Great Lakes Water Authority

Key Performance Indicators and
Effective Utility Management (EUM) Metrics
January 09, 2019

Ten Attributes of Effectively Managed Water Sector Utilities (EUM)

Attribute	Attribute Components
Employee and Leadership Development	Recruits and retains a workforce that is competent, motivated, adaptive, and safety-focused. Establishes a participatory, collaborative organization dedicated to continual learning, improvement, and innovation. Ensures employee institutional knowledge is retained, transferred, and improved upon over time. Provides a focus on and emphasizes opportunities for professional and leadership development, taking into account the differing needs and expectations of a multi-generational workforce and for resource recovery facilities. Establishes an integrated and well-coordinated senior leadership team.
Operational Optimization	Ensures ongoing, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations in service to public health and environmental protection. Makes effective use of data from automated and smart systems, and learns from performance monitoring. Minimizes resource use, loss, and impacts from day-to-day operations, and reduces all forms of waste. Maintains awareness of information and operational technology developments to anticipate and support timely adoption of improvements.
Financial Viability	Understands the full life-cycle cost of utility operations and value of water resources. Establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues. Establishes predictable rates—consistent with community expectations and acceptability—adequate to recover costs, provide for reserves, maintain support from bond rating agencies, plan and invest for future needs, and taking into account the needs of disadvantaged households. Implements sound strategies for collecting customer payments. Understands the opportunities available to diversify revenues and raise capital through adoption of new business models.
Infrastructure Strategy and Performance	Understands the condition of and costs associated with critical infrastructure assets. Plans infrastructure investments consistent with anticipated growth, system reliability goals, and relevant community priorities, building in flexibility for evolution in technology and materials, and uncertainty in the overall future operating context (e.g., climate impacts, customer base). Maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable risk consistent with customer, community, and regulator-supported service levels. Assures asset repair, rehabilitation, and replacement efforts are coordinated within the community to minimize disruptions and other negative consequences.
Enterprise Resiliency	Ensures utility leadership and staff work together internally, and with external partners, to anticipate, respond to, and avoid problems. Proactively identifies, assesses, establishes tolerance levels for, and effectively manages a full range of business risks (including interdependencies with other services and utilities, legal, regulatory, financial, environmental, safety, physical and cyber security, knowledge loss, and natural disaster-related) in a proactive way consistent with industry trends and system reliability goals.

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Ten Attributes of Effectively Managed Water Sector Utilities (EUM)
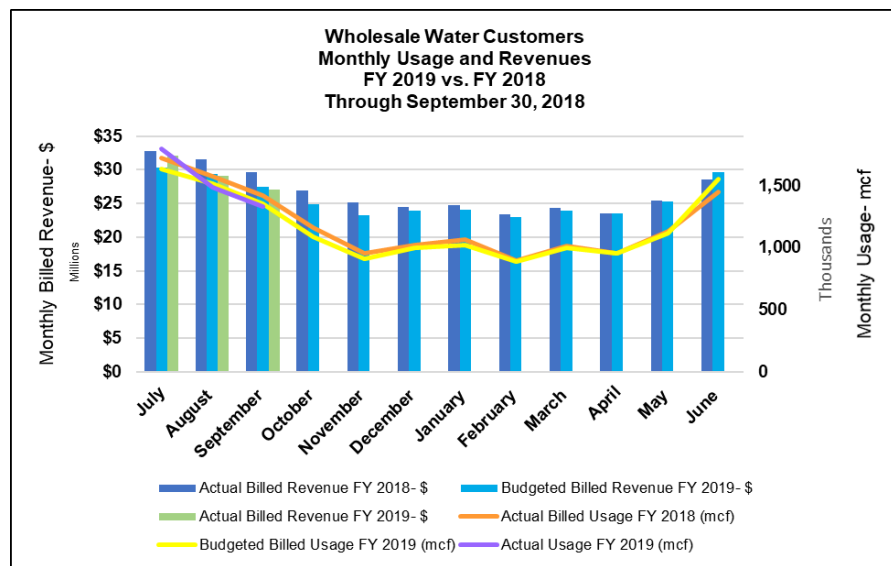
| Attribute	Attribute Components
Product Quality	Produces "fit for purpose" water that meets or exceeds full compliance with regulatory and reliability requirements and consistent with customer, public health, ecological, and economic needs. Products include treated drinking water, treated wastewater effluent, recycled water, stormwater discharge, and recovered resources.
Customer Satisfaction	Provides reliable, responsive, and affordable services in line with explicit, customer-derived service levels. Utilizes a mix of evolving communication technologies to understand and respond to customer needs and expectations, including receiving timely customer feedback and communicating during emergencies. Provides tailored customer service and outreach to traditional residential, commercial, and industrial customers, and understands and exercises as appropriate the opportunities presented by emergent customer groups (e.g., high strength waste producers, power companies).
Community Sustainability	Takes an active leadership role in promoting and organizing community sustainability improvements through collaboration with local partners (e.g., transportation departments, electrical utilities, planning departments, economic development organizations, watershed and source water protection groups). Manages operations, infrastructure, and investments to support the economic, environmental, and social health of its community. Integrates water resource management with other critical community infrastructure, social, and economic development planning to support community-wide resilience, sustainability, and livability to enhance overall water resource sustainability.
Water Resource Sustainability	Ensures the availability and sustainable management of water for its community and watershed, including water resource recovery. Understands its role in the complete water cycle, understands fit for purpose water reuse options, and integrates utility objectives and activities with other watershed managers and partners. Understands and plans for the potential for water resource variability (e.g., extreme events, such as drought and flooding), and utilizes as appropriate a full range of watershed investment and engagement strategies (e.g., Integrated Planning). Engages in long-term integrated water resource management, and ensures that current and future customer, community, and ecological water-related needs are met.
Stakeholder Understanding and Support	Engenders understanding and support from stakeholders (anyone who can affect or be affected by the utility), including customers, oversight bodies, community and watershed interests, and regulatory bodies for service levels, rate structures, operating budgets, capital improvement programs, and risk management decisions. Actively promotes an appreciation of the true value of water and water services, and water's role in the social, economic, public, and environmental health of the community. Involves stakeholders in the decisions that will affect them, understands what it takes to operate as a "good neighbor," and positions the utility as a critical asset to the community.

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EUM Attribute:

Financial Viability

Financial Viability –
Reliability of Wholesale Water and Sewer Revenue Projections

Wholesale Water Customers
Monthly Usage and Revenues
FY 2019 vs. FY 2018
Through September 30, 2018

Wholesale Sewer Customers
Monthly Revenues
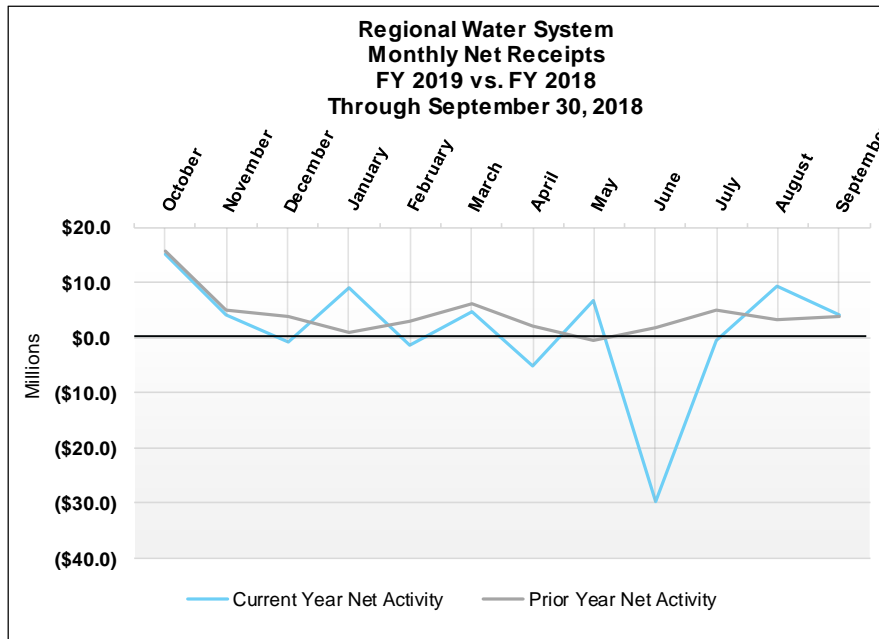**FY 2019 vs. FY 2018**
Through September 30, 2018

Wholesale Water System billed revenues for FY 2019 are stable with actual billings at 101.4% of budget and actual usage at 102.7% of budget through September 2018. Billed revenue for FY 2019 was 6.0% lower compared to the same period in FY 2018.
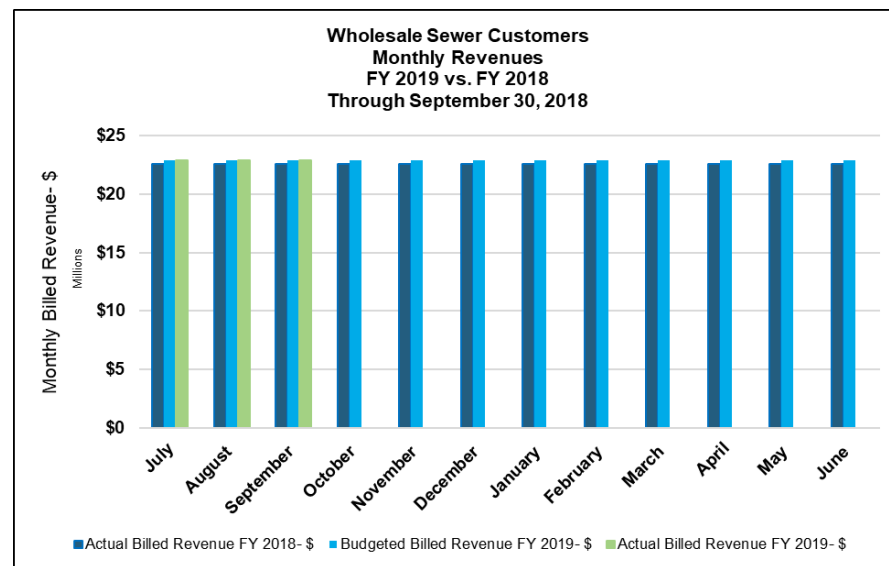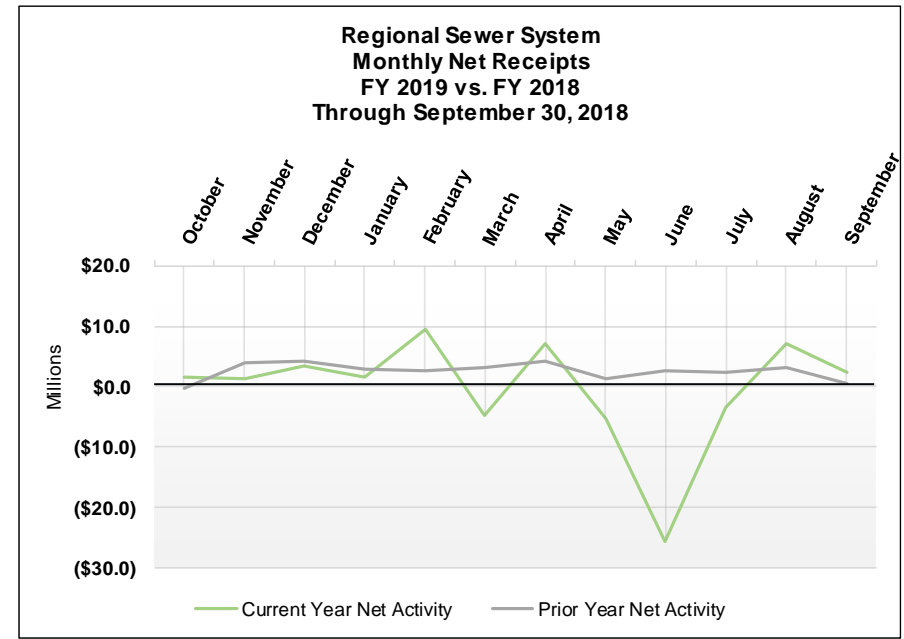
Wholesale Sewer System billed revenues for FY 2019 are stable with actual billings at 100% of budget (based on the full fixed monthly charge) through September 2018. Billed revenue for FY 2019 was 1.3% higher compared to the same period in FY 2018.

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Financial Viability – GLWA Regional System Net Receipts

Regional Water System
Monthly Net Receipts
FY 2019 vs. FY 2018
Through September 30, 2018

Regional Sewer System
Monthly Net Receipts
FY 2019 vs. FY 2018
Through September 30, 2018

Regional Water System net receipts for September 30, 2018 exceeded MBO disbursements by $4.12 million resulting in a year-to-date net receipts over disbursements ratio of 18% for FY 2019. This metric does vary monthly based on collection activity. The life-to-date metric for net receipts over disbursements for the regional water system is 11%.
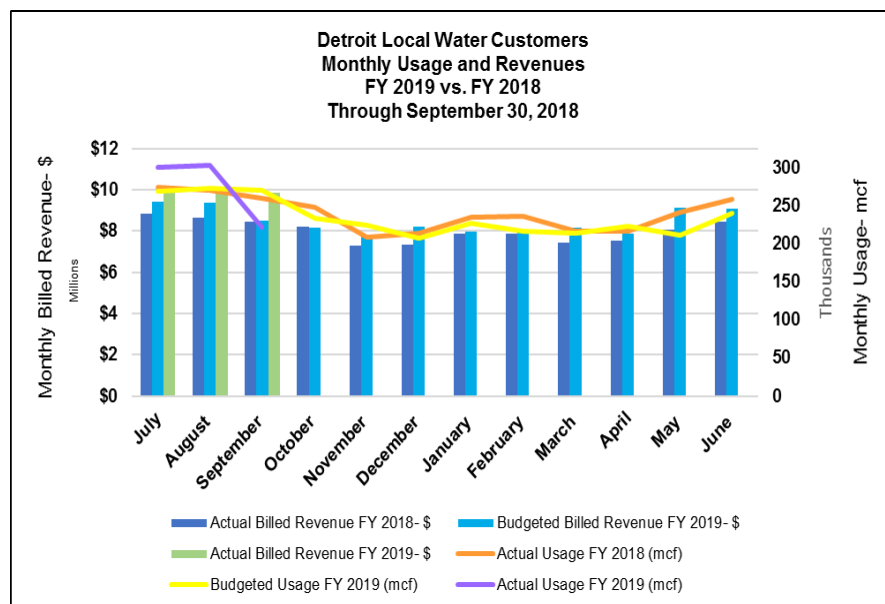
Regional Sewer System net receipts for September 30, 2018 exceeded MBO disbursements by $2.25 million resulting in a year-to-date net receipts over disbursements ratio of 5% for FY 2019. This metric does vary monthly based on collection activity. The life-to-date metric for net receipts over disbursements for the regional sewer system is 3%.

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*For the purposes of this reporting, **Net Receipts equals actual cash collections for the period less Master Bond Ordinance (MBO) disbursements**. The black line in the charts above at the zero highlights the minimum goal for net receipts.*

Financial Viability –
Reliability of Detroit Local Water and Sewer Revenue Projections

Detroit Local Water System billed revenues for FY 2019 are stable with actual billings at 109.4% of budget and actual usage at 101.5% of budget through September 2018. Billed revenue for FY 2019 was 15.3% higher compared to the same period in FY 2018.

Detroit Local Sewer System billed revenues for FY 2019 are stable with actual billings at 102.8% of budget and actual usage at 104.4% of budget through September 2018. Billed revenue for FY 2019 was 13.4% higher compared to the same period in FY 2018.

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Financial Viability – DWSD Local System Net Receipts

Local Water System
Monthly Net Receipts
FY 2019 vs. FY 2018
Through September 30, 2018

Local Sewer System
Monthly Net Receipts
FY 2019 vs. FY 2018
Through September 30, 2018

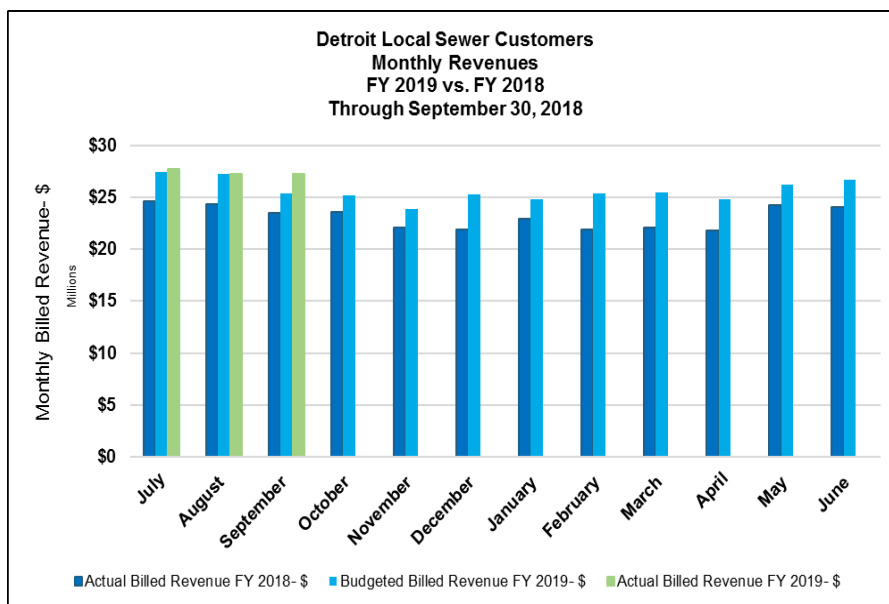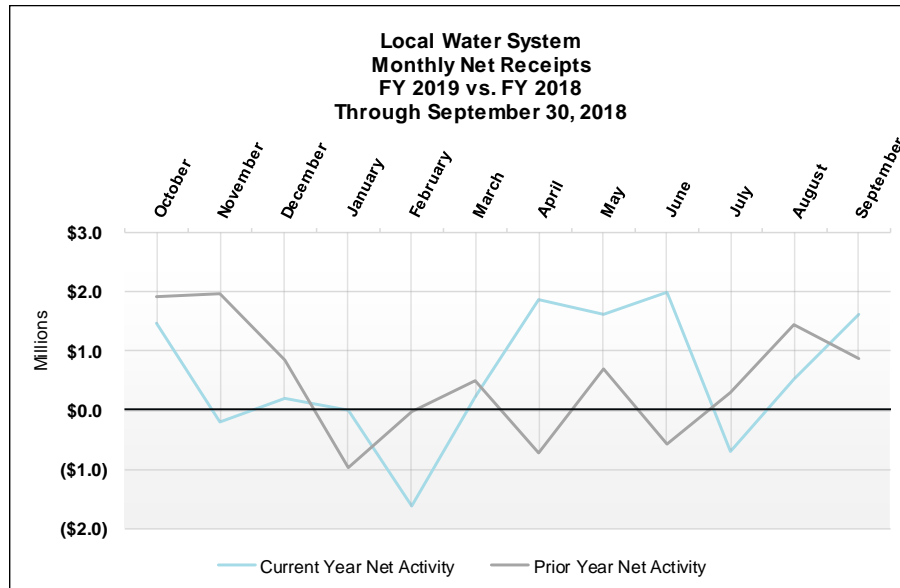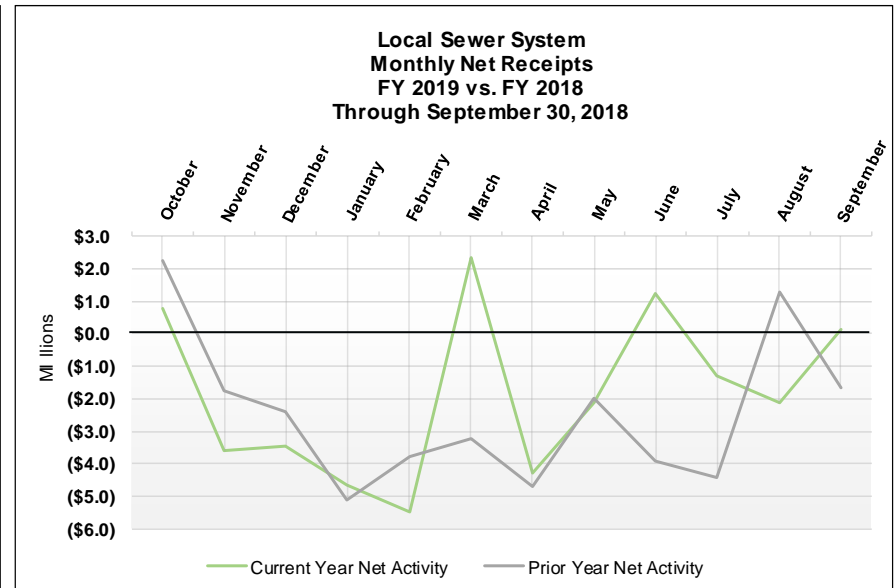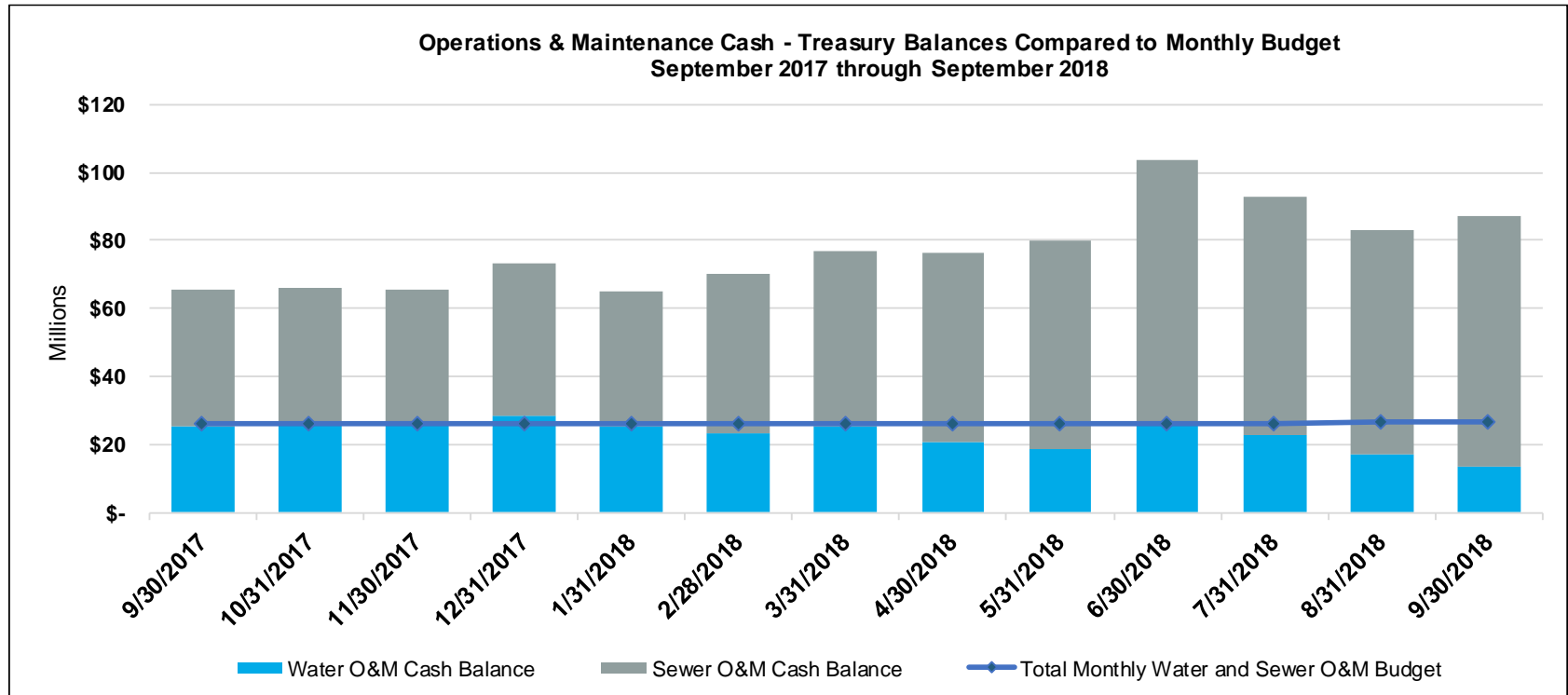Local Water System net receipts for September 30, 2018 exceeded MBO disbursements by $1.62 million resulting in a year-to-date net receipts over disbursements ratio of -1 for FY 2019. This metric does vary monthly based on collection activity. The life-to-date net receipts over disbursements ratio for the local water system is 3%.

Local Sewer System net receipts for September 30, 2018 slightly exceeded MBO disbursements by $0.13 million resulting in a year-to-date net receipts over disbursements ratio of -7%. This metric does vary monthly based on collection activity. The life-to-date metric for net receipts over disbursements for the local water system is -8%. DWSD has proposed a long-term plan to address this structural shortfall.
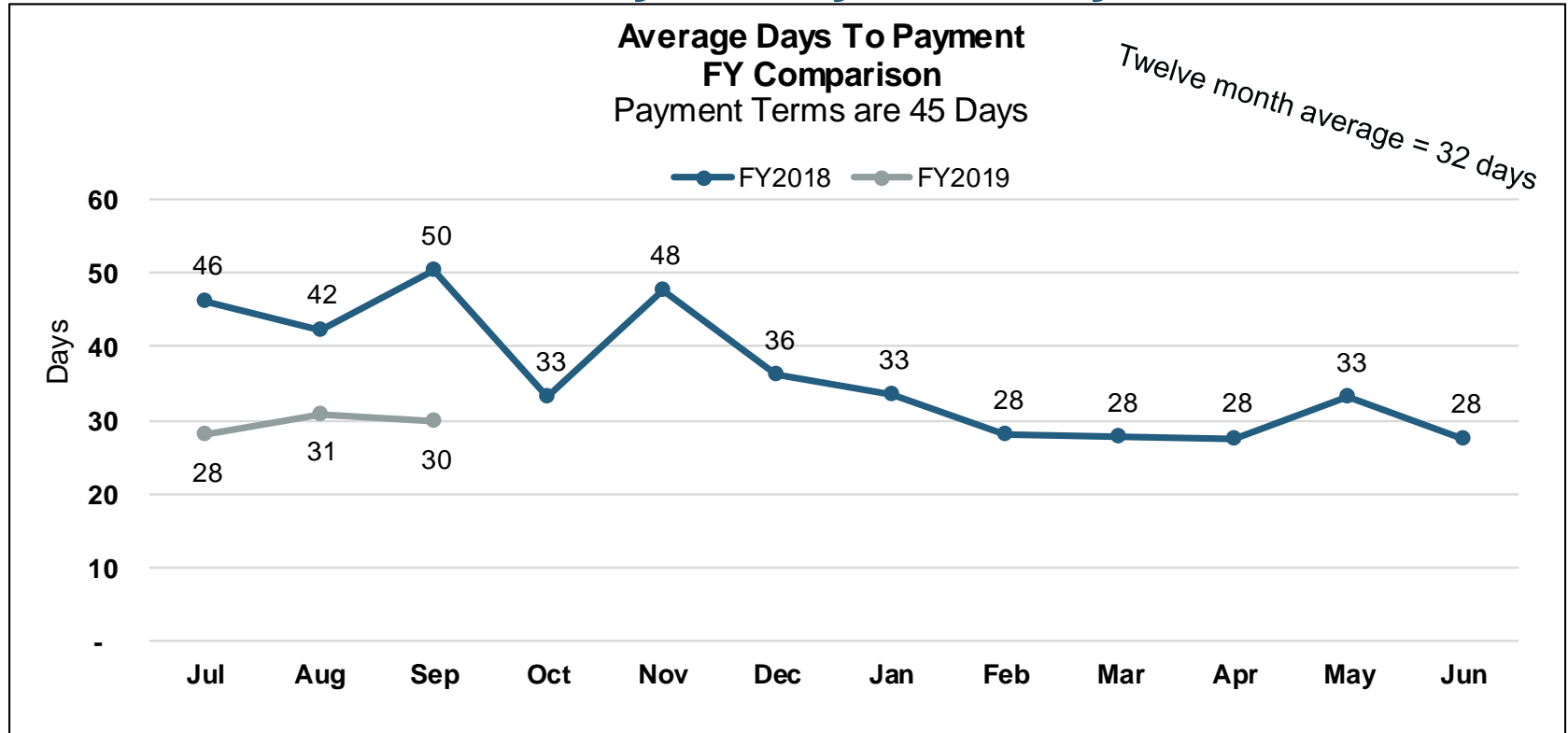
*For the purposes of this reporting, **Net Receipts equals actual cash collections for the period less Master Bond Ordinance (MBO) disbursements**. The black line in the charts above at the zero highlights the minimum goal for net receipts.*

Financial Viability – Revenue Stability and Appropriate O&M Cash Reserves

Operations & Maintenance Cash - Treasury Balances Compared to Monthly Budget
September 2017 through September 2018

Legend: Water O&M Cash Balance | Sewer O&M Cash Balance | Total Monthly Water and Sewer O&M Budget
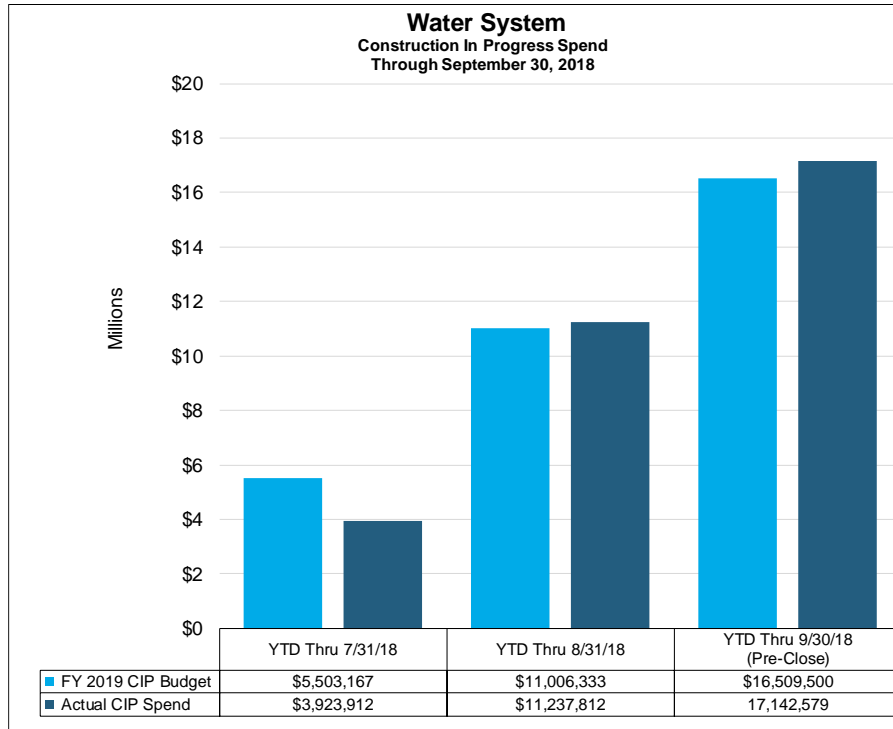
- Cash balances are appropriate to fund monthly budgeted Operations & Maintenance (O&M) with an average ratio of O&M cash to budget of 2.25x for water and 3.40x for sewer.
- Variability in cash balances for April and May 2018 was due to settlement of interfund receivables/payables for FY 2017 that were on hold awaiting the approval of the Memorandum of Understanding Term Sheet and effect on final FY 2017 audited financial report completion. These transfers were completed by June 30, 2018.
- Variability in cash balances for July thru September 2018 is due to interfund receivables/payables that have not been settled.

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Financial Viability – Days to Pay an Invoice

**Average Days To Payment
FY Comparison**
Payment Terms are 45 Days

Twelve month average = 32 days

Legend: FY2018 — FY2019

FY2018 values: Jul 46, Aug 42, Sep 50, Oct 33, Nov 48, Dec 36, Jan 33, Feb 28, Mar 28, Apr 28, May 33, Jun 28

FY2019 values: Jul 28, Aug 31, Sep 30

Y-axis: Days (-, 10, 20, 30, 40, 50, 60)

X-axis: Jul, Aug, Sep, Oct, Nov, Dec, Jan, Feb, Mar, Apr, May, Jun

- Timely vendor payments support supplier relations and is the outcome of a collaborative workflow from requisition to payment. It also serves as a means to leverage early payment discounts, provide timely financial reporting, and improve cashflow projections.

- GLWA's vendor payment timing goal is a twelve month average of < 30 days from invoice receipt to payment date. This goal is fifteen days earlier than GLWA's established vendor terms. As of September 2018 the twelve month average is 32 days, continuing a steady improvement trend.

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Financial Viability- FY 2019 Total CIP Spend

Water System
Construction In Progress Spend
Through September 30, 2018

	YTD Thru 7/31/18	YTD Thru 8/31/18	YTD Thru 9/30/18 (Pre-Close)
FY 2019 CIP Budget	$5,503,167	$11,006,333	$16,509,500
Actual CIP Spend	$3,923,912	$11,237,812	17,142,579

Sewer System
Construction In Progress Spend
Through September 30, 2018

	YTD Thru 7/31/18	YTD Thru 8/31/18	YTD Thru 9/30/18 (Pre-Close)
FY 2019 CIP Budget	$8,765,250	$17,530,500	$26,295,750
Actual CIP Spend	$11,589,291	$15,934,128	22,315,253

Water System Construction in Progress (CIP) Spend: As of September 2018, the Water system incurred $17,142,579 of CIP costs to date. This is 104% of the total prorated spend, exceeding budget current period budget expectations, and maintaining a increase over the prior period.
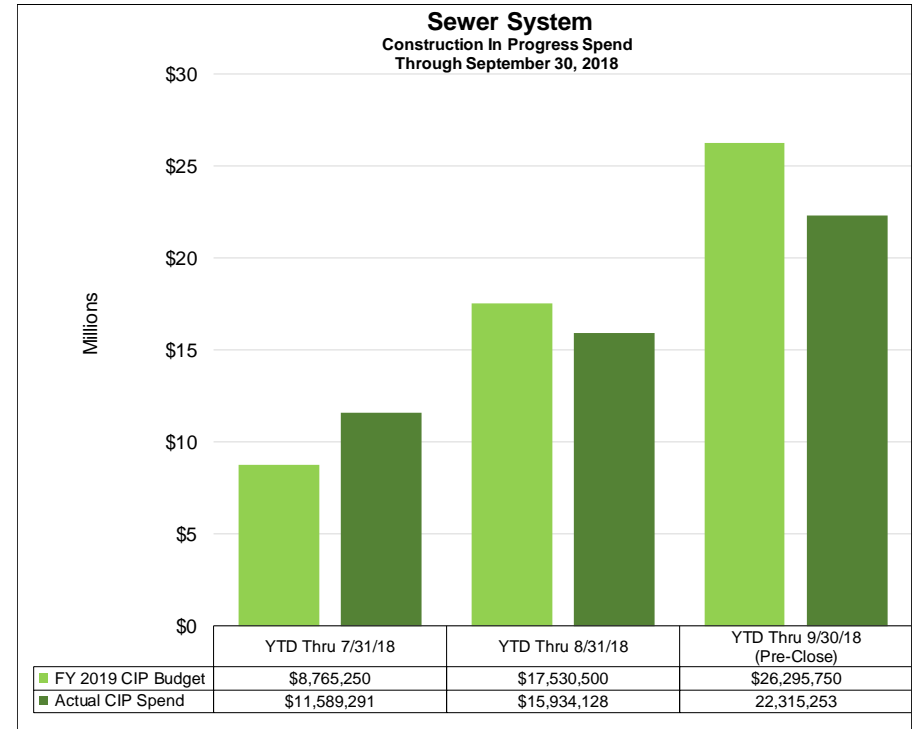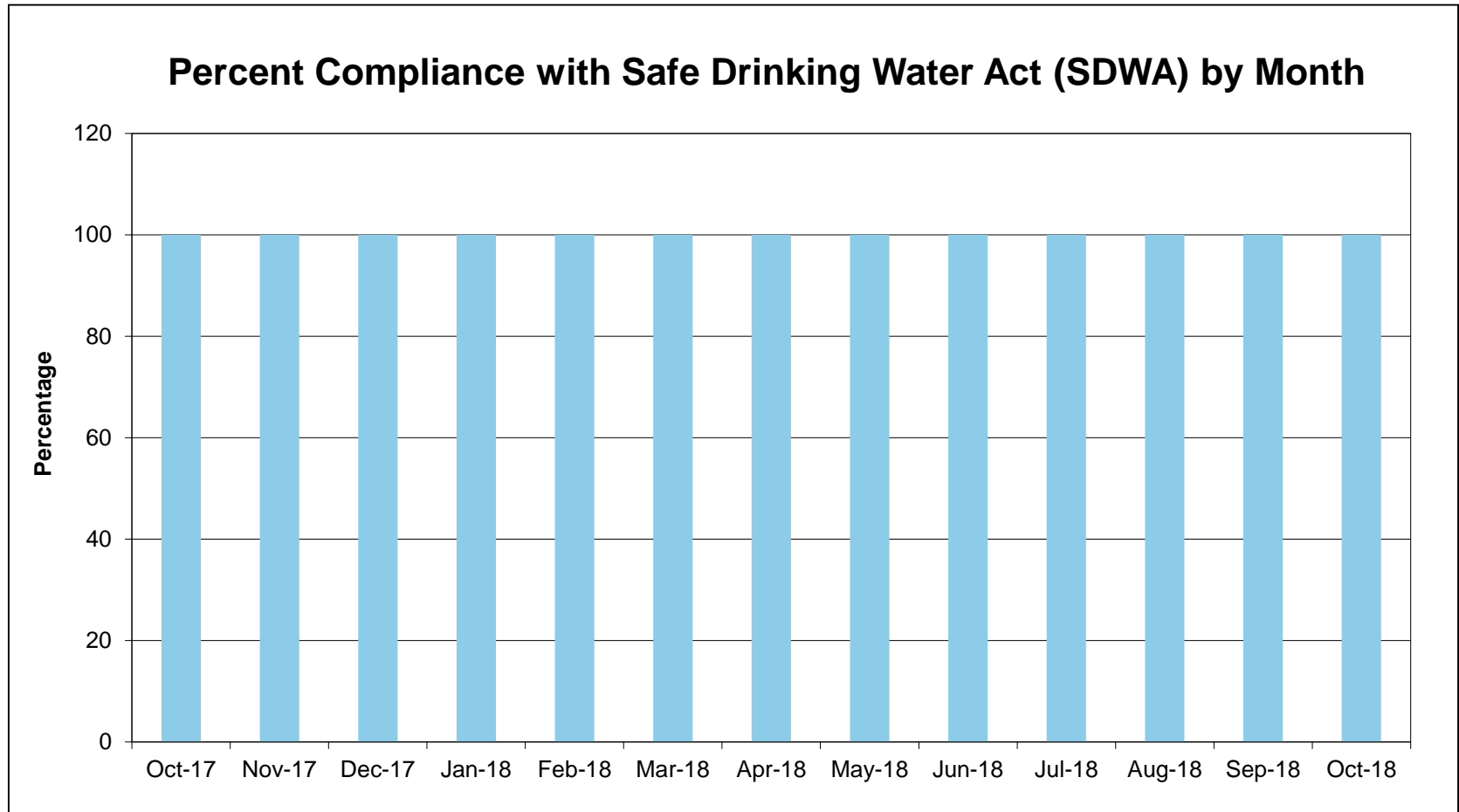
Sewer System Construction in Progress (CIP) Spend: As of September 2018, the Sewer system incurred $22,315,253 of CIP costs to date. This is 85% of the total prorated spend, falling short of current period budget expectations, but maintaining a steady increase over the prior period.

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EUM Attribute:

Product Quality

Product Quality – SDWA Compliance

## Percent Compliance with Safe Drinking Water Act (SDWA) by Month

Product Quality: GLWA's goal is to surpass Safe Drinking Water Act requirements and this slide indicates compliance for the month.

Product Quality
Regulatory Compliance – Effluent Phosphorous Concentration

- Significant progress has been made in the reduction of effluent phosphorus.
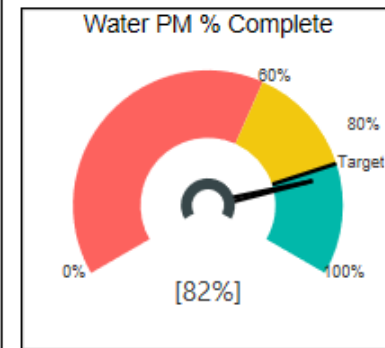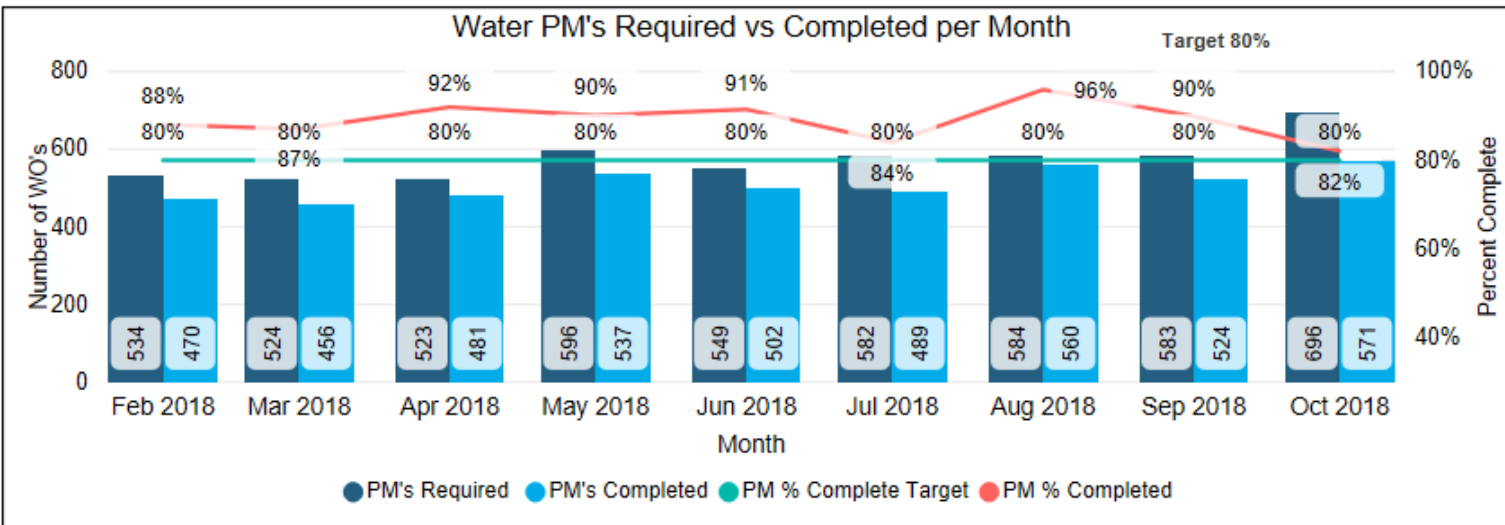- GLWA strives to surpass Federal and State requirements.

Effluent Phosphorus Concentration
1990 to 2018
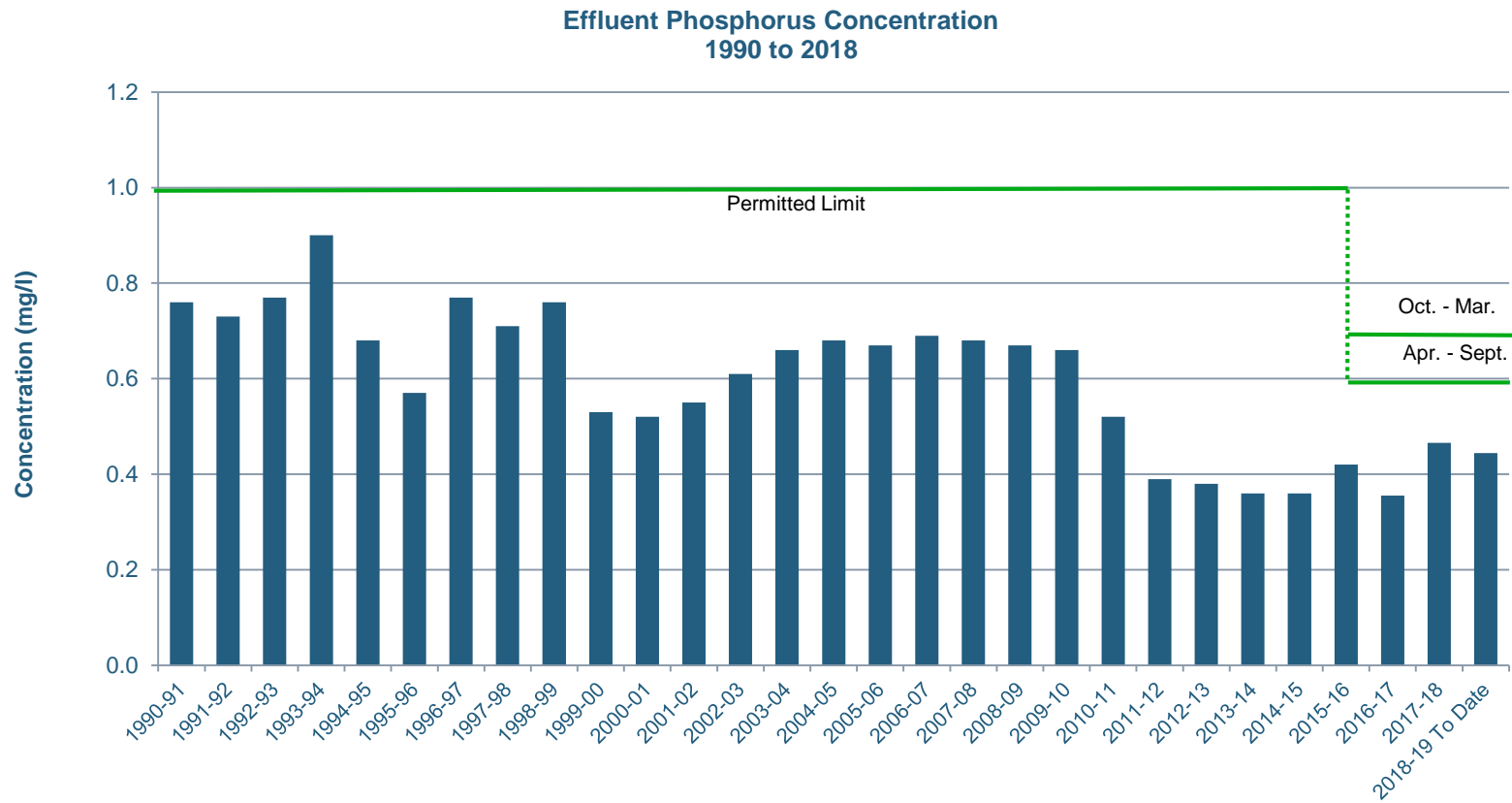
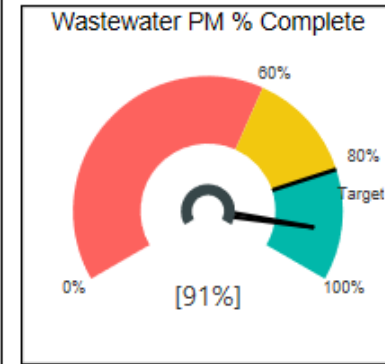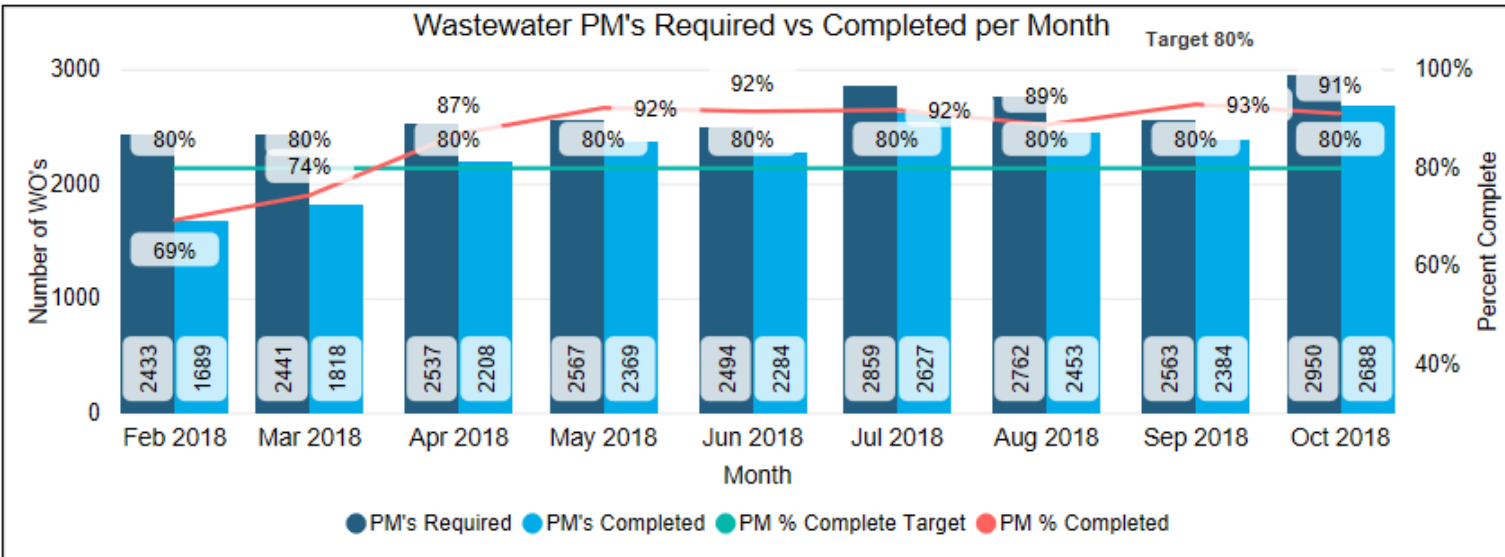# EUM Attribute:

Infrastructure Strategy and Performance

Infrastructure Strategy and Performance –
Wastewater and Water Preventative Maintenance (PM) Management
October 2018

*Timely preventative maintenance extends asset useful life and minimizes unplanned downtime.

*Unplanned downtime can lead to permit non-compliance and negative environmental impacts.

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Infrastructure Strategy and Performance –
Wastewater Preventative & Corrective Maintenance Management
October 2018

Completed Wastewater PM's % of Total per Month
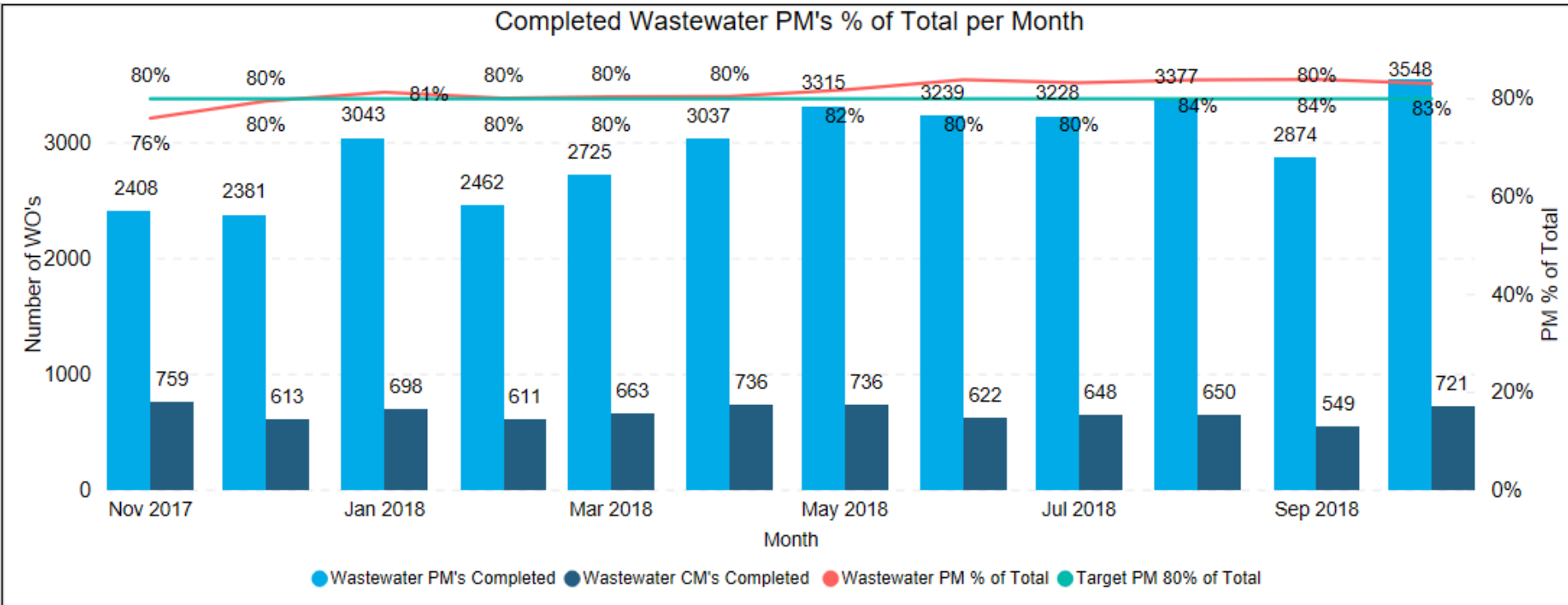
*The Target is derived from the 2017 American Water Works Association Utility Benchmarking program that indicates that an appropriate level of PM activities can be identified by the PM percentage of total maintenance work performed. If the percentage is significantly lower than the target (red) it is a warning of possible increase in unplanned, emergency type work (CM). If the percentage is significantly higher than the target (yellow) it is a warning that PMs can be reduced and resources can be better directed to other system needs.

PM = Preventative Maintenance
CM = Corrective Maintenance

Wastewater PM % of Total

83%

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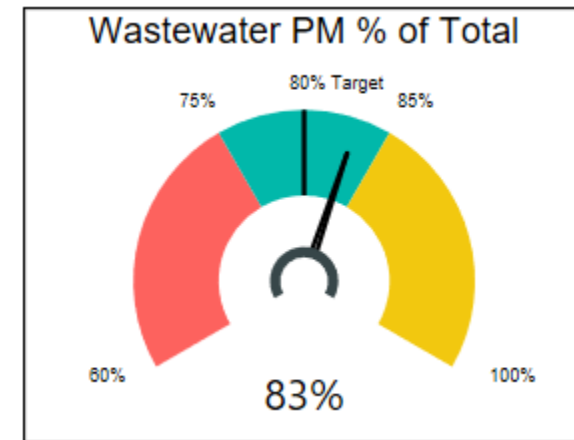
Infrastructure Strategy and Performance –
Water and Field Services Valve Exercising

Valve Exercising

Legend: ■ 20% Closure ■ 100% Closure ▬ Target

Month	20% Closure	100% Closure
May-18	15	
Jun-18	31	1
Jul-18	4	34
Aug-18	19	14
Sep-18	29	
Oct-18	50	

Y-axis: No. of Valves (0–60). Target line at 25.
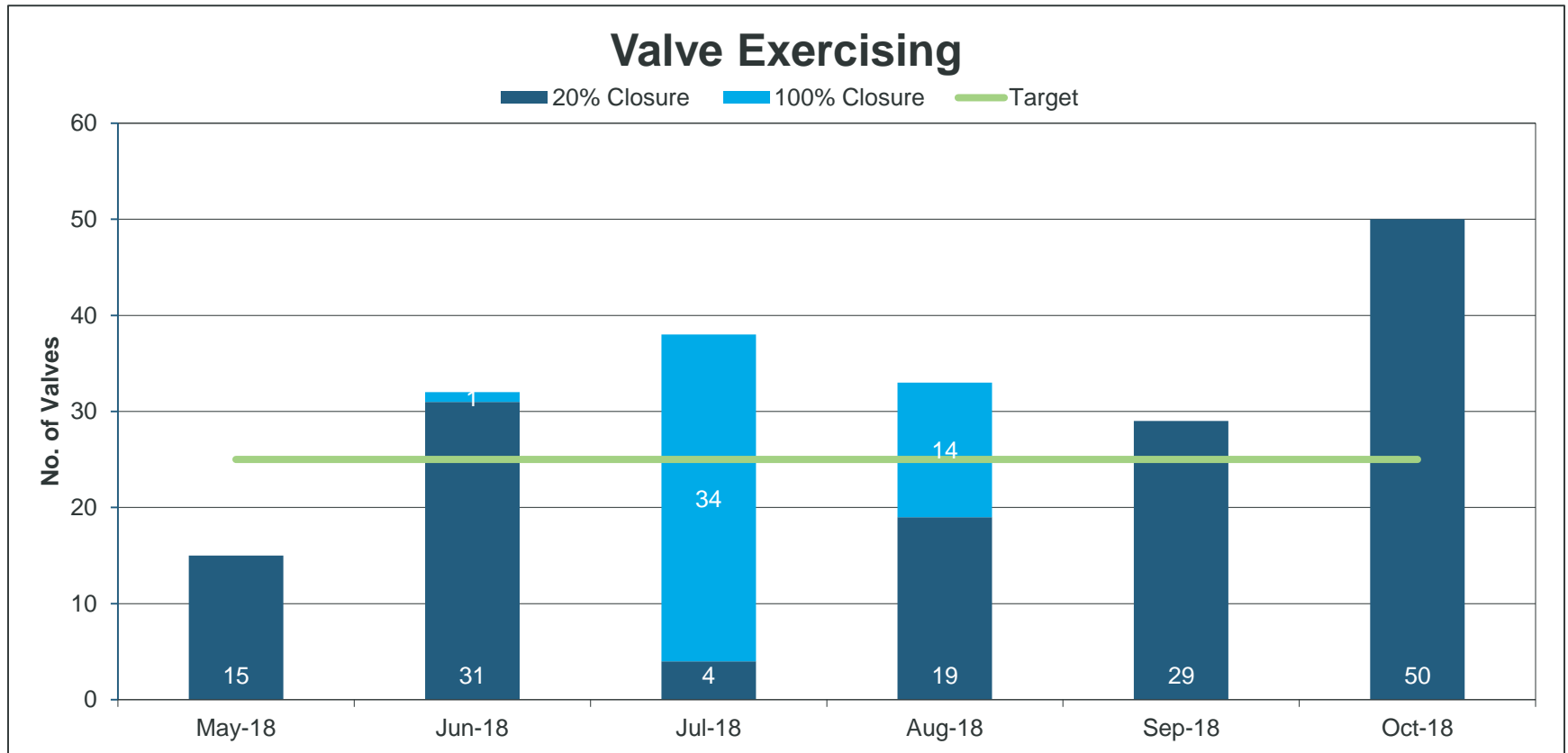
Valves cycled 20% on the initial visit/attempt • Valves cycled 100% on the second visit/attempt • Target to exercise 25 valves per month

Infrastructure Strategy and Performance: GLWA's goal is to determine the status of system valves and prioritize necessary repairs. 450 valves will be evaluated and will be operated from open position to close and back open two times at a minimum.

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EUM Attribute:

Operational
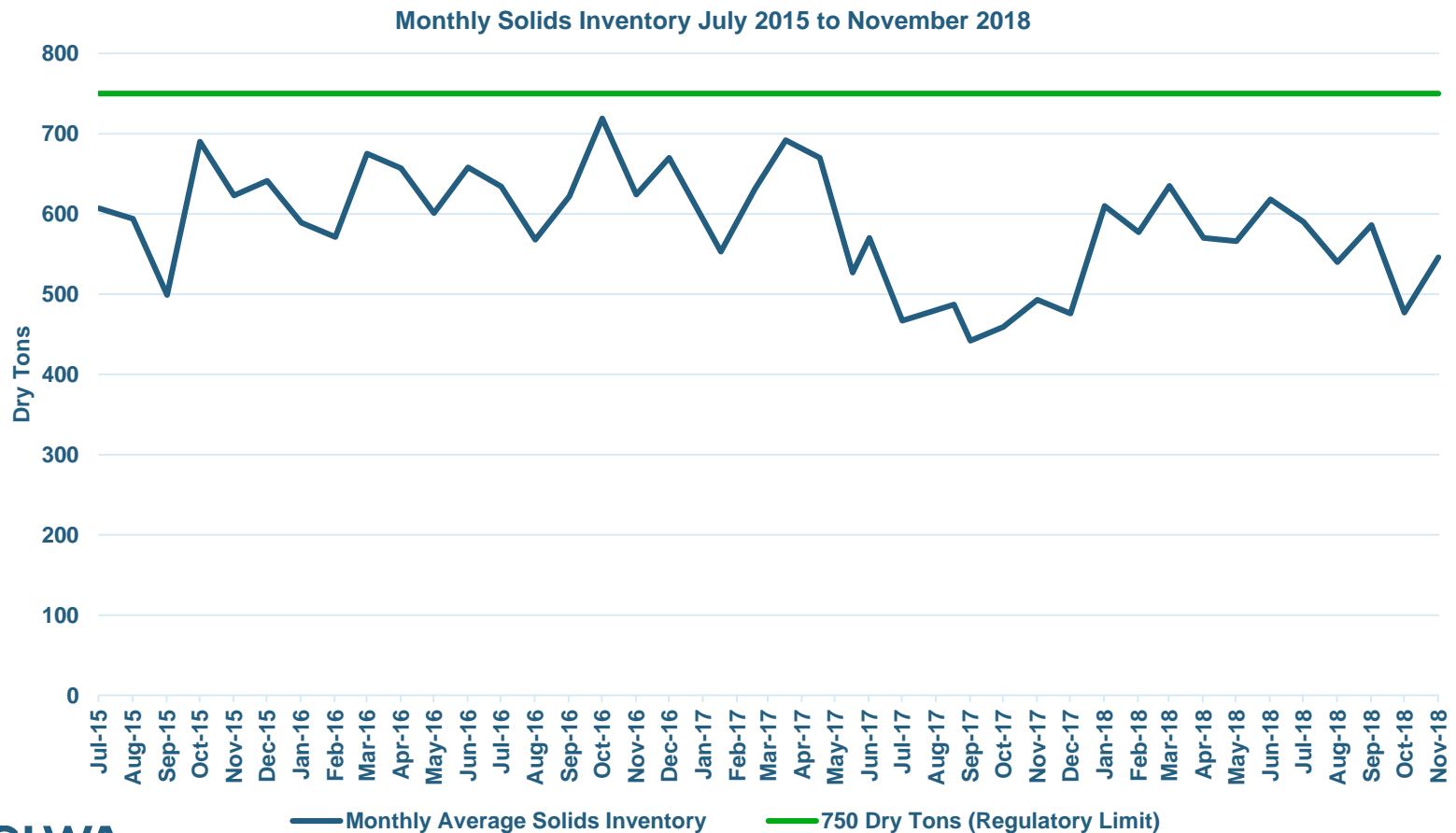Optimization

Operational Optimization
Regulatory Compliance – Monthly Solids Inventory

- Solids inventory is a measure of process performance and is regulated by the State.
- Having consistently tracked below 750 dry tons since Oct. 2014 is noteworthy.

Monthly Solids Inventory July 2015 to November 2018

Legend: —— Monthly Average Solids Inventory   —— 750 Dry Tons (Regulatory Limit)

Operational Optimization
Chemical & Electrical Cost

Chemical and Electrical cost per MG
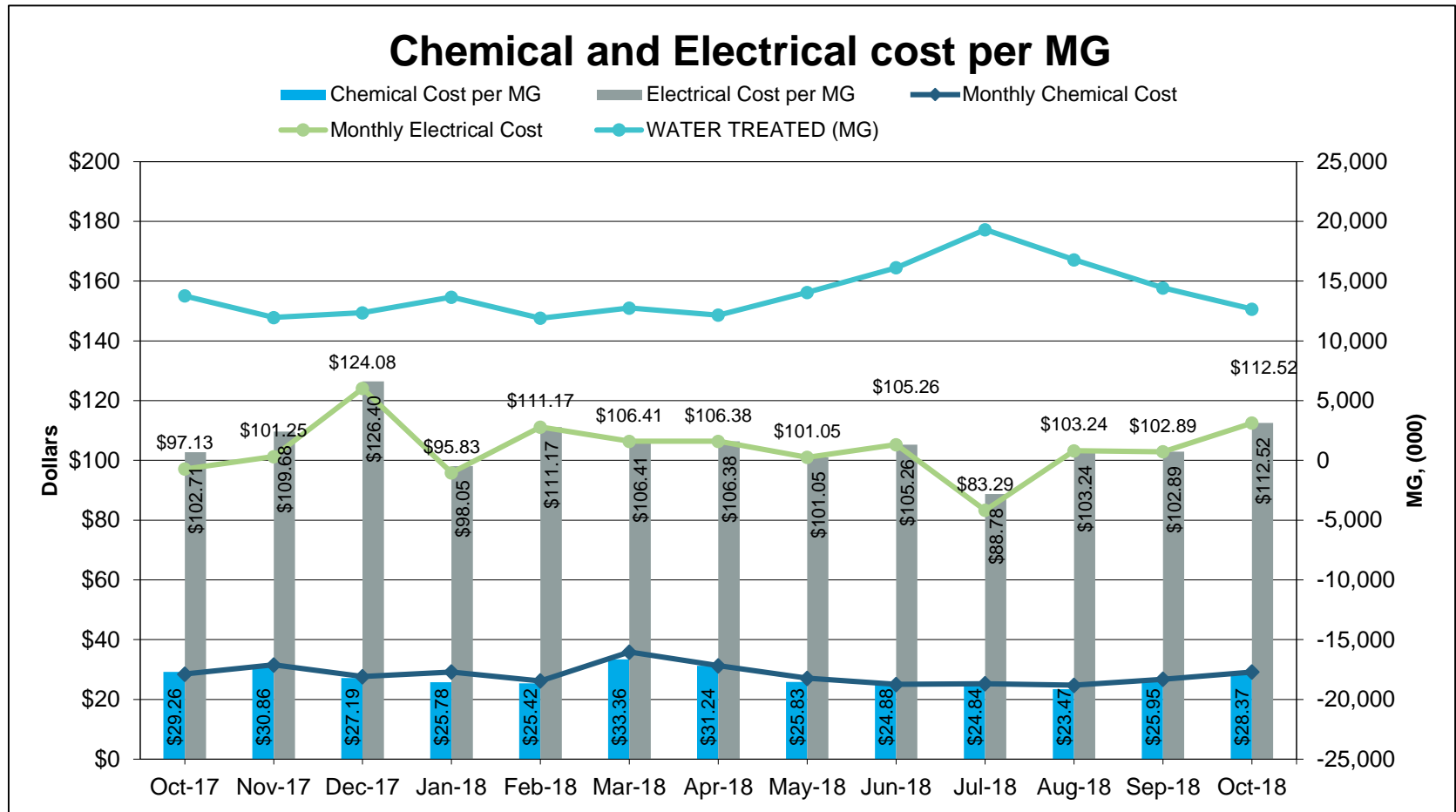
Operational Optimization: Being able to identify ongoing performance improvements for chemical and electrical usage per MG of water pumped is a key metric in managing operational cost. This slide is under development to include tracking of total costs per MG.

EUM Attribute:

Enterprise Resiliency

Enterprise Resiliency - Procurement Cycle Plan vs. Actual Timeline

Procurement Cycle Plan vs Actual
Twelve Month Average Thru September 30, 2018
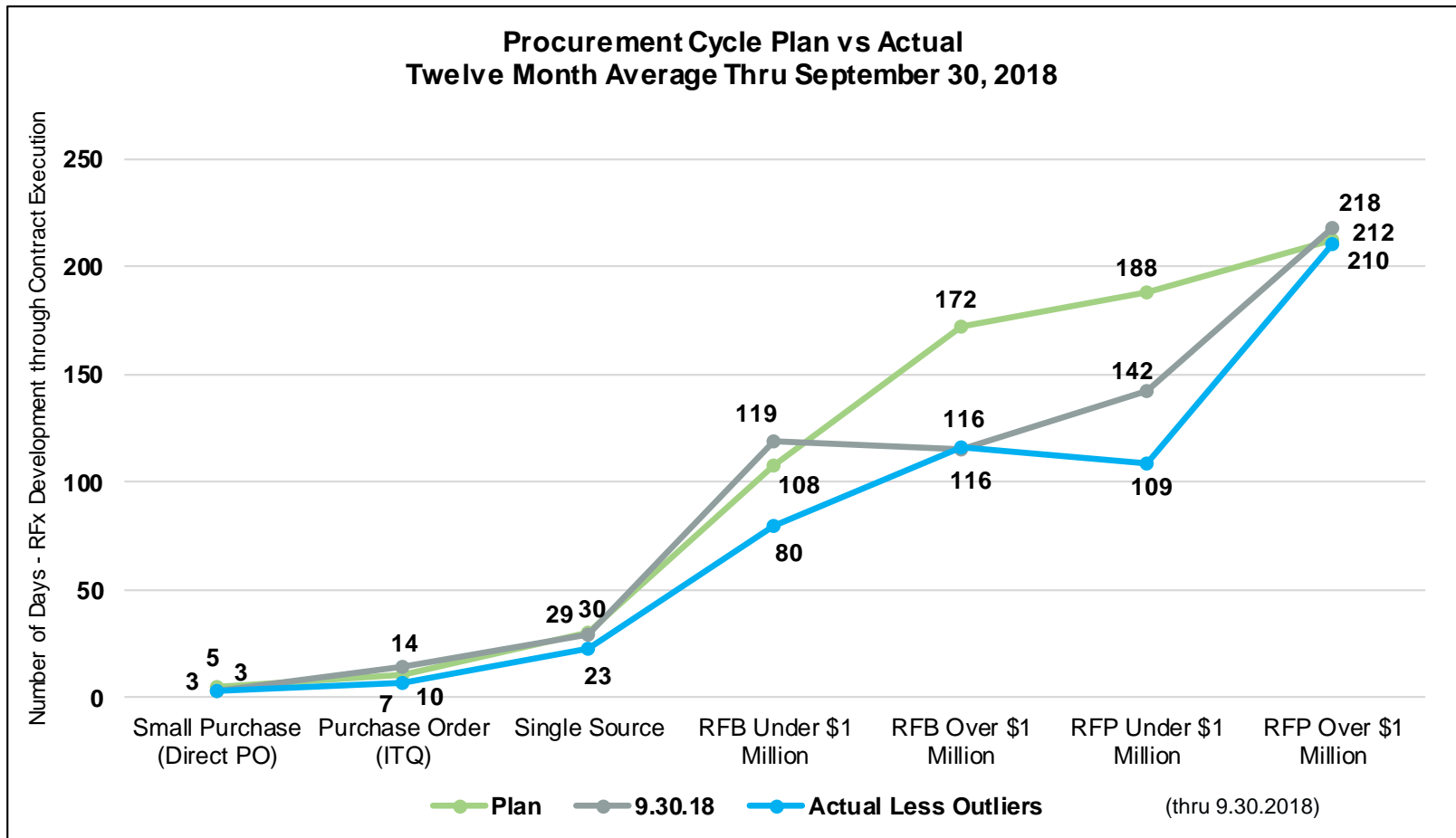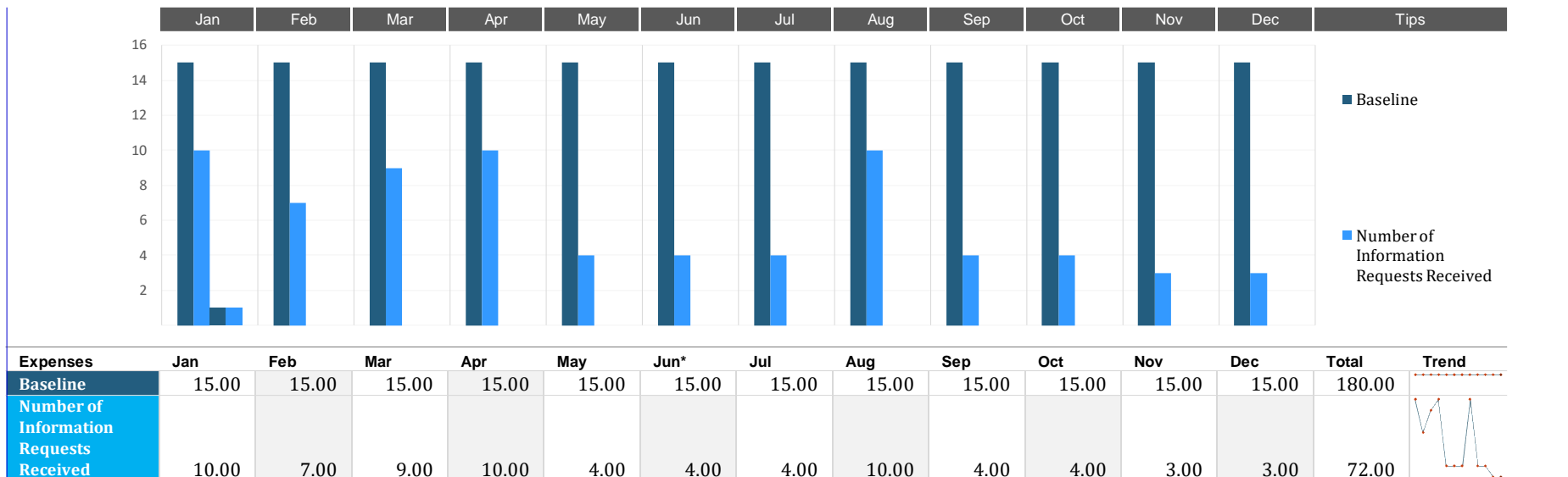
Number of Days - RFx Development through Contract Execution

Category	Plan	9.30.18	Actual Less Outliers
Small Purchase (Direct PO)	3	5	3
Purchase Order (ITQ)	7	14	10
Single Source	29	30	23
RFB Under $1 Million	108	119	80
RFB Over $1 Million	172	116	116
RFP Under $1 Million	188	142	109
RFP Over $1 Million	212	218	210

Legend: — Plan — 9.30.18 — Actual Less Outliers (thru 9.30.2018)

- The Procurement team tracks the number of days required to move a project from the point of a finalized scope to an executed contract. This is tracked across seven different project execution categories ranging from small, direct purchases to large requests for proposals.
- For the twelve-month period ended September 31, 2018 GLWA Procurement is meeting or slightly exceeding execution goals for three of the seven project categories. Single Source, RFB Over $1 Million and RFP under $1 Million do show improvement this period. Efforts are being made to address the Small Purchase category which continues to lag.

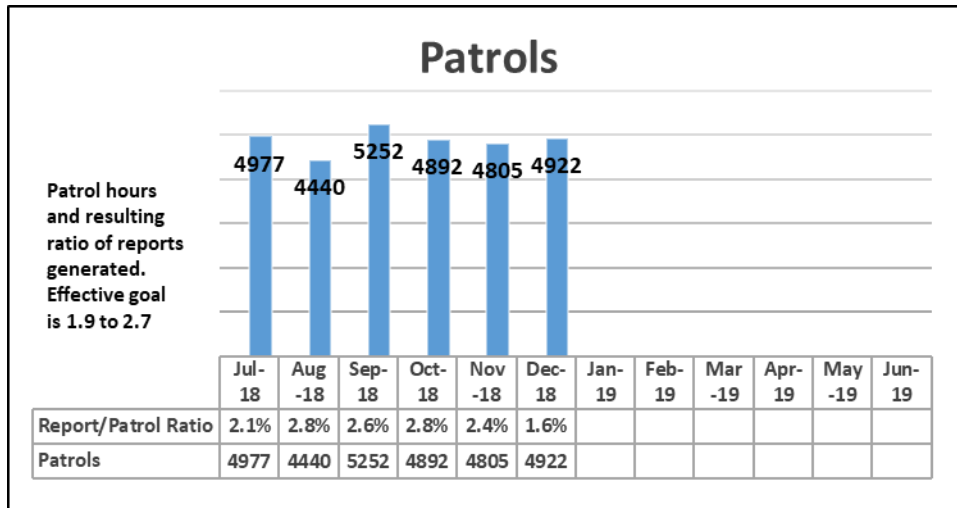*ITQ – Invitation to Quote **RFP** – Request for Proposal **RFB** – Request for Bid*
Small Purchase: *A purchase that constitutes a dollar threshold of < $10k.* ***Outlier:*** *Unusual circumstances that caused a delay.* 23

Enterprise Resiliency –
General Counsel Information Requests Received

Expenses	Jan	Feb	Mar	Apr	May	Jun*	Jul	Aug	Sep	Oct	Nov	Dec	Total	Trend
Baseline	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	180.00	
Number of Information Requests Received	10.00	7.00	9.00	10.00	4.00	4.00	4.00	10.00	4.00	4.00	3.00	3.00	72.00	

One of the measures of organizational transparency is access to information. GLWA maintains many avenues of informal information access, including through its website. To the extent the information is readily available, the Office of the General Counsel should receive fewer FOIA requests over time.
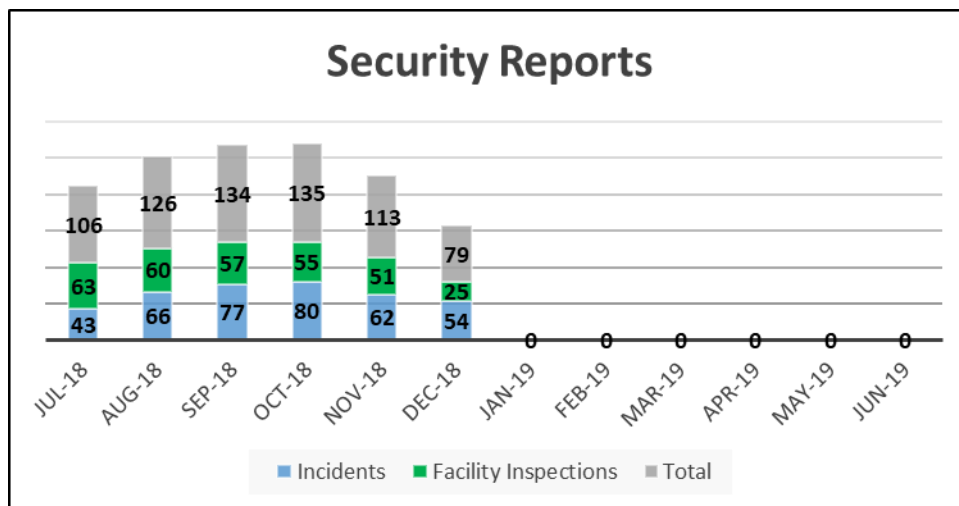
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Enterprise Resiliency – Security & Integrity

Patrols

Patrol hours and resulting ratio of reports generated. Effective goal is 1.9 to 2.7

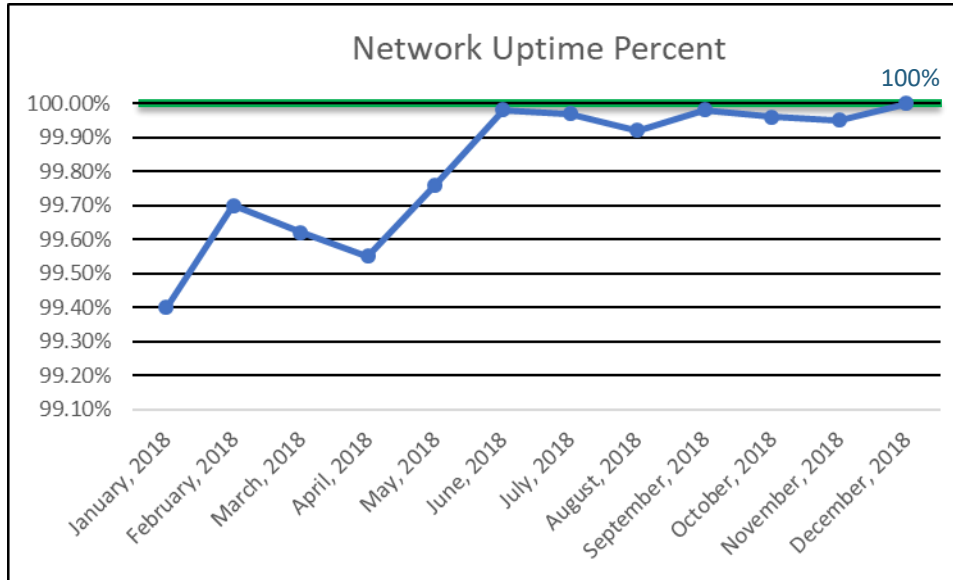|	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
Report/Patrol Ratio	2.1%	2.8%	2.6%	2.8%	2.4%	1.6%						
Patrols	4977	4440	5252	4892	4805	4922						

- Patrols are an indication of the level of services rendered by the staff of the Security & Integrity Group.

- Security reports are an indication of the effectiveness of security programs (less is better).

Security Reports

	JUL-18	AUG-18	SEP-18	OCT-18	NOV-18	DEC-18	JAN-19	FEB-19	MAR-19	APR-19	MAY-19	JUN-19
Total	106	126	134	135	113	79	0	0	0	0	0	0
Facility Inspections	63	60	57	55	51	25						
Incidents	43	66	77	80	62	54						

■ Incidents ■ Facility Inspections ■ Total

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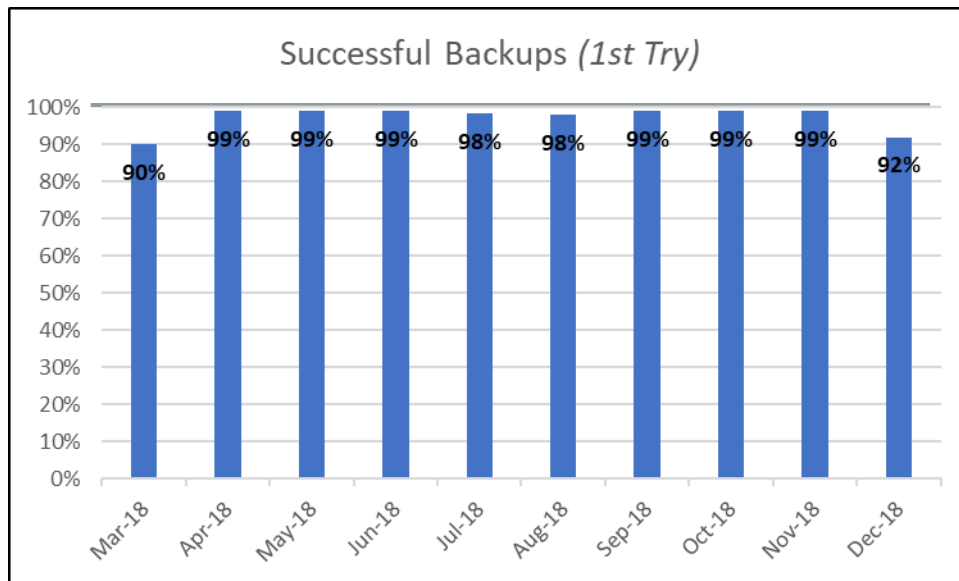# Enterprise Resiliency – Information Technology

Network Uptime Percent

- GLWA has 59 network-connected sites, including offices, plants, pump stations, and other facilities.

- Network connectivity allows employees to access the applications needed to do their work and connects plants and pump stations to the intranet to report operational data

- An Incident is a technology issue that is preventing an employee from performing some part of their job duties

- Quick resolution of incidents increases employee productivity.
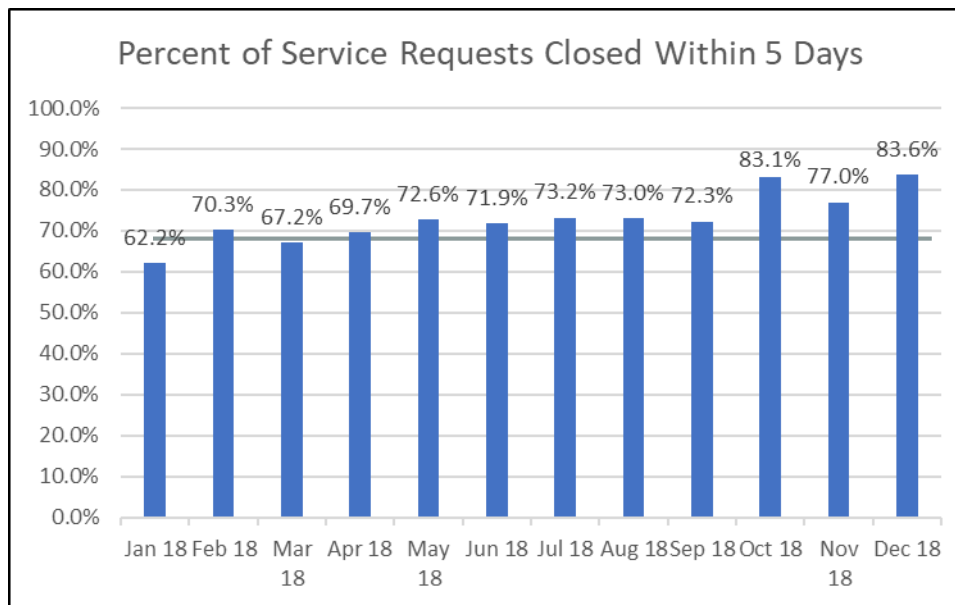
- The industry standard for 24-hour resolution is 68%

Percent of Incidents Closed Within 24 Hours

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Enterprise Resiliency – Information Technology
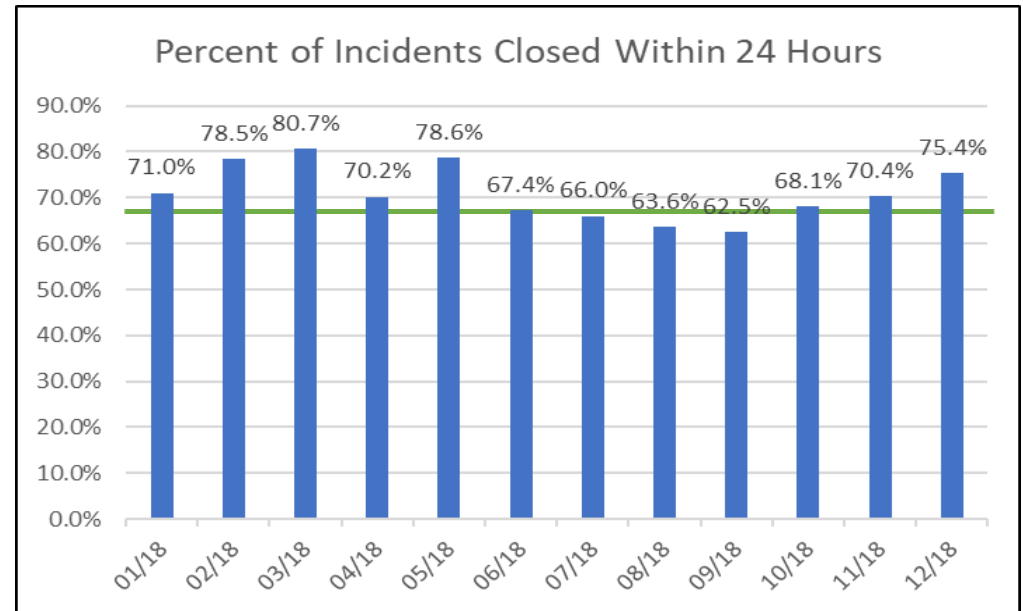
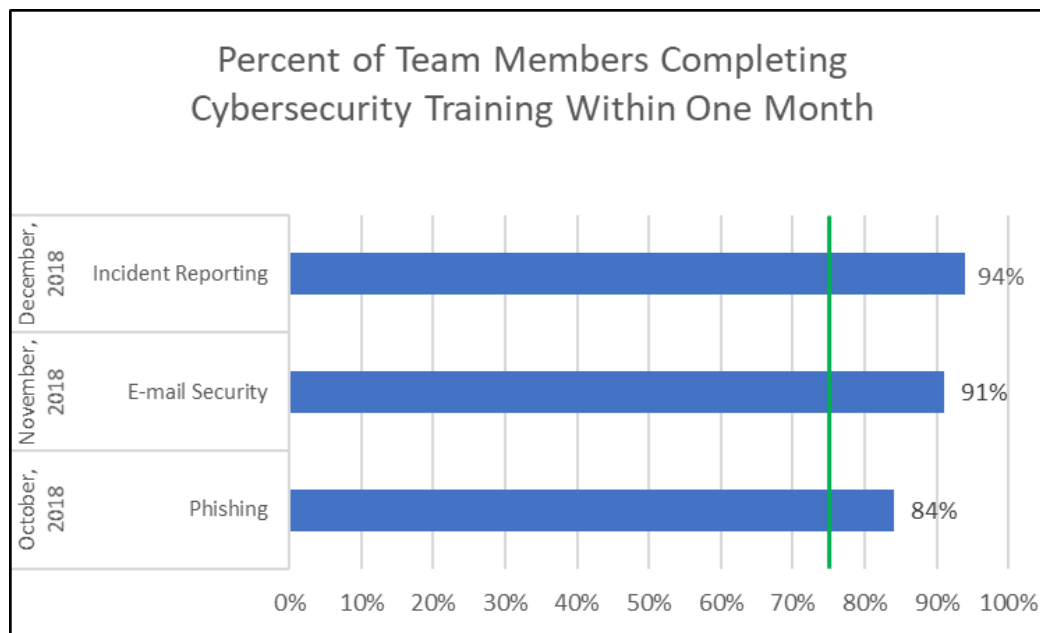## Successful Backups (1st Try)

- Backups ensure that GLWA's information is safe in case of unexpected disruptions.

- Successfully backing up on the first try streamlines operations and frees up resources for other tasks.

- A service request is a request for IT work that is not preventing an employee from performing their work.

- Timely fulfilment of service requests ensure that employees have the technology resources needed to do their jobs, and increases job satisfaction.

Percent of Service Requests Closed Within 5 Days

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Enterprise Resiliency – Information Technology

Percent of Team Members Completing Cybersecurity Training Within One Month

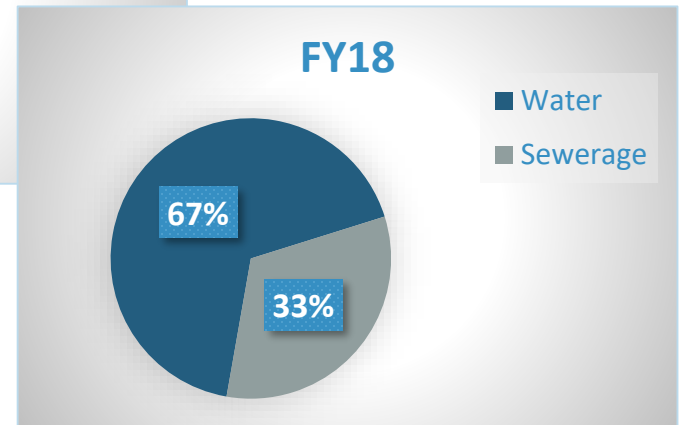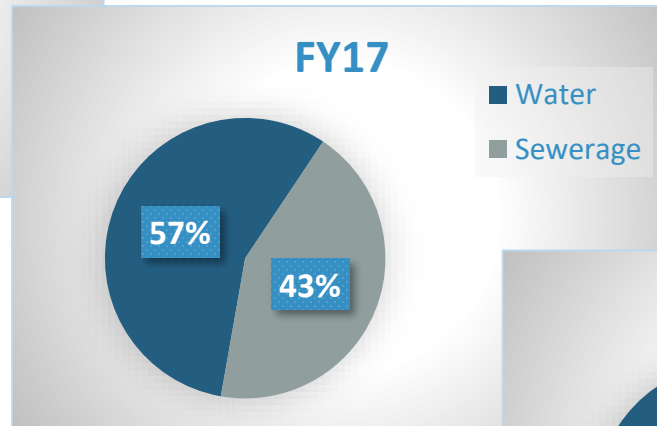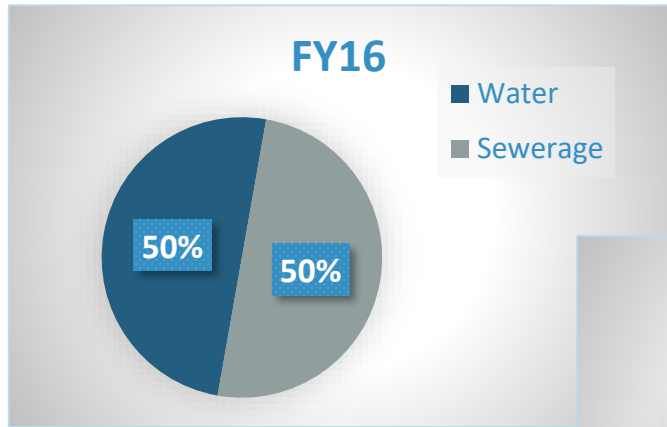| December, 2018 | Incident Reporting | 94% |
| November, 2018 | E-mail Security | 91% |
| October, 2018 | Phishing | 84% |

- End users are responsible for 80% of cybersecurity breaches.

- Well trained users are less likely to take action that could cause a breach

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Enterprise Resiliency –
Key Workers' Compensation Comparative Metrics
Valued as of June 30, 2018

Fiscal Year Ending	Claim Count	Incurred	Paid	Average Paid Cost per Claim	Other Metrics		
					# of Litigated Claims	# of Open Claims	% Medical Only
06.30.2016	30*	$46,720	$46,720	$1,557	-0-	-0-	77%
06.30.2017	53	$189,301	$189,301	$3,572	-0-	-0-	74%
06.30.2018	50	$341,249	$142,086	$2,841	2	13	55%

*Represents 6 months of losses (January 1, 2016 – June 30, 2016)

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This is an annual metric that will be updated again in January 2019.

Enterprise Resiliency –
Workers' Compensation Claims by System
As of June 30, 2018

FY16
- Water
- Sewerage

50% | 50%

FY17
- Water
- Sewerage

57% | 43%

FY18
- Water
- Sewerage

67% | 33%

This is an annual metric that will be updated again in January 2019.

GLWA
Great Lakes Water Authority

Enterprise Resiliency –
All Litigated Workers' Compensation Claims
As of June 30, 2018

Total number of litigated files = 1.5% of <u>all</u> reported claims since January 1, 2016

Date of Loss / Injury Description	Claim Status	Total Incurred	Total Paid	Expected Outcome
October 4, 2017 Right Rotator Cuff	Pending	$72,440	$34,828	"Take nothing" re: additional wage loss following termination for cause
October 29, 2017 Motor Vehicle Accident – Alleged Lower Back	Pending	$9,000	$9.80	Claimant's *Application for Mediation* to be withdrawn by WC Agency (failure to pursue)

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Enterprise Resiliency –
General Liability and Auto Liability Claims
As of June 30, 2018
(all claims are closed)

Fiscal Year Ending	General Liability		Auto Liability	
	# of Claims	Total Paid	# of Claims	Total Paid
06.30.2016	1	$405	1	$1,000
06.30.2017	3	$246,034*	3	$2,649
06.30.2018	0	$ -0-	1	$ -0-

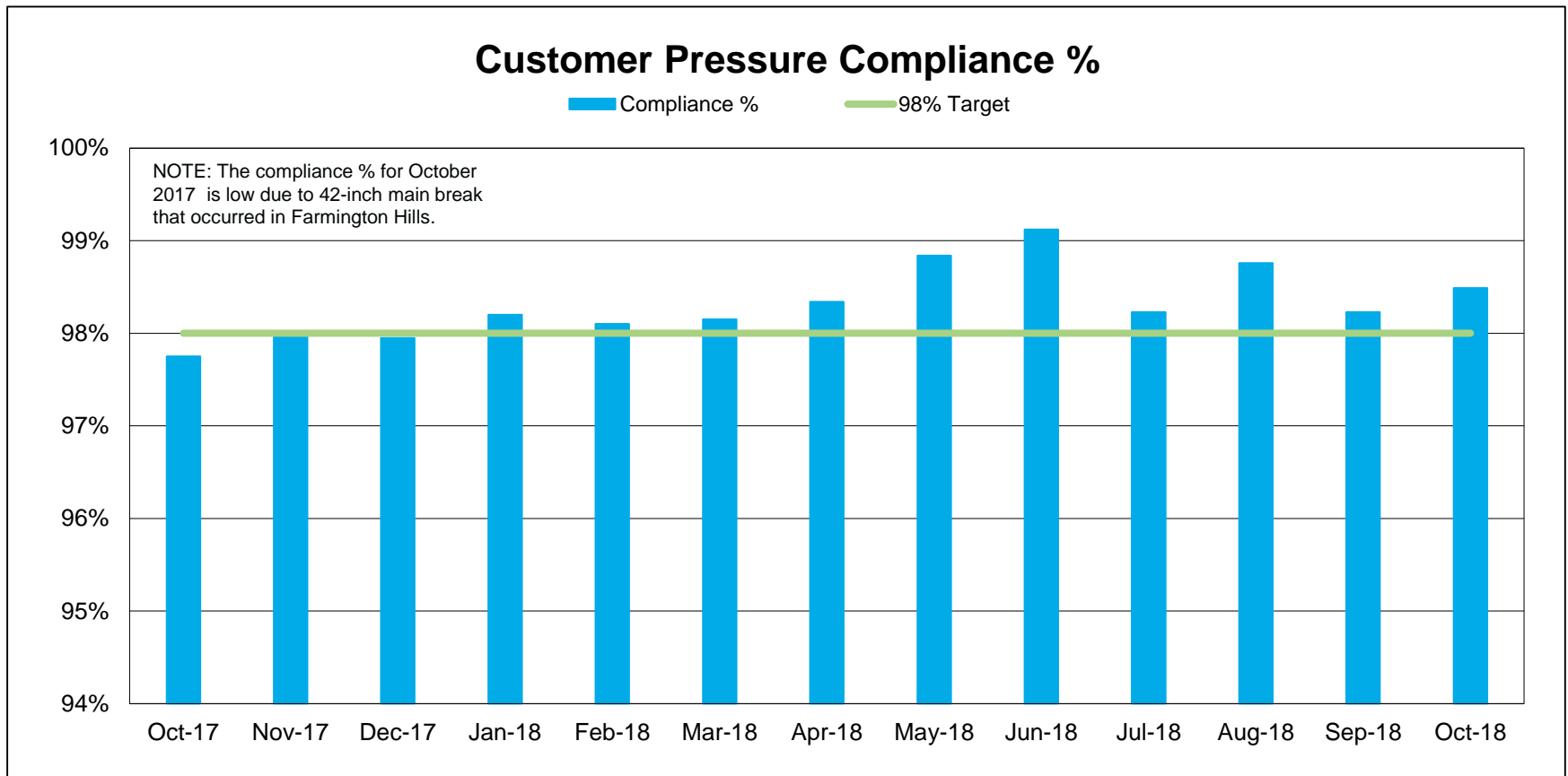* $244,923 (99.6%) of the total is related to *Beasley vs. GLWA* matter

GLWA
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This is an annual metric that will be updated again in January 2019.

EUM Attribute:

Customer
Satisfaction

Customer Satisfaction – Water & Field Services

Customer Pressure Compliance %

Legend: ■ Compliance % ━ 98% Target

NOTE: The compliance % for October 2017 is low due to 42-inch main break that occurred in Farmington Hills.

Operational Resiliency: To exceed customer compliance by being greater than 98% of contractual pressures.

GLWA
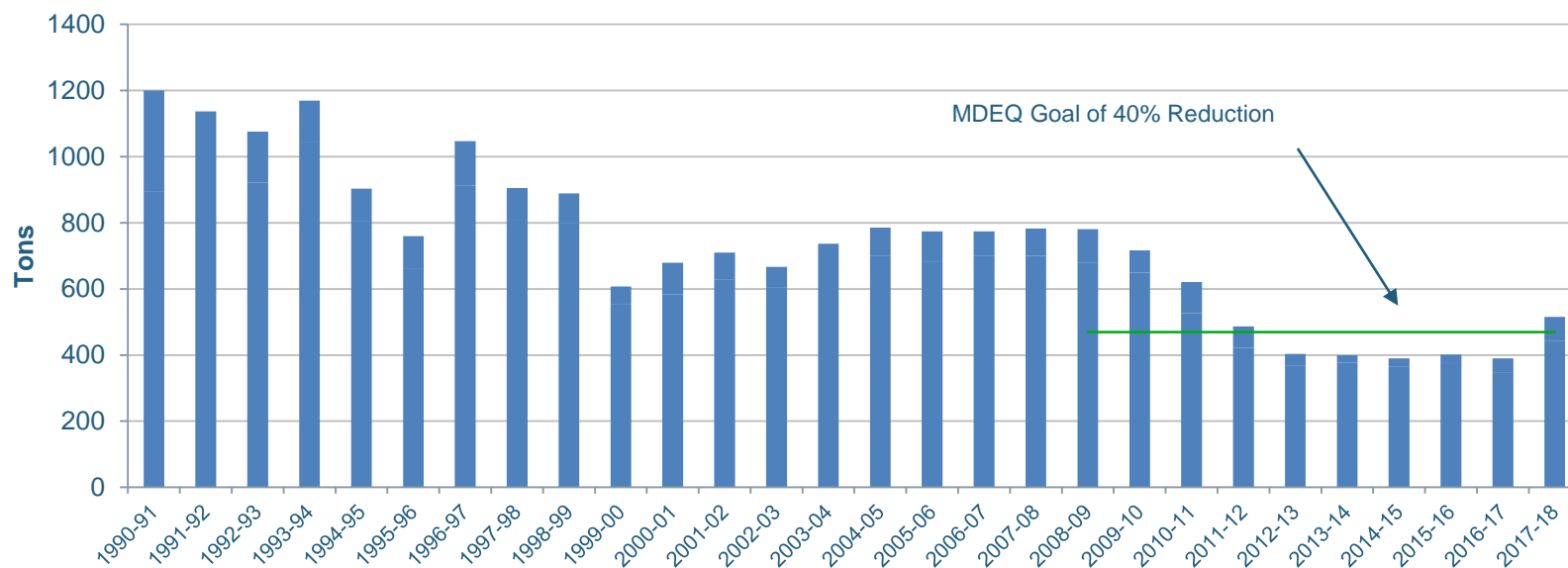*Great Lakes Water Authority*

EUM Attribute:

**Community
Sustainability**

Community Sustainability – Watershed Health

- The State and Federal regulators have a goal of 40% reduction in phosphorus loading in the Western Lake Erie Basin.
- GLWA has surpassed the State and Federal goal.

**Effluent Phosphorus Loading 1990 to 2018**

EUM Attribute:

Water Resource Sustainability

Water Resource Sustainability – Biosolids Handling by Method

- GLWA strives to increase nutrient recovery and beneficial reuse of biosolids.

- Use of the biosolids dryer facility for solids handling is preferred because it uses biosolids for the production of fertilizer pellets.
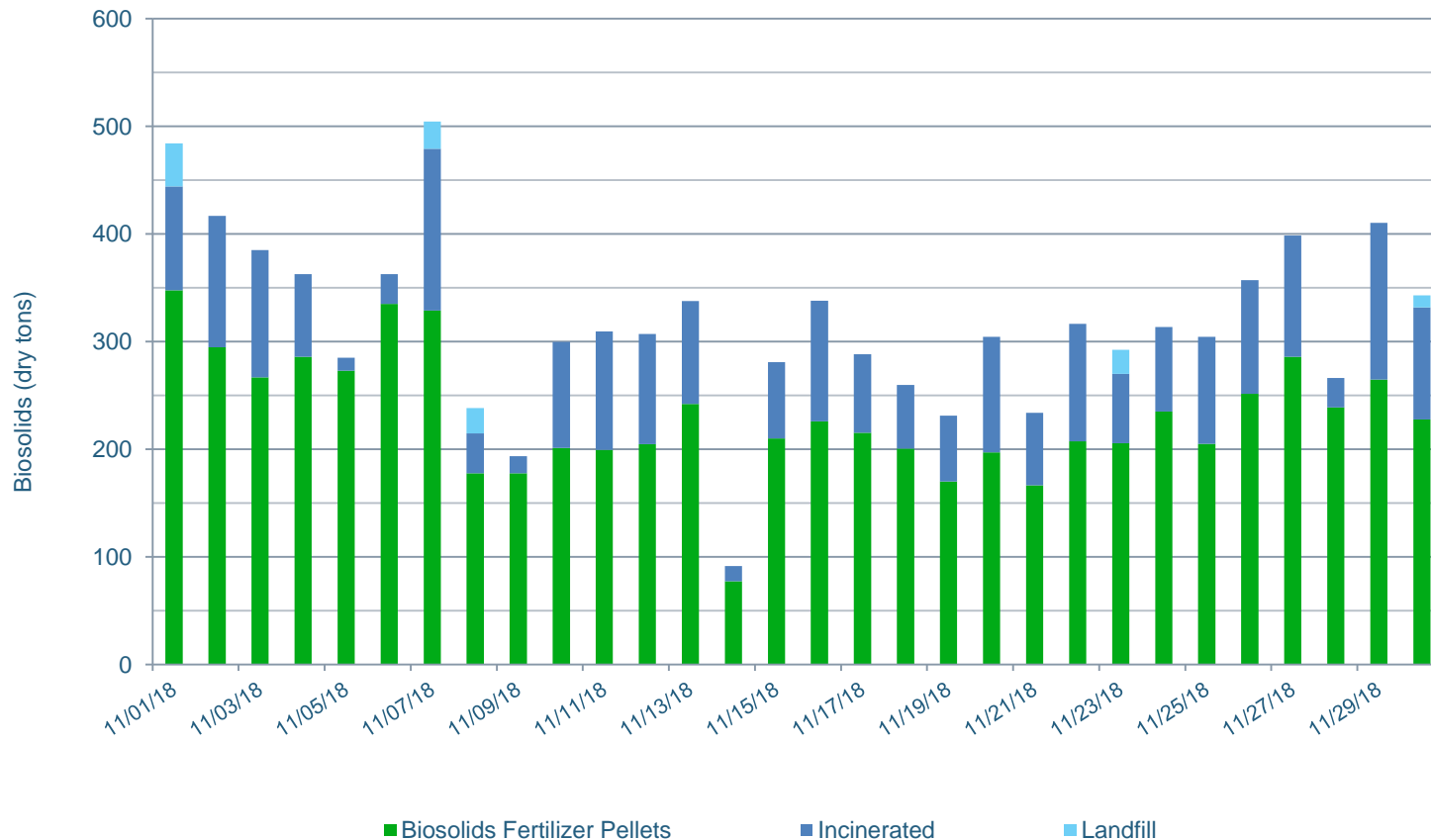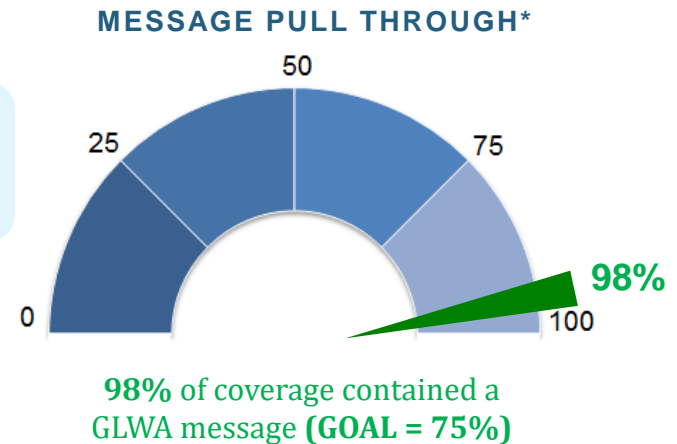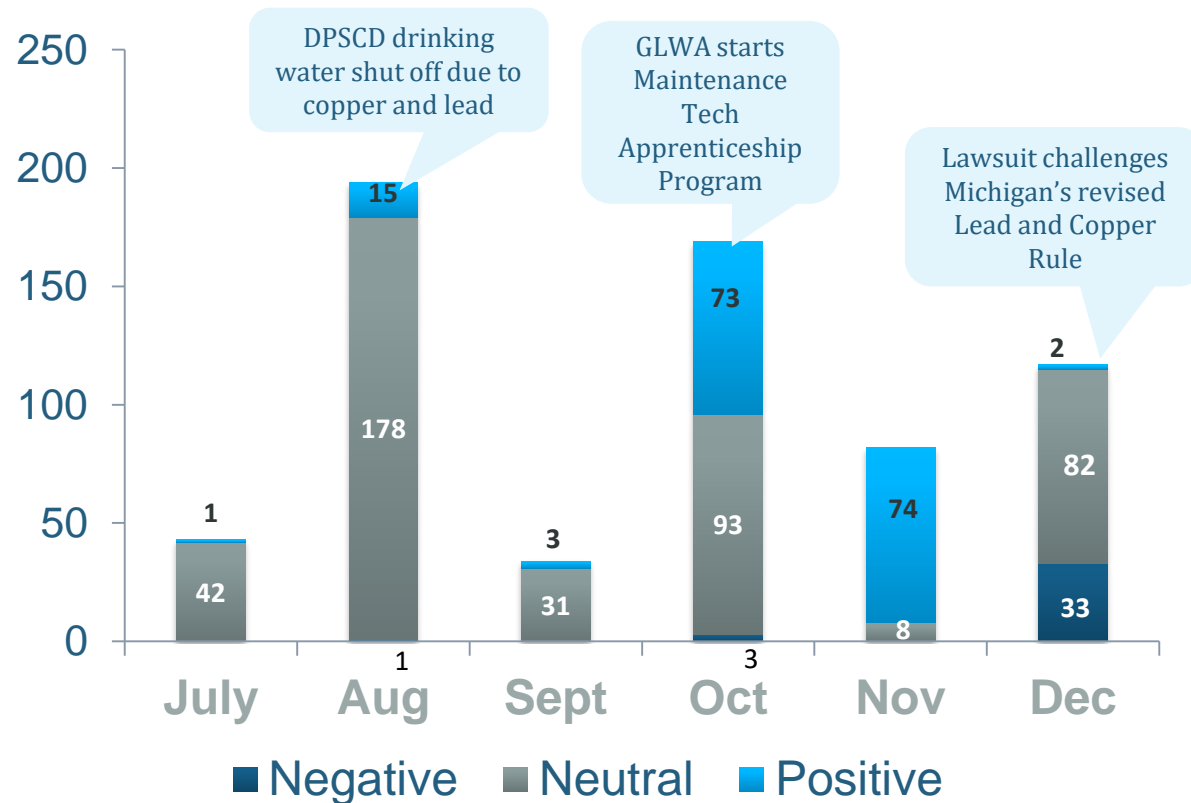
Traditional Media Summary

Relevant news coverage for Great Lakes Water Authority (GLWA) in December focused mainly on the coalition lawsuit which challenges Michigan's revised Lead and Copper Rule, and the police incident involving a GLWA worker on off-duty time.

Overall in December, GLWA saw a 42 percent increase in mentions compared to November. This increase was mainly due to the elevated amount of coverage regarding the the two stories noted above. Nearly 70 percent of the articles were neutral, with the two percent being positive and 28 percent being negative. Positive coverage was attributed to the influence GLWA had in Farmington area regarding the Smart Ball and Pipe Diver technology launched in the area. The negative coverage was attributed to stories about the police incident involving a GLWA worker, while neutral coverage was related to the lawsuit which challenges Michigan's lead in drinking water rules. Message pull through remained strong in December, at 98% of non-cursory mentions.

DPSCD drinking water shut off due to copper and lead

GLWA starts Maintenance Tech Apprenticeship Program

Lawsuit challenges Michigan's revised Lead and Copper Rule

MESSAGE PULL THROUGH*

98%

98% of coverage contained a GLWA message **(GOAL = 75%)**

MEDIA VOLUME: 117

CURSORY OR FLINT MENTIONS: 28

CONTAINED GLWA MESSAGE: 89

Chart values:
- July: Neutral 42, Positive 1
- Aug: Negative 1, Neutral 178, Positive 15
- Sept: Neutral 31, Positive 3
- Oct: Negative 3, Neutral 93, Positive 73
- Nov: Neutral 8, Positive 74
- Dec: Negative 33, Neutral 82, Positive 2

■ Negative   ■ Neutral   ■ Positive

*Message pull through includes quotes or comments from a GLWA spokesperson, a quote from a GLWA press release or underlying theme of GLWA providing safe and clean water.

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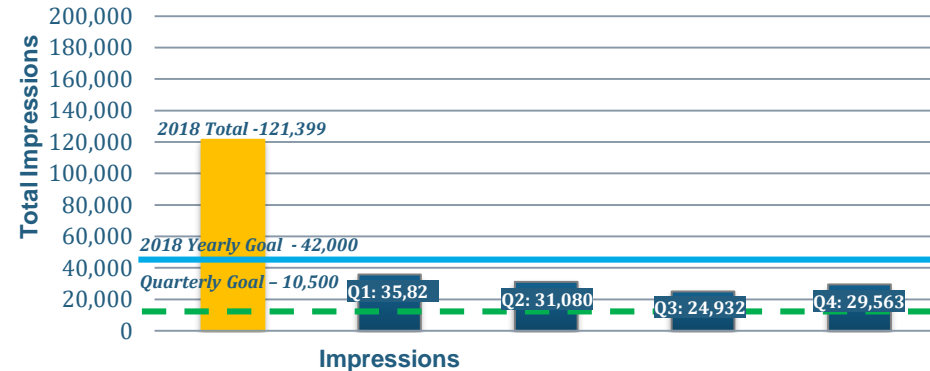
40

Facebook & Twitter Quarterly Review

Facebook - Total Impressions Q4 2018

- Sum 2018 Impressions (131,190)
- Yearly Goal (84,000 impressions/year)
- Quarterly Goal (21,000 impressions/quarter)
- Total Q4 Impressions (26,870 total impressions)

Total Impressions

2018 Total - 131,190

2018 Yearly Goal – 84,000

Quarterly Goal - 21,000

Q1: 23,136
Q2: 25,094
Q3: 57,090
Q4: 57,090
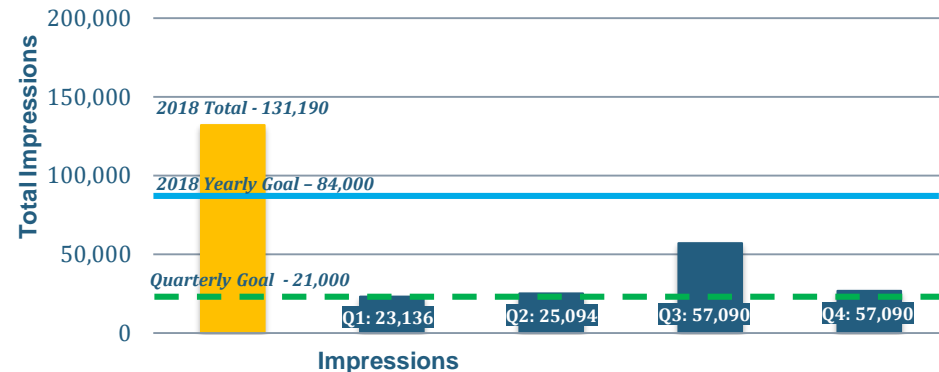
Impressions

Twitter - Total Impressions by Q4 2018

- Sum 2018 Impressions (121,399)
- Yearly Goal (42,000 impressions/year)
- Quarterly Goal (10,500 impressions/quarter)
- Total Q4 Impressions (29,563 total impressions)

Total Impressions

2018 Total -121,399

2018 Yearly Goal - 42,000

Quarterly Goal – 10,500

Q1: 35,82
Q2: 31,080
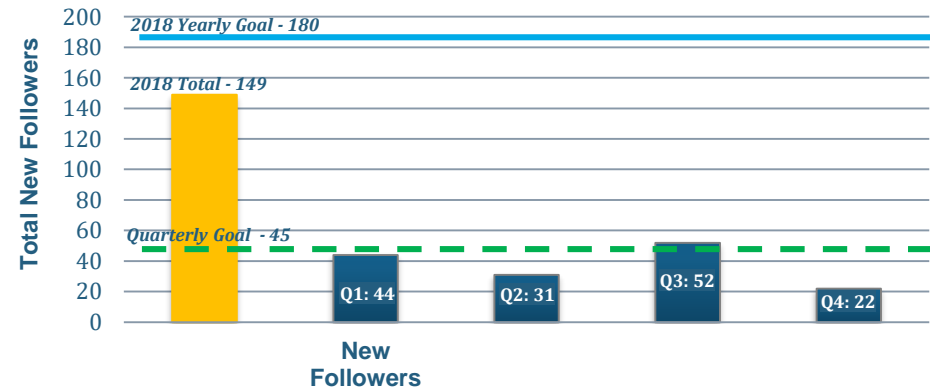Q3: 24,932
Q4: 29,563

Impressions

Facebook - Total New Followers Q4 2018

- Sum 2018 Followers (128)
- Yearly Goal (216 new followers/year)
- Quarterly Goal (54 new followers/quarter)
- Q4 New Followers (37 followers)

Total New Followers

2018 Yearly Goal - 216

2018 Total - 128

Quarterly Goal – 54

Q1: 35
Q2: 23
Q3: 33
Q4: 37
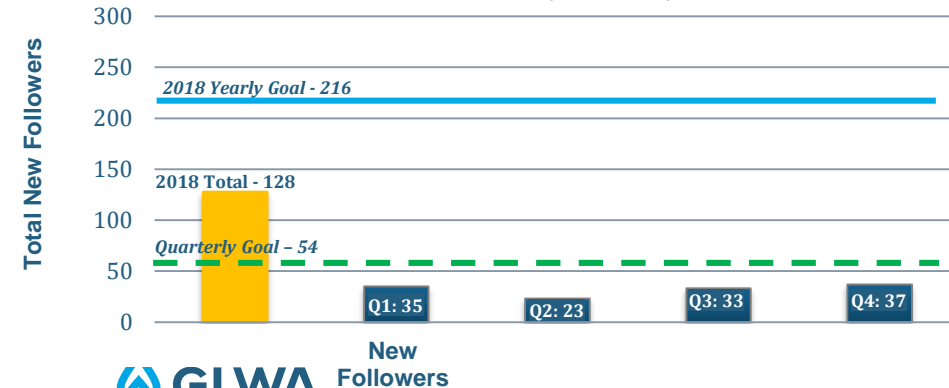
New Followers

Twitter - Total New Followers Q4 2018

- Sum 2018 Followers (149)
- Yearly Goal (180 new followers/year)
- Quarterly Goal (45 new followers/quarter)
- Q4 New Followers 22 total new followers)

Total New Followers
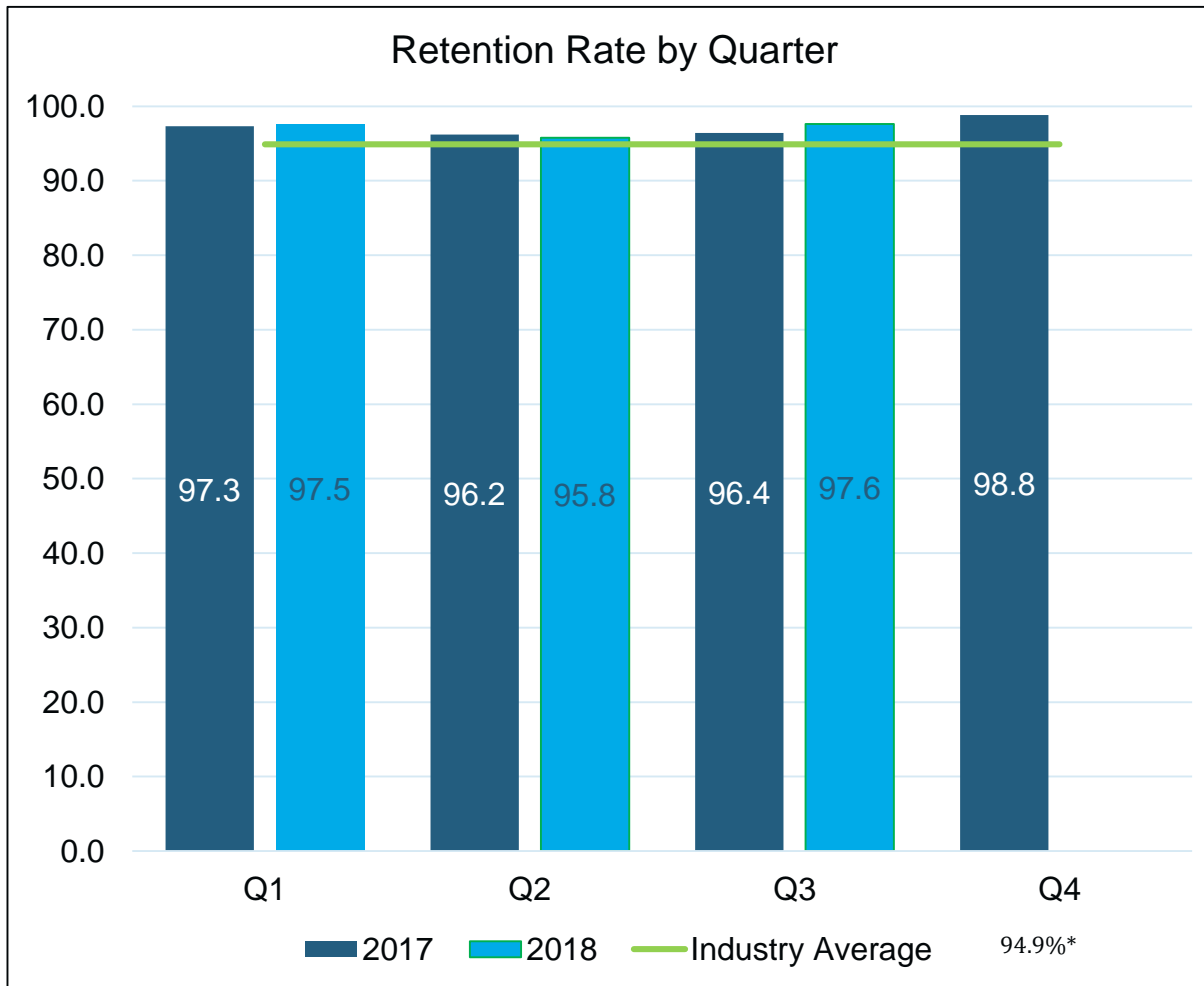
2018 Yearly Goal - 180

2018 Total - 149

Quarterly Goal - 45

Q1: 44
Q2: 31
Q3: 52
Q4: 22

New Followers

GLWA
Great Lakes Water Authority

- *Q1: January 2018 – March 2018*

EUM Attribute:

Employee and Leadership Development

Organizational Development

Retention Rate by Quarter

	Q1	Q2	Q3	Q4
2017	97.3	96.2	96.4	98.8
2018	97.5	95.8	97.6	

Legend: 2017 ■ 2018 ■ Industry Average — 94.9%*

Above retention rates are reflected in percentages

- Retention leads to decreased training costs, increased productivity, and cross training and development.

*From the U.S. Bureau of Labor Statistics 10-Oct-2016 report for the sector "State and Local Government, Excluding Education."

Updated: 10/4/18

This is a quarterly metric and will be updated after close of 4th Quarter in early 2019