZATIONAL DEVELOPMENT (continued)

Apprentices in Cohorts I and II will complete their hours during the next four months.

Maintenance Technicians: Maintenance Technician apprentices began a new on-the-job rotation in January, and are settling into their new locations.

Mid-Year Review

The Mid-Year Review for Union Team Members is currently active. Mid-year Reviews close on Friday, February 21, 2020. We have a 78% completion rate for active team members as of the date of this report.

Progression

The progression review process is entering its final stages. We have a 95% completion rate for active, eligible Team Members. Thirty-eight team members are eligible to progress as of the date of this report.

Staffing

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

Number of New Hires	25
Number of Contractors Hired	2
Total Staffing - Regular FTEs (YTD)	1041
Total Number of Contractors (FTEs)	144

Benefits/Wellness

- ICMA-RC Individual Consultations held at Lake Huron & Southwest. Will be held at WRRF and WBB next week.
- Estate Planning seminars being held at Northeast, WRRF and WBB.
- Diabetes Management with Omada and Livongo began successfully.
- Dependent Audit via BMI is underway. Total records being audited: 517 team members and 1,187 dependents.
- Grief Counseling session held at WRRF (450+ team members). Amir McCaskle was a member of 2 teams totaling 49 team members. During the 3-hour session, 29 team members took advantage of the services offered.
- Take Our Daughters and Sons to Work Day® Thursday, April 23, 2020.

ORGANIZATIONAL DEVELOPMENT (continued)

Training and Development

During the month of January 2020, GLWA facilitated:

26 courses in Safety. Delivered 211.5 Hours of Instructor-Led Training to:

- 384 GLWA team members
- 7 courses in various subject matters (Onboarding, Leadership, etc). Delivered 51.5 Hours of Instructor-Led Training to 77 GLWA team members
- 0 courses hosted by Contractors

360 Water Report:

- 12 GLWA team members completed 22 courses

LEGAL

General Counsel's February Report is an attachment to the Chief Executive Officer's Report.

Respectfully submitted,



Sue F. McCormick
Chief Executive Officer

SFM/dlr

Attachments (1)