



Office of the Chief Executive Officer  
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[www.glwater.org](http://www.glwater.org)

August 24, 2016

The Honorable  
Board of Directors  
Great Lakes Water Authority

Dear Chairman Daddow and Directors:

**Regarding: CEO's Report – August, 2016**

On July 8, 2016, an intense rain event occurred which severely impacted the combined sewer system operated by GLWA and the local system operated by the City of Detroit Water and Sewerage Department (DWSD). The rain event was unusually intense and resulted in combined sewage backups in basements and on streets in certain areas. The neighborhoods on the eastside of the City of Detroit bordering the Detroit River, known as Jefferson-Chalmers was the area most severely impacted by the backups. Last week another rain event occurred in the early morning hours of Tuesday, August 16, 2016 which resulted in basement backups in some homes in these same areas. In response to these occurrences, the staff of GLWA and DWSD have initiated a project to separately and jointly analyze the July and August events. Both GLWA and DWSD have engaged expert consultants to conduct studies to better understand the events and the combined sewer systems' responses.

As part of our joint investigations and analyses, DWSD and GLWA's staff and its consultants have identified a number of immediate and near-term response actions to these incidents to further optimize the systems operations. Some of the response actions, such as increasing staff at the wet weather facilities when wet weather is predicted, as well as staffing the Conner Creek CSO facility around the clock, have already been put in place. Preparations for other response actions are presently being made and will result to bear fruit in the next 30 days. Although the consultants' studies will assist in the understanding of the events and options for optimizing the systems' responses to these events, we will continue to work in consultation with DWSD as we develop long term optimization of the systems. Further analyses beyond the initial studies will be necessary to fully develop long-term optimization strategies. This collaborative and consultative approach illustrates the approach GLWA is taking with all its customers.

On August 23<sup>rd</sup>, the Security and Integrity Unit of GLWA hosted a Table Top Exercise at Water Works Park utilizing its Emergency Response Plan recently updated. Participants from the City of Detroit Emergency management and First Responders, Wayne County First Responders, and MDEQ all participated with GLWA staff. It was the first time a table top exercise has focused on water infrastructure. The event was highly successful and many participants looked forward to another event of this nature.

## **PLANNING SERVICES**

### ***Asset Management and CIP Group***

The Asset Management and Capital Improvement Plan Work Group (AM & CIP) met on August 23, 2016 and discussed staff recommendations for amended/revised water system capital improvement projects. The Work Group also discussed the GLWA staff's concept to compile and maintain a master CIP project list to assist in future CIP prioritization. The list would include projects anticipated beyond the current CIP timeline including those outlined in Master planning or other study documents, those that come from needs and conditions assessments as well as those brought forward from customer communities. The group also reviewed progress on the wastewater needs assessment being performed in compliance with GLWA's NPDES permit requirement for the sanitary sewer system and wastewater treatment plant.

Business Case Evaluations (BCE) forms have been developed for projects that are to be included in the FY 2018 – 2022 water and wastewater CIPs. The new prioritization methodology and documentation is now being used by managers throughout GLWA. All newly identified projects, and all previously identified projects that have yet to go to the Procurement Group for solicitation require completed BCE forms. The Capital Management Group in Financial Services is currently processing and reviewing the requests and will be distributing them to management for additional review. It is anticipated that the formal CIP review committees that include GLWA staff and representatives from our customer communities, will meet in September to evaluate and prioritize project proposals.

A map viewer for the CIP projects was integrated with the Wholesale Automatic Meter Reading and the Greater Detroit Regional Sewerage System Portals. This upgrade allows GLWA customers to view CIP projects and locations on a geographic information system based map. This work was done in coordination with the System Analytics and Meter Operations Group.

Progress continues to be made to advance the CIP Program Management solicitation. Timing of the release of the solicitations is currently being coordinated with the Detroit Water and Sewerage Department (DWSD) and may be delayed to optimize consultant responses and cost proposals.

### ***Systems Planning Group***

Proposals for the Comprehensive Regional Wastewater Master Plan remain under review. It is anticipated that a recommendation will be brought to the GLWA Board for approval in October. The next meeting of the Wastewater Master Plan Steering Committee will likely occur in September in anticipation of project kick-off.

## PLANNING SERVICES (continued)

Staff continues to work actively with prospective water customers. Principles outlined in the System Optimization documents are providing valuable direction and guidance during these discussions.

### *System Analytics and Meter Operations Group*

The Wastewater Analytics Task Force meeting was held on August 12, 2016 at the Wastewater Treatment Plant. The agenda included a plant tour along with a tour of the Biosolids Dryer Facility. The attendees expressed that they enjoyed and appreciated the tour which provided them insight into wastewater treatment processes. The next meeting of this Customer Outreach Group is scheduled for October 7, 2016.



Proposals for the Units of Service for Non-Master Metered Customers of GLWA and System Water Audit were received on July 29, 2016. Evaluations are in progress by an evaluation team comprised of representatives from DWSD, GLWA, and several customer communities. This study was provided for in the Water and Sewer Services Agreement.

The System Analytics and Meter Operations Group is testing a new programmable logic controller program targeted at improving data collection from the GDRSS sewer meters. The goal of this improvement is to provide close to real-time sewer data on the GDRSS Portal, as well as to increase the number of successful reads.

### *Energy Management Group*

The Energy Management Group continues efforts on the investment grade energy audit for the Wastewater Treatment Plant, and drafting of GLWA's first Comprehensive Energy Management Plan. The first draft of the plan is nearly complete.

While monitoring GLWA's energy contracts and the energy industry, staff noted that DTE announced a filing with the Michigan Public Service Commission for a large natural gas rate increase for commercial and industrial customers. The initial estimates of the net effect to the GLWA natural gas billings is an increase of \$154,000 annually, with the majority of the impact occurring on the Wastewater Treatment Plant billings. DTE identified reasons for the increase as, they have not received an increase in natural gas charges since 2012, and the revenues have fallen as a result of its energy efficiency program. Staff is investigating an opportunity to add additional DTE gas accounts to the State of Michigan's natural gas cooperative agreement which would provide savings.

## WASTEWATER OPERATIONS

### *Wastewater Operations and Compliance*

We are pleased to report that the Wastewater Treatment Plant was in compliance with all National Pollutant Discharge Elimination System and Michigan Department of Environmental Quality (MDEQ) water quality permits for the month July 2016, including meeting the expectation of no appreciable solids recycling in the process stream. The July 2016 Wastewater Sludge Inventory and Disposal Graph is attached. Continued discussions are occurring with MDEQ related to the air quality permit for the incineration complexes and the Biosolids Dryer Facility.

Wastewater management staff continues to work on the preparation of documents related to two upcoming compliance dates.

- October 1, 2016: a number of reports are required to be submitted to MDEQ. These include a Needs Assessment of the wastewater system as well as an annual submittal related to the Wastewater Treatment Plant's Asset Management program.
- January 1, 2017: staff is required to submit an amendment to the Supplemental Report on Alternative Combined Sewer Overflow (CSO) Controls for the Upper Rouge River. This report will describe changes to the recommended long-term CSO control projects for the 17 CSO outfalls in the Upper Main Rouge River. The West Side Modeling project is underway and will assist in informing decision-making associated with this submittal. This submittal is a shared responsibility between DWSD and GLWA.

### *Wastewater Staffing*

We are pleased to welcome Mr. Daniel Alford as our first Director of Engineering and Maintenance at the Wastewater Treatment Plant. Mr. Alford holds a Bachelor of Arts in Biology and Master of Science in Civil Engineering. He also holds a Michigan Professional Engineer's license and a Class A Municipal Wastewater Treatment Plant Operator certification. Mr. Alford comes to us from Wayne County where he was the Superintendent of Wastewater and Stormwater Operations for the second largest wastewater treatment plant in the State. Prior to that duty assignment, he worked professionally in other engineering roles and as an Assistant Utility Engineer at a 50 MGD Water Treatment Plant. In total Mr. Alford has more than 15 years of experience in water utility engineering and operations.

Congratulations to Dr. Majid Khan for being promoted to Director of Wastewater Operations. Dr. Khan holds a doctoral degree in Applied Chemistry and a Class A Municipal Wastewater Treatment Plant Operator certification from the State of Michigan. He has served our organization as a Chemist, Sewage Plant Supervisor, Team Leader, Manager and now Director. In total, he has 20 years of experience in wastewater treatment plant operations.

## **WASTEWATER OPERATIONS** (continued)

The current process-team approach has been successful in bringing the maintenance and operational needs of the plant together. The leadership team change provides for additional focus on operations and equipment reliability by bringing the engineering element of the plant's staff directly into the function of plant maintenance, thereby emphasizing equipment reliability across the equipment lifecycle from design and installation, through maintenance and replacement.

An assessment of staffing needs at the wastewater treatment plant has been underway for the last several months. It was initiated internally when plant management changed recently and then augmented by fulfilling a request made by MDEQ associated with the Biosolids Dryer Facility becoming operational. Staffing numbers and organizational structure have both been considered in this assessment. This assessment will provide the basis for an adjustment in the staffing requirements currently detailed in the Administrative Compliance Order for the Wastewater Treatment Plant.

### ***Incineration and Fire Remediation Update***

As noted previously in the monthly reports, the fire that occurred in March damaged the conveyance system feeding the recently upgraded incinerators in Incineration Complex II. This resulted in an inability to utilize the newly upgraded incinerators and a delay in the retirement of out of compliance Complex I incinerators. In terms of the remediation effort, a large team of contractors and consultants has been engaged and meet weekly to ensure adequate progress on the project. The project schedule remains tight. Painting has been completed on schedule in Incineration Complex II and miscellaneous cleaning and repairs continue along with lighting upgrades. Exploratory roof demolition has begun, while preparatory work has started for the south conveyor rehabilitation and elevator replacement. The incinerators are still anticipated to return to service by year-end.

### ***Rouge River Outfall (RRO) Disinfection Project Update***

Design of the Rouge River Outfall Disinfection Project continues to be a high priority. A workshop to review the design documents developed by the contractor for the project is scheduled for August 25, 2016. The 30% design documents for the project are due this week. Last month, the Board approved a change order for sediment removal, which will start after the construction of two access ports. Mobilization to construct two access ports at the east chlorine contact conduit is now underway.

## **WASTEWATER OPERATIONS** (continued)

### ***Bio-Solids Dryer Facility Update***

NEFCO continues to pursue expeditious upgrading of equipment to improve reliability of all four (4) treatment trains of the Biosolids Dryer Facility. In recent months, several small fire incidents have been reported having various causes. Additionally, mechanical failures of dryer equipment have occurred. NEFCO has engaged a forensic engineering team to evaluate and redesign elements of the dryers. Over the past month, treatment trains 1, 3, and 4 were operational with periodic down-time for maintenance and repairs.

Treatment train 2 continues to remain out of service due to past gearbox failures. It is expected to return to service on August 26, 2016 after installation of a robust interim gear drive, which will be replaced by a permanent gearbox in late November. In addition, GLWA and NEFCO are continuing efforts to finalize an agreement for NEFCO to provide for alternative disposal of a specified quantity of biosolids until the dryers are reliably operating at the specified capacity. Work continues on a treatment option that will be pilot tested to reduce sulfur dioxide emissions by adding ferric chloride to the sludge received at the facility.

### ***Chlorine Event***

On Thursday, August 11, 2016, a limited amount of chlorine leaked from a chemical feed line into a process building at the Wastewater Treatment Plant's chlorination/de-chlorination building. The leak was contained quickly by onsite staff. Due to the level of concentration initially identified by chlorine sensors, the onsite Emergency Response Team, staffed by the Detroit Fire Department, initially responded with a very high level of concern for worker and public safety. The facility's air handling equipment immediately started to reduce the chlorine concentrations inside the building. As the concentrations decreased, the Emergency Response Team deescalated the emergency level. There were no injuries to personnel. All early warning systems were activated and operated as planned. There was no impact to the public, drinking water or surface water. An after-action analysis is presently underway to identify the root cause of the leak and improve our processes to reduce the probability of reoccurrence.

### ***Research and Innovation***

On July 21, 2016, Majid Khan, spoke at the Michigan Water Environment Association's annual regional seminar on biosolids. His presentation was on the topic of public-private partnerships associated with the contractual relationship between GLWA and NEFCO, its Biosolids Dryer Facility builder and operator. There were more than fifty attendees at the seminar including representatives of the MDEQ. The presentation was received with a great deal of curiosity and enthusiasm for public private partnerships. MDEQ representatives expressed appreciation for the efforts and contributions of GLWA in this field. After the presentations, the delegation visited various urban farming locations in Detroit.

## WASTEWATER OPERATIONS (continued)

### *Industrial Waste Control Group*

We are evaluating responses received to our request for proposal for replacement pretreatment information management system and laboratory information management systems. During the past month, we participated in "deep-dive" of the vendor products and are in the final evaluation stage. As is required for GLWA, this Group has been engaged in the internal development of updated regulatory rules and regulations. A stakeholder meeting is scheduled for August 30, 2016 to obtain comments and discuss the proposed rules.

## WATER OPERATIONS

The Southwest Water Treatment Plant just completed its plant-wide "clean sweep", an initiative to remove all scrap and debris and leave nothing lying on the floors throughout the plant. Equipment, tools, parts and materials used for maintaining the plant has been stored on shelves for tracking and easy access.



*Rapid Mix Storage Area*

As part of initiatives created by the Data Process Network Security team, all Water Operations Ovation users have been provided individual identification cards and passwords. In addition, three (3) water plant staff members went through Ovation Security Patch training to take over the task of providing monthly security patch updates to the Ovation System for Water Operations which was a task that was previously done by the SCADA team at the Wastewater Treatment Plant. These tasks support the mission of the Data Process Network Security team to protect the integrity of the process network for GLWA.

The American Water Works Association (AWWA) expressed its appreciation for Springwells Water Treatment Plant Manager, Mathew Mangatt's participation on the planning committee for the 2017 AWWA Inorganics Symposium scheduled for March 21-22, 2017, in Detroit. The planning committee has now rated and reviewed the submitted abstracts, and will be working to develop the technical program. Mathew's assistance provided not only a vital utility perspective, but also lends knowledge of regional issues.

The Lake Huron Water Treatment Plant invited the administrative and maintenance staff of the Indian Trail North manufactured home community for a tour of the facility on August 5, 2016. Employees of the Lake Huron plant stressed their commitment to hold the public's trust with providing safe and clean drinking water to its customers, as well as its desire to be a great neighbor to the surrounding community.

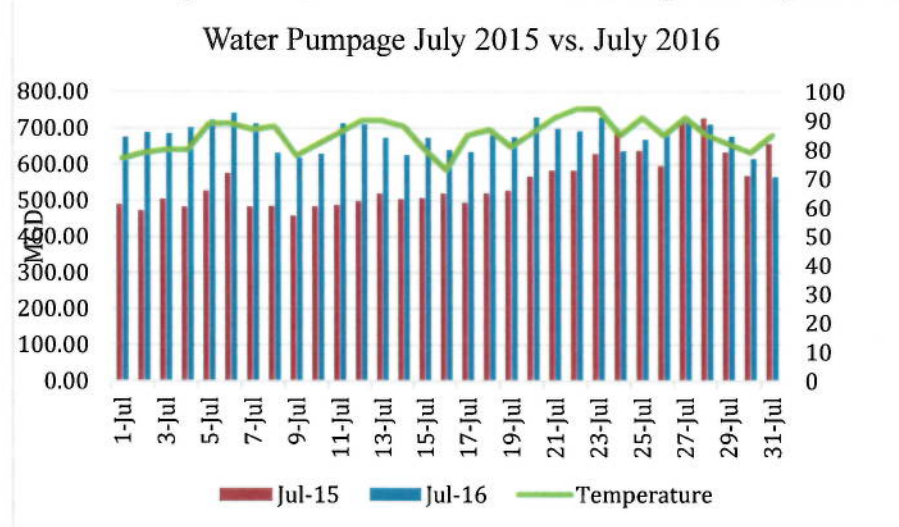
**WATER OPERATIONS** (continued)

Water Works Park staff hosted a tour of their facility for Community officials representing an established community who is considering the feasibility of a Water Services contract with GLWA.

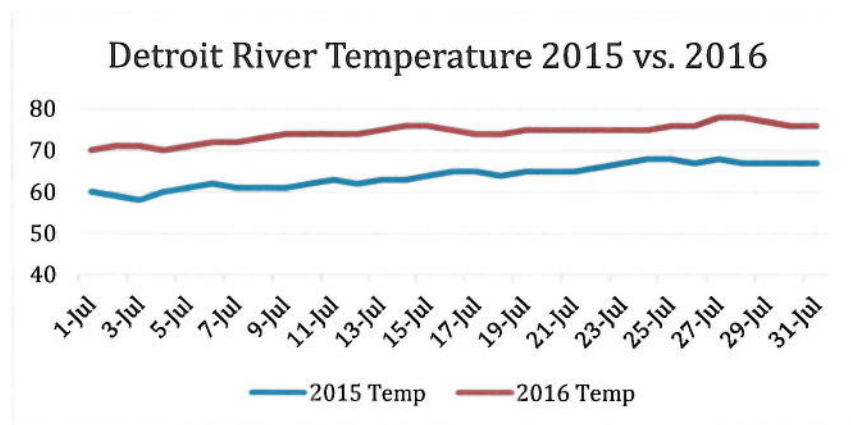
***Systems Control Center***

Total water pumpage for July is 22% higher than last year. The system was able to handle the peak load without any issues.

Total volume July 2015: 17,104.17 MG • Total volume July 2016: 20,942.40 MG



Systems Control Center received a few calls regarding higher water temperatures in the community systems this year. The cause of higher temperature is attributed to the source water temperature in the Detroit River.



## INFORMATION TECHNOLOGY

I am pleased to welcome Jeffrey Small who joins as GLWA's first Chief Information Officer.

Mr. Small brings 30 years of information technology and business process experience to GLWA. Immediately prior to joining the GLWA team, he served for four years as Deputy Chief Information Officer at Wayne County, Michigan. Prior to his work at Wayne County, Mr. Small held IT leadership roles at several multi-national companies in a cross-section of industries, including retail, sourcing, and brand management and consumer products. Mr. Small holds a Bachelor of Arts degree in Political Science from The George Washington University, and an MBA in Computer Information Systems from Baker College. Please join me in welcoming Jeffrey to GLWA.

The GLWA Information Technology team has upgraded the Intrusion Prevention System (IPS) appliance, to the latest Cisco FirePower hardware. The FirePower appliance resides onsite in the CSF data center, and blocks suspicious traffic from entering or exiting the GLWA/DWSD network. The IPS, in conjunction with our firewall, antivirus infrastructure, and monitoring systems, is a key piece of our overall IT Cybersecurity program.

The GIS team has installed a new GIS environment with a fully redundant architecture, has updated approximately 10 percent of the existing geodatabase, and have re-launched the GIS program through an ongoing series of GIS Workshops to individual business units. This team is now actively working on numerous enhancements to the geodatabase, and rolling out new mapping applications and services on an ongoing basis. Some of the latest releases include the Impervious Surfaces Map App used by DWSD for impervious cover billings, which also includes an internal app for calculating drainage acreage, as well as a Capital Improvement Plan (CIP) map for GLWA detailing five-year plan project locations and details.

The GLWA Infrastructure team has upgraded the datacenter at Central Services Facility to a Tier 3 data center. This means that it now has redundant power, AC and network.

New racks were installed with PVIQ smart patching and Datacenter Infrastructure Management (DCIM) to monitor every aspect of the data center including the three 300 kilowatt generators that are dedicated to just the datacenter. These generators are located in the back of Central Services Facility. The datacenters at the Water Board Building and Wastewater Treatment Plant have racks for utility servers (DNS, Datadomains, etc.), routers, switches, etc. for the Business, Security and Process networks.

We are currently in discussion with AT&T regarding the costs for services which includes the implementation of an internal GLWA telecommunications network, data security services and for the phone services provided by AT&T.

### **INFORMATION TECHNOLOGY** (continued)

AT&T payments have been placed on hold pending the final outcome of negotiations with AT&T on contract charges to-date. Related to these discussions, the following key events have occurred over the past month:

1. Meeting held with AT&T collections and executives to discuss issues related to payments with AT&T executives requesting payment for money owed
2. Good faith payment by GLWA of \$2 million to AT&T
3. Potential cost saving (sales incentive) options document provided to GLWA by AT&T

A follow-up meeting with ATT collections is scheduled for August 31. Prior to that meeting, GLWA will be holding a joint strategy session with DWSD to review options provided by AT&T, and to determine an approach moving forward.

### **FINANCIAL SERVICES GROUP**

The Financial Services Group continues to make progress on a number of major projects that span the first quarter of FY 2017. This includes the development of official documents for GLWA's inaugural bond transaction this fall, organizational and business process design and implementation made possible by the Phase I rollout of the BS&A financial software, development of a three year Financial Services Group strategic plan, and reviews of large dollar projects in process to ensure the GLWA is receiving the best value. Many of these items will be on the agenda for the next GLWA Audit Committee on Friday, September 9, 2016 at 8:00 a.m.

### **ORGANIZATIONAL DEVELOPMENT**

Since January 1, 2016, the organization has hired 114 employees. The total number of FTE's to date is 819. There are 32 open recruitments across the organization which are posted on the GLWA website.

New Employee Orientation is currently being held each month at Water Works Park. To date, 93 employees have participated in the orientation.

#### ***Training Highlight: Doug Cartland's Hungry Leadership Development Series***

GLWA's leadership team is in the fourth week of the 10-week training series. The goal of the training is to enhance the organization's leadership skills through participation in the same learning experience.

**ORGANIZATIONAL DEVELOPMENT** (continued)

The leadership team members are given the opportunity to practice leadership skills by interacting with each other through role-playing, behavioral modeling and other group activities. This will help to build consistency as well as momentum toward creating a common leadership culture across the organization.

Calendar Year to date, the training team has conducted 7922.5 training hours for 1103 employees.

**KUDOS and STAFF ACCOLADES**

Water Operations would like to acknowledge the excellent customer service that is being performed at Water Works Park (WWP) Water Treatment Plant by Security Officer Phillip Manley. His dedication to his job has been noticed from internal and external customers that he interacts with as he performs his daily functions. WWP is our newest treatment facility that provides tours, and is the host to various customer service meetings. Officer Manley has developed a method that balances the high level security detail with the need for making the customer feel comfortable during their time at the facility. Thanks for the great service!

**LEGAL**

General Counsel's August Report is attached to the Chief Executive Officer's report.

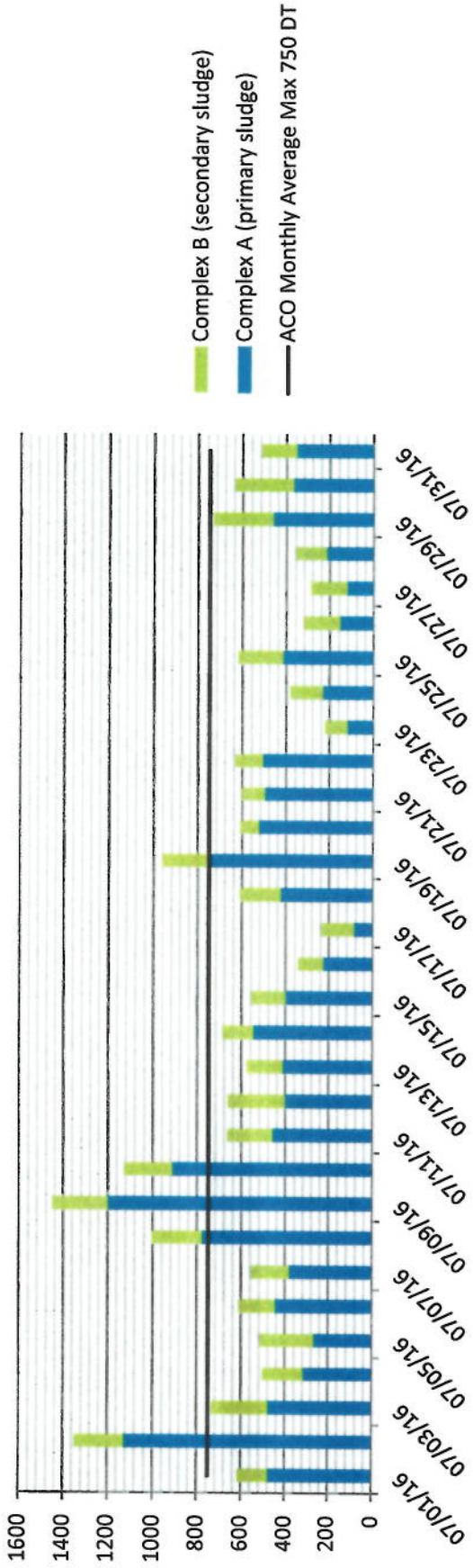
Respectfully submitted,



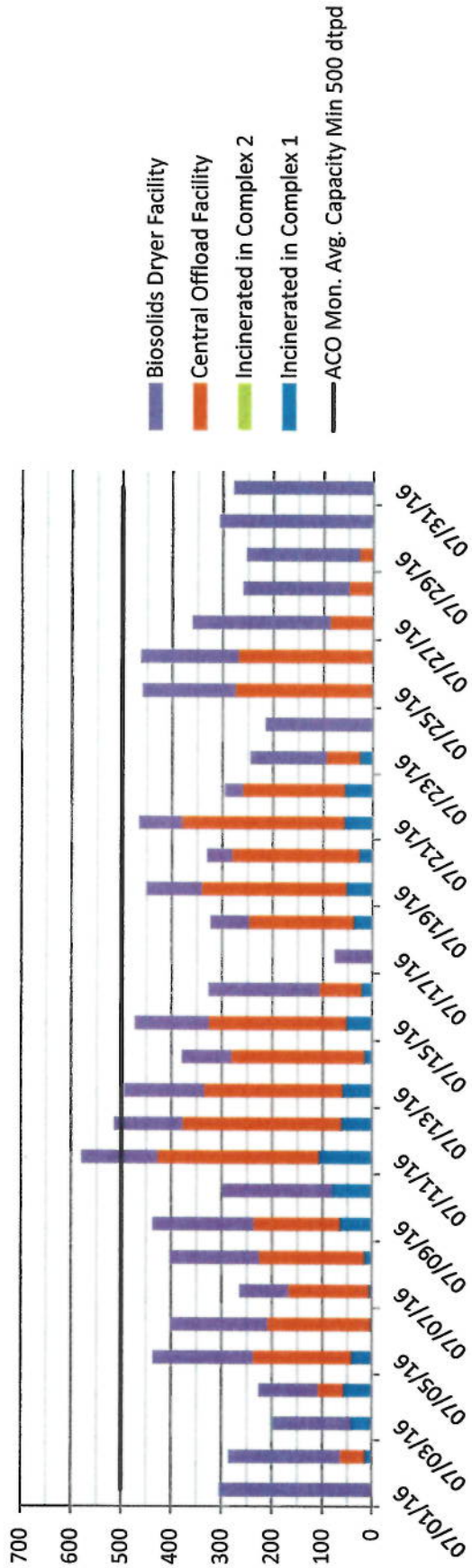
Sue F. McCormick  
Chief Executive Officer

SFM/dlr  
Attachments (2)

### Sludge Inventory (dry tons)



### Sludge Disposal by Method (dry tons)





## General Counsel – August, 2016

General Counsel worked on the following matters:

1) Contract matters

Contracts reviewed as to form: General Counsel reviewed 6 contracts as to form and execution.

Contracts drafted or revised: General Counsel drafted or revised 5 contracts.

General Counsel created a new form of Professional Services Contract specifically for staff augmentation services. The form was put into use on or about August 2, 2016.

General Counsel is preparing for water contract reopener season. This year there are only 3 regularly scheduled reopeners (Almont, NOCWA, and Romeo). We have heard that there will be customers who wish to reopen out of sequence including Washington Twp. and Northville Twp.

2) Subpoenas / Information Requests:

General Counsel received 9 subpoenas/ information requests and responded to 14 subpoenas/ information requests.

GLWA has responded to an appeal of its denial of material related to mediation proceedings in the City of Detroit's bankruptcy case by upholding its original decision to deny the request and clarifying that since the Effective Date of the Leases, GLWA has no responsive documents.

3) New Cases:

*No new cases.*

4) Cases Closed:

Andrews v Goff – Shared Services – defective sidewalk.



- 5) EJCDC: General Counsel continues to work with GLWA staff to implement the use of EJCDC form contracts for GLWA procurements.
- 6) Detroit July Rain Event: GLWA has received approximately 700-800 claims from counsel for DWSD customers who claim their basements were flooded during this event. We anticipate working with DWSD on the disposition of these claims.

GLWA has received FOIA requests from Plaintiff's counsel related to this event.

General Counsel has prepared and DWSD's counsel has reviewed, a Joint Defense and Common Interest Agreement that will facilitate GLWA and DWSD's cooperative response to these incidents.

- 7) Main Break Claims: General Counsel continues to work on the disposition of main break claims filed by Madison Heights and Redford Township
- 8) AFSCME v IUOE, DWSD, and GLWA Appeal: The briefing in this appeal has been completed.
- 9) Gordie Howe International Bridge: General Counsel continues to assist in this ongoing project associated with the planned bridge construction.
- 10) Lapeer County Property Acquisition: Properties for locating the booster chlorination stations for continuing service to Lapeer County customers Imlay City, Mayfield Twp. and Lapeer have been identified and appraised for condemnation purposes. The Mayfield Twp. property owner, Kamax, L.P., has offered to sell their parcel for \$5945. Regarding the property located in Goodland Twp., we have issued a Good Faith Written Offer letter in the amount of \$4000. Owner's response is due September 2. If a response is not received, a condemnation action will be filed.
- 11) DWSD v Highland Park: Highland Park has filed an Interlocutory Application for appeal to the Michigan Supreme Court the Court of Appeals' ruling denying its request to remand the case to the trial court for further fact finding. GLWA has responded in opposition to Highland Park's requested relief.



GLWA continues to meet with MDEQ to discuss concerns raised in the Board's letter to Governor Snyder regarding Highland Park's continued non-payment. The State has indicated that it hopes to have an additional response in the near future.

- 12) IPP Program Transfer: General Counsel continues to support this initiative and has developed form documents to allow IPP end-users to be billed directly and create privity of contract. We will be scheduling a stakeholder meeting in the near future to review this concept
- 13) NPDES Permit Renewal. General Counsel continues to support this initiative.
- 14) Flint. General Counsel continues to assist in responding to investigators and litigants.
- 15) ATT: General Counsel is assisting GLWA and DWSD IT in addressing this issue. A conference call was held with ATT officials including its President to discuss the mutual concerns. A follow-up meeting is scheduled next week. Further detail on these issues is contained in the IT section of the CEO's report.