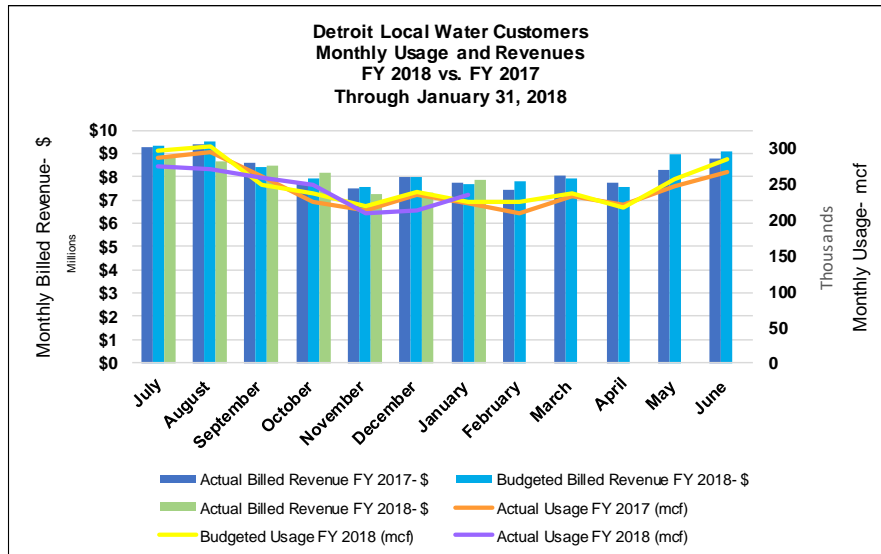


Great Lakes Water Authority

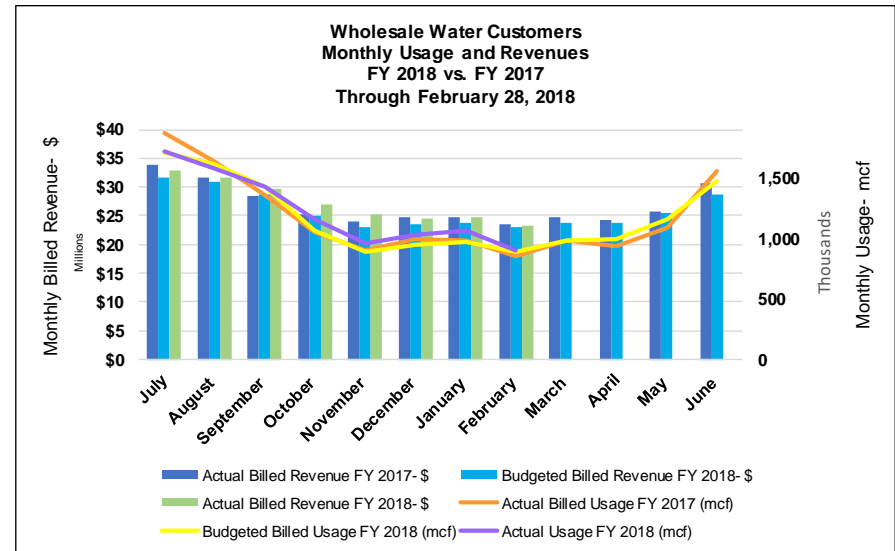
*Key Performance Indicators and
Effective Utility Management (EUM) Metrics
April 11, 2018*



Financial Viability – Reliability of Water System Revenue Projections

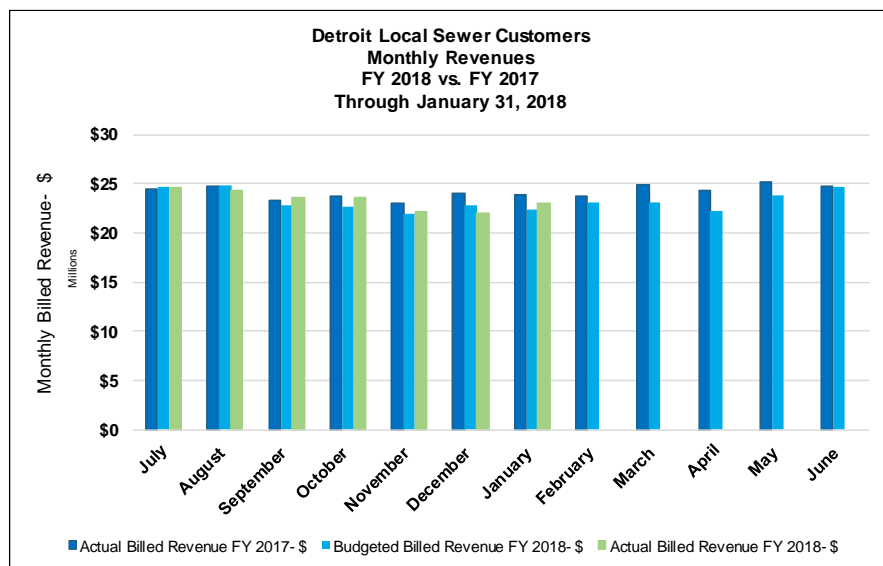


Detroit Local Water System billed revenues for FY 2018 are stable with actual billings at 96.8% of budget and actual usage at 96.8% of budget through January 2018. Billed revenue for FY 2018 was 3.0% lower compared to the same period in FY 2017.

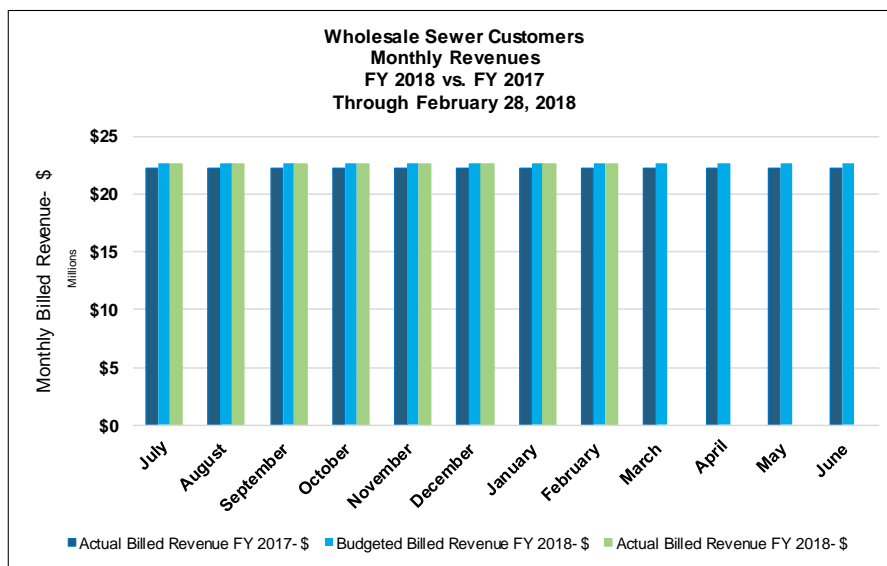


Wholesale Water System billed revenues for FY 2018 are stable with actual billings at 104.5% of budget and actual usage at 103.2% of budget through February 2018. Billed revenue for FY 2018 was 1.3% higher compared to the same period in FY 2017.

Financial Viability – Reliability of Sewer System Revenue Projections

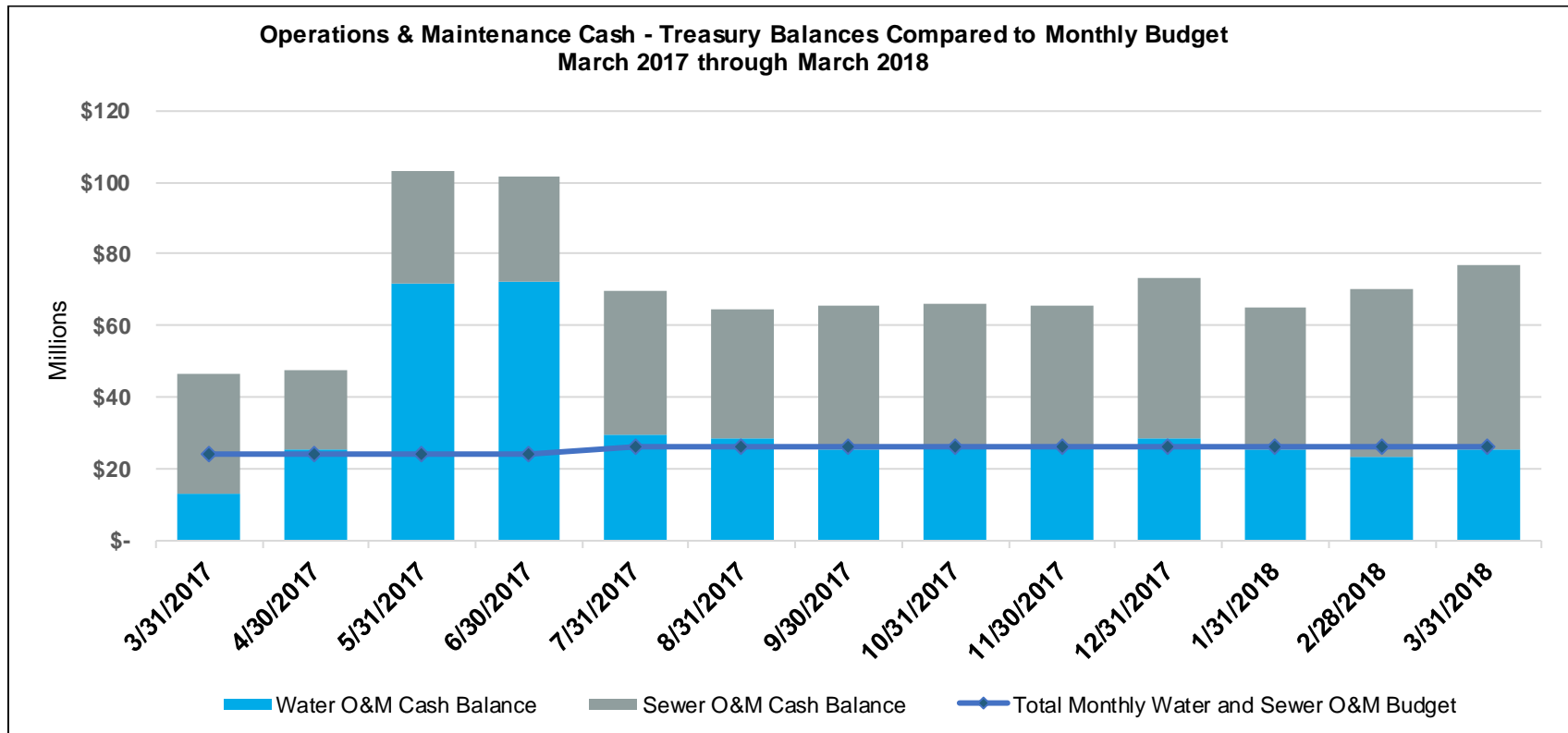


Detroit Local Sewer System billed revenues for FY 2018 are stable with actual billings at 100.7% of budget and actual usage at 99.4% of budget through January 2018. Billed revenue for FY 2018 was 2.4% lower compared to the same period in FY 2017.



Wholesale Sewer System billed revenues for FY 2018 are stable with actual billings at 100% of budget (based on the full fixed monthly charge) through February 2018. Billed revenue for FY 2018 was 1.9% higher compared to the same period in FY 2017.

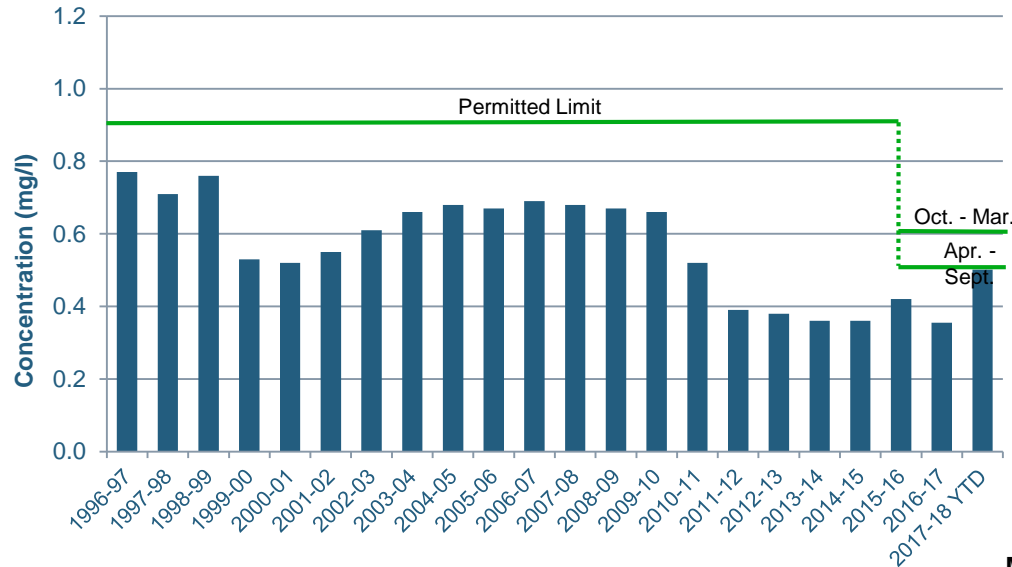
Financial Viability – Revenue Stability and Appropriate O&M Cash Reserves



- Cash balances are appropriate to fund monthly budgeted Operations & Maintenance (O&M) with an average ratio of O&M cash to budget of 3.30x for water and 2.44x for sewer.
- Variability in cash balances for May and June 2017 is due to the settlement timing of interfund receivables/payables through December 2015 and continued refinement of cash management practices.

Product Quality – Wastewater Regulatory Compliance

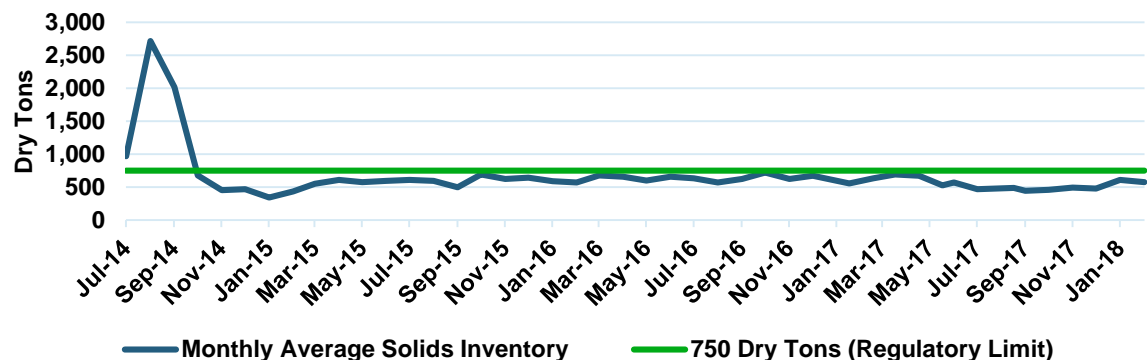
Effluent Phosphorus Concentration
1996 to 2017



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

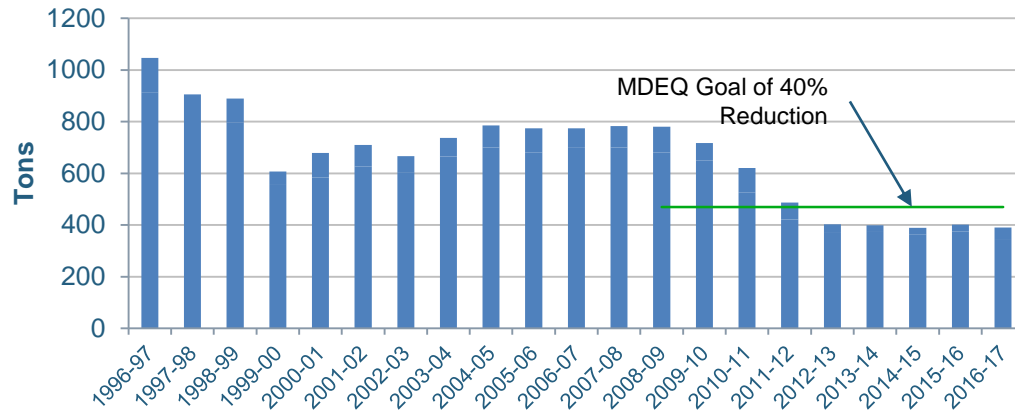
- Solids inventory is a measure of process performance and is regulated by the State.
- Having consistently tracked below 750 dry tons since Oct. 2014 is noteworthy.

Monthly Solids Inventory
July 2014 to February 2018



Community Sustainability – Watershed Health

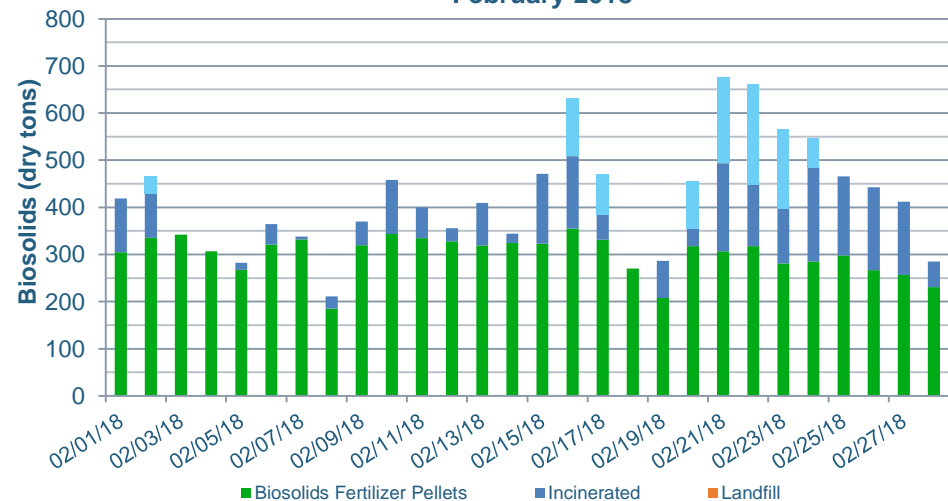
Effluent Phosphorus Loading
1996 to 2017



- 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.

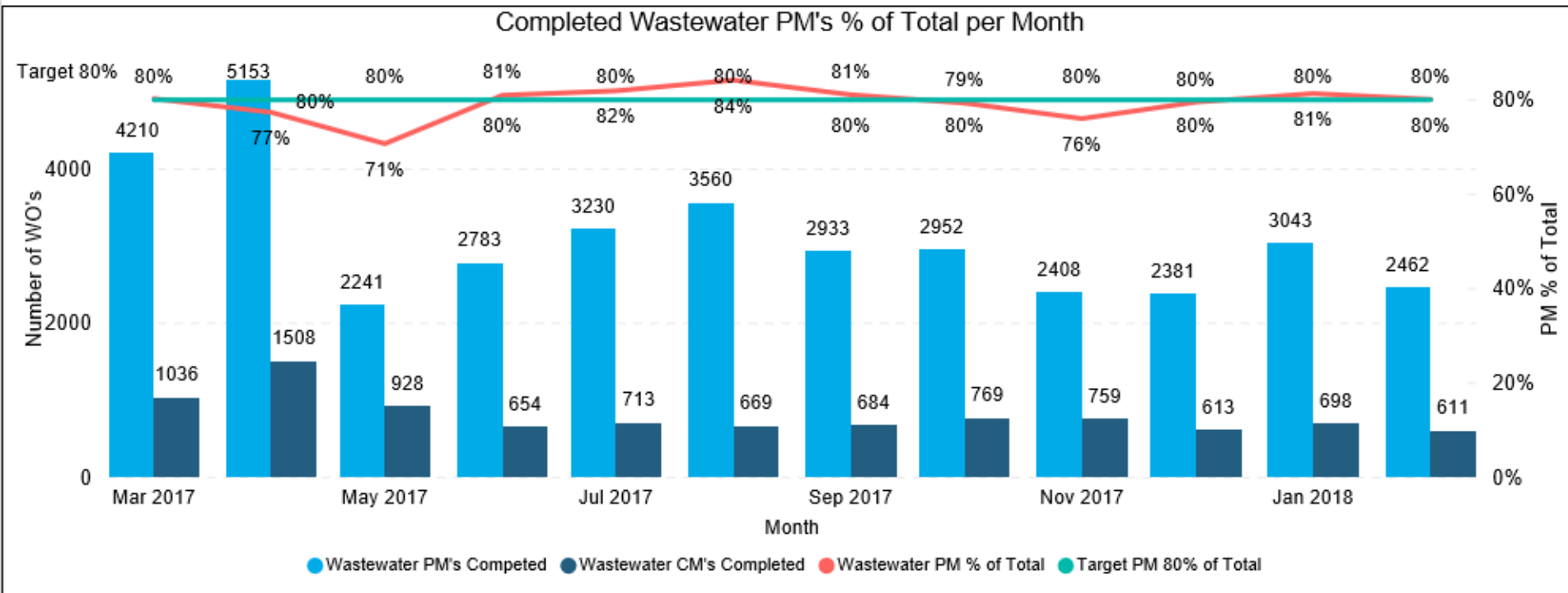
- GLWA strives to increase nutrient recovery and beneficial reuse of biosolids.
- Use of the biosolids dryer facility for solids handling is preferred because it uses biosolids for the production of fertilizer pellets.

Biosolids Handling by Method
February 2018



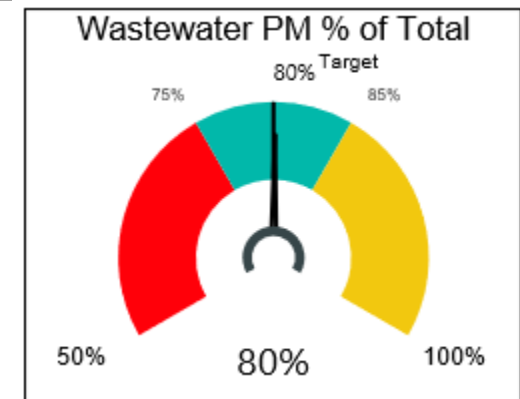
Infrastructure Strategy and Performance - Wastewater Preventative & Corrective Maintenance Management

February 2018



*The target is derived from the 2017 American Water Works Association (AWWA) 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

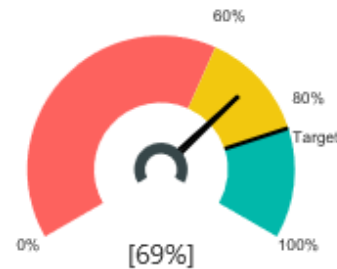


Infrastructure Strategy and Performance - Wastewater and Water Preventative Maintenance (PM) Management February 2018

Wastewater PM's Required vs Completed per Month



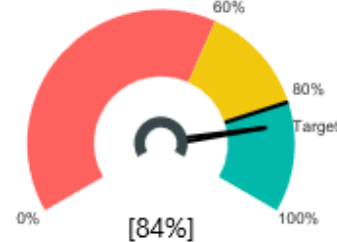
Wastewater PM % Complete



Water PM's Required vs Completed per Month

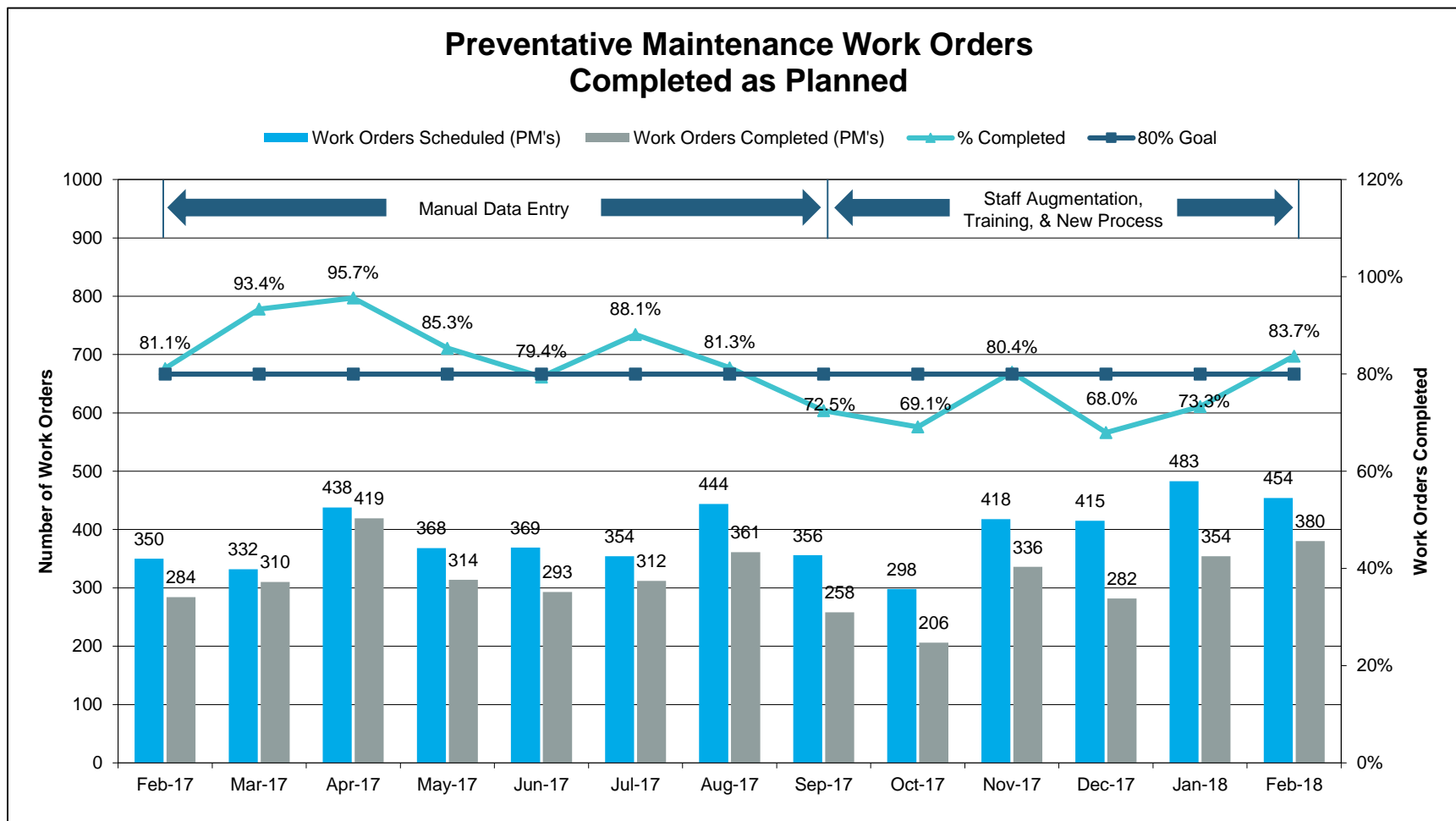


Water PM % Complete



Water Maintenance Management

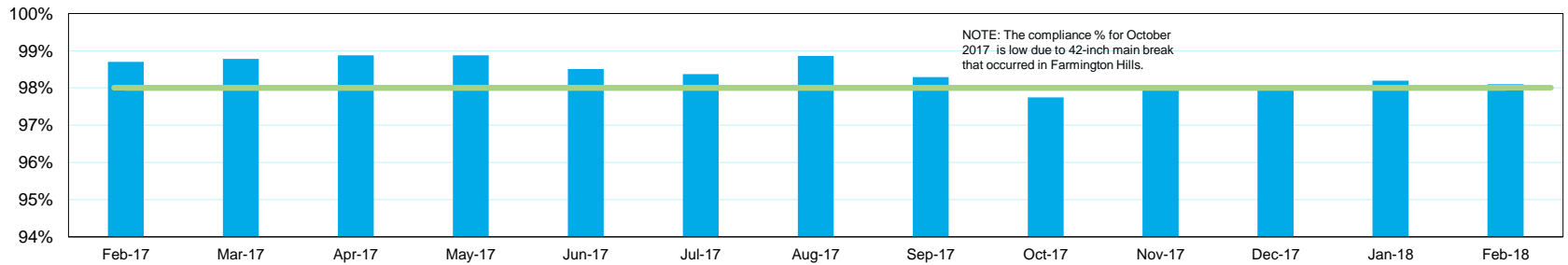
Preventative Maintenance Work Orders Completed as Planned



Infrastructure Strategy and Performance: Being able to identify critical assets and predict the likelihood of failure as a performance initiative to support GLWA's Asset Management Strategy. This initiative will extend the service life and reliability of the equipment at the lowest life cycle cost.

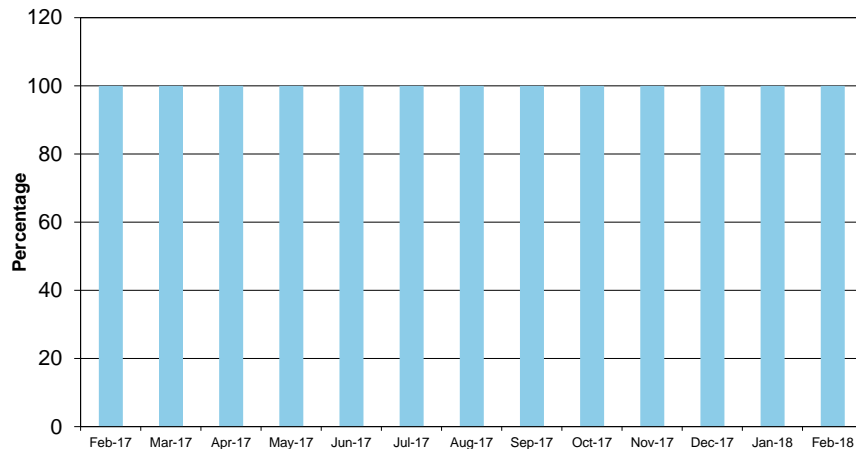
Water & Field Services

Customer Pressure Compliance %



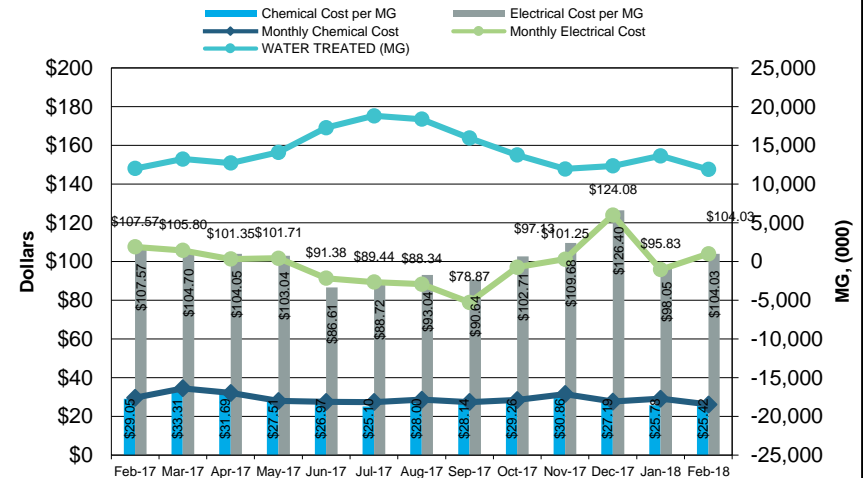
Operational Resiliency: To exceed customer compliance by being greater than 98% of contractual pressures.

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



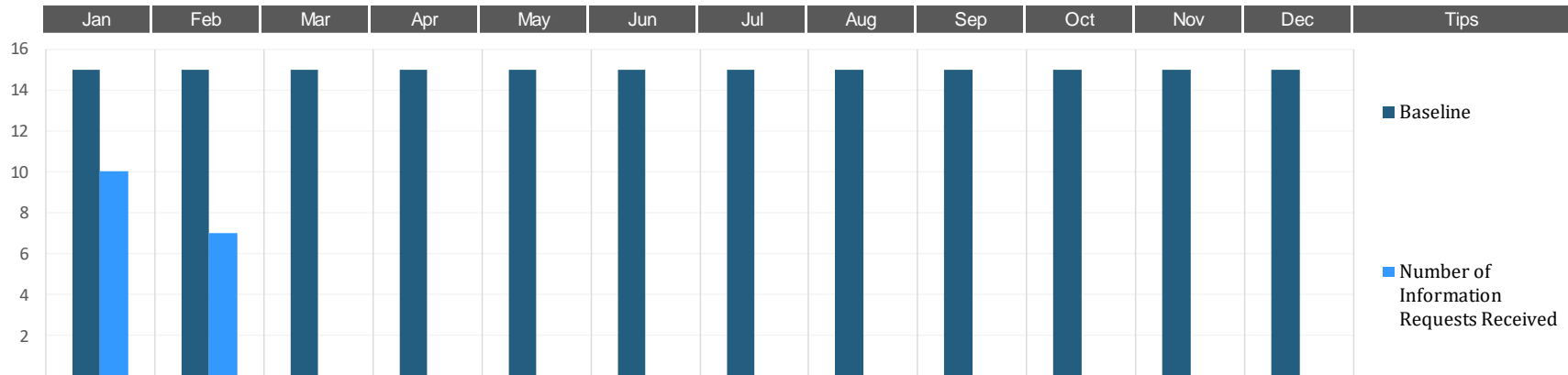
Product Quality: GLWA's goal is to surpass Safe Drinking Water Act requirements and this slide indicates compliance for the month.

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.

General Counsel Information Requests Received



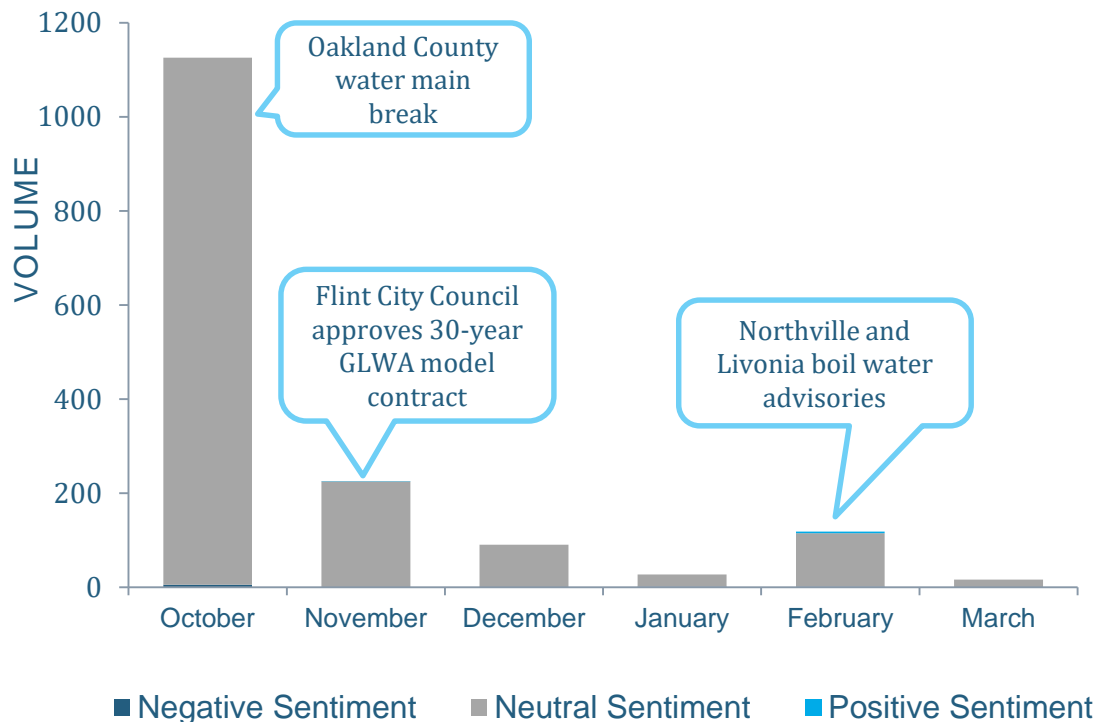
Expenses	Jan	Feb	Mar	Apr	May	Jun*	Jul	Aug	Sep	Oct	Nov#	Dec	Total	Trend
Baseline	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	180.00	
Number of Information Requests Received	10.00	7.00											17.00	

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.

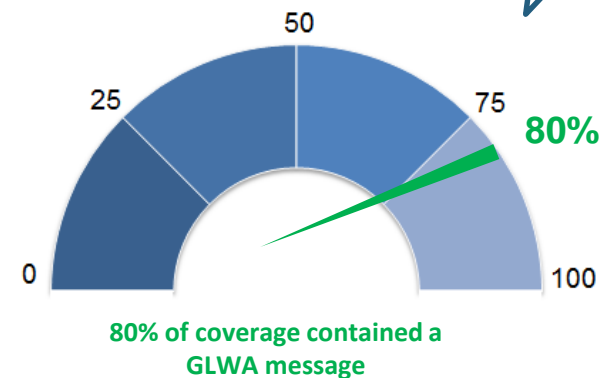
Traditional Media Summary

Great Lakes Water Authority (GLWA) mentions decreased in March following a February spike related to boil advisories. Coverage was largely neutral. Articles focused on the release of the after-action report for the October 2017 Oakland County water main break, as well as a Great Lakes Echo article discussing water quality, and common contaminants in Michigan water.

GLWA TRADITIONAL MEDIA VOLUME & SENTIMENT



MESSAGE PULL THROUGH*



MEDIA VOLUME: 16

CURSORY OR FLINT MENTIONS: 11

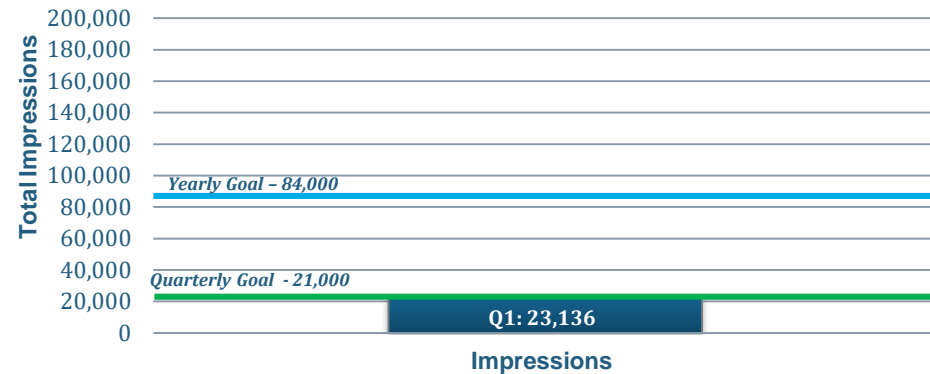
CONTAINED GLWA MESSAGE: 4

*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.

Facebook & Twitter – Q1 2018

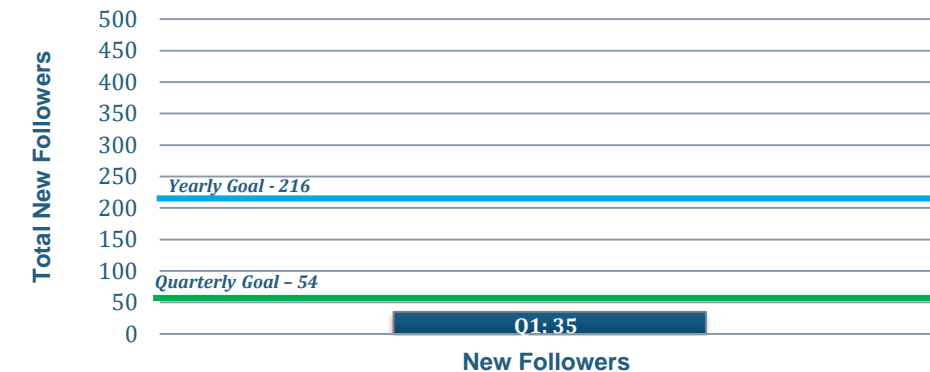
Facebook - Total Impressions Q1 2018

- Yearly Goal (84,000 impressions/year)
- Quarterly Goal (21,000 impressions/quarter)
- Total Q1 Impressions (23,136 total impressions)



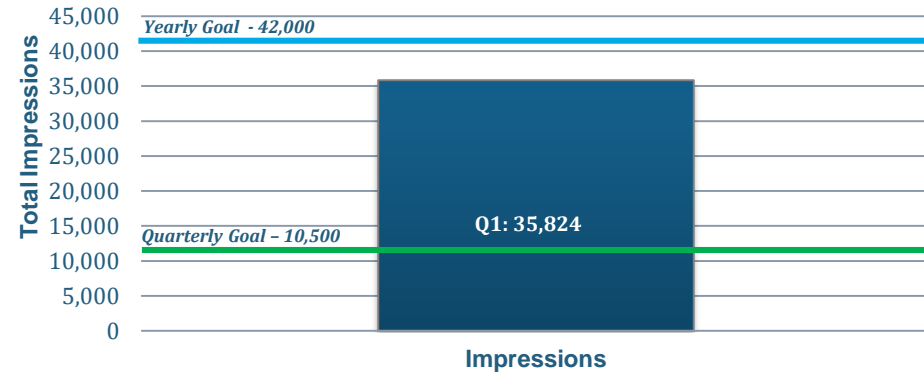
Facebook - Total New Followers Q1 2018

- Yearly Goal (216 new followers/year)
- Quarterly Goal (54 new followers/quarter)
- Q1 New Followers (35 followers)



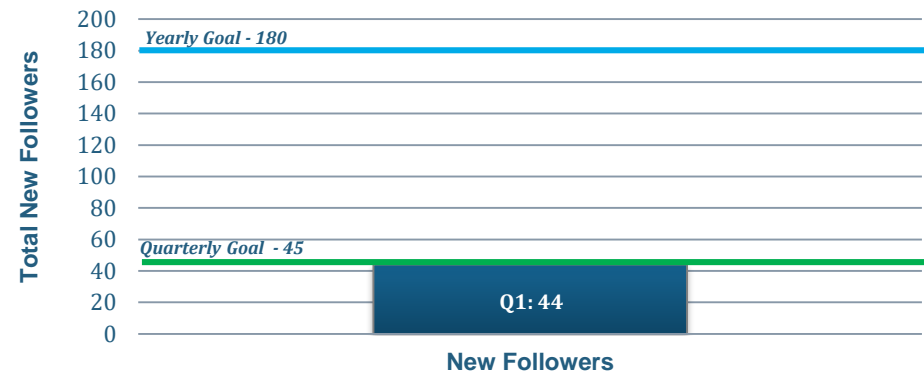
Twitter - Total Impressions by Q1 2018

- Yearly Goal (42,000 impressions/year)
- Quarterly Goal (10,500 impressions/quarter)
- Total Q1 Impressions (35,824 total impressions)

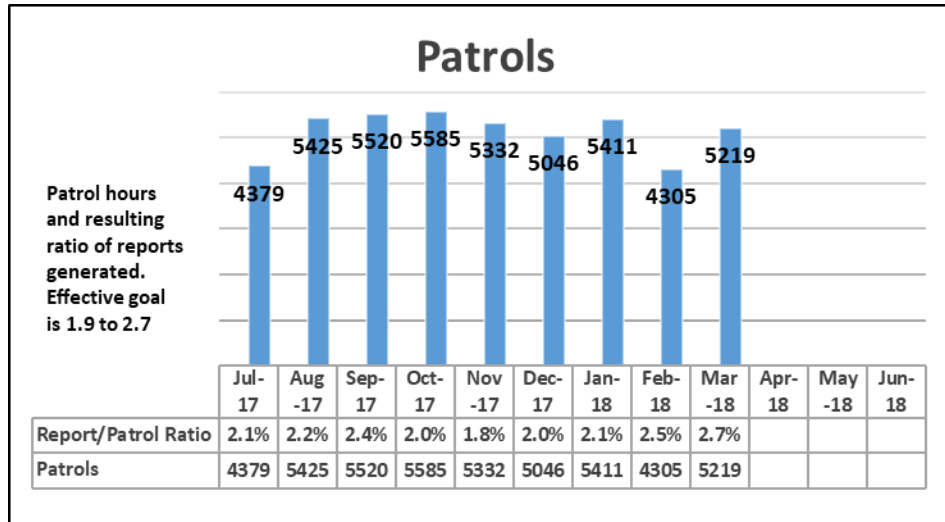


Twitter - Total New Followers Q1 2018

- Yearly Goal (180 new followers/year)
- Quarterly Goal (45 new followers/quarter)
- Q1 New Followers (44 total new followers)

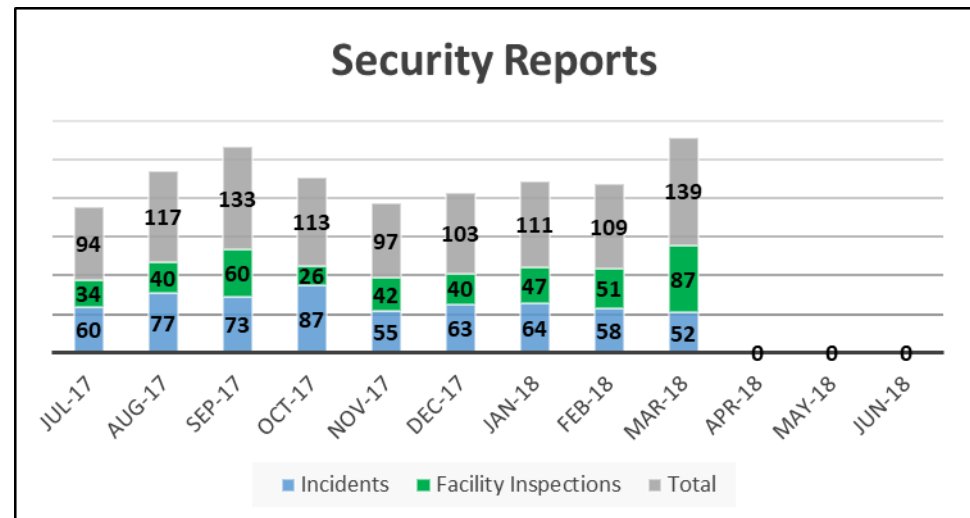


Security & Integrity

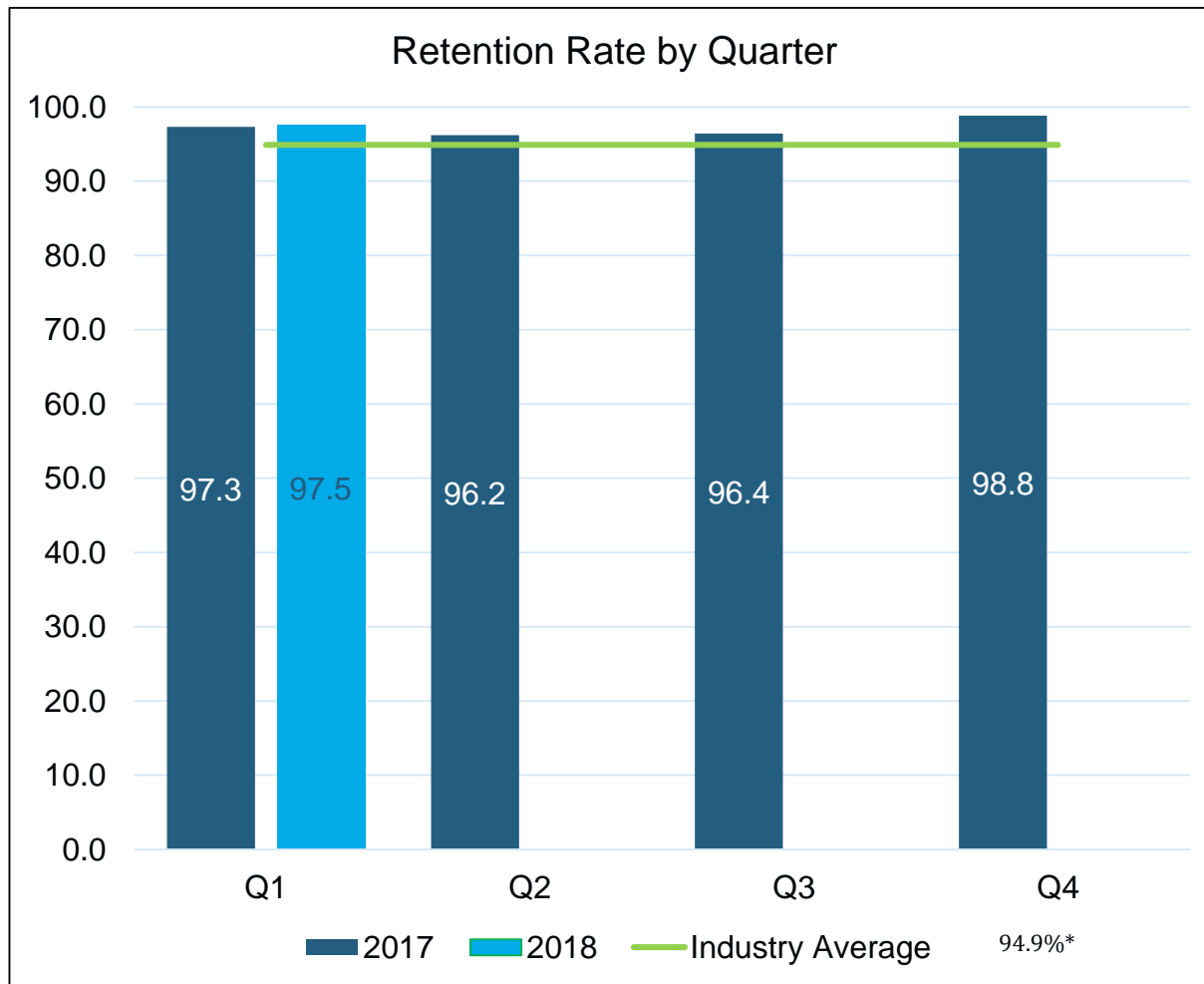


- Patrols are an indication of the level of services rendered by the staff of the Security & Integrity Group.

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



Organizational Development

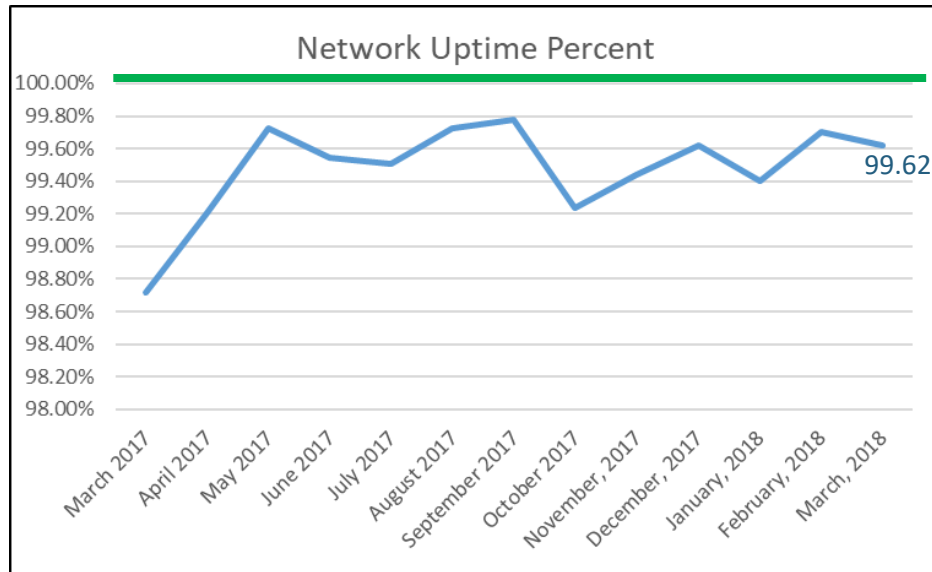


Above retention rates are reflected in percentages

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

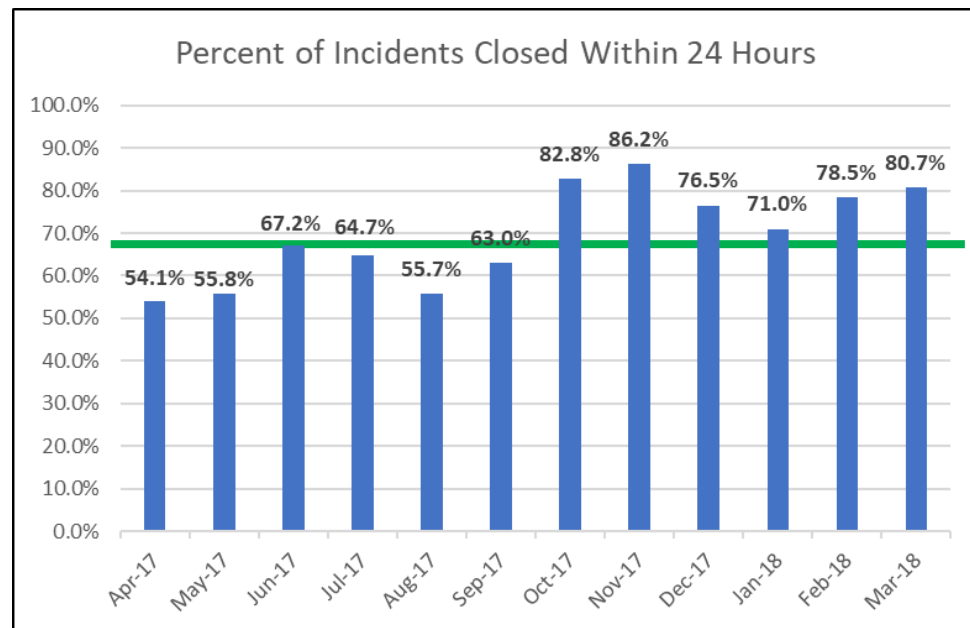
*From the U.S. Bureau of Labor Statistics 10-Oct-2016 report for the sector "State and Local Government, Excluding Education."

Information Technology

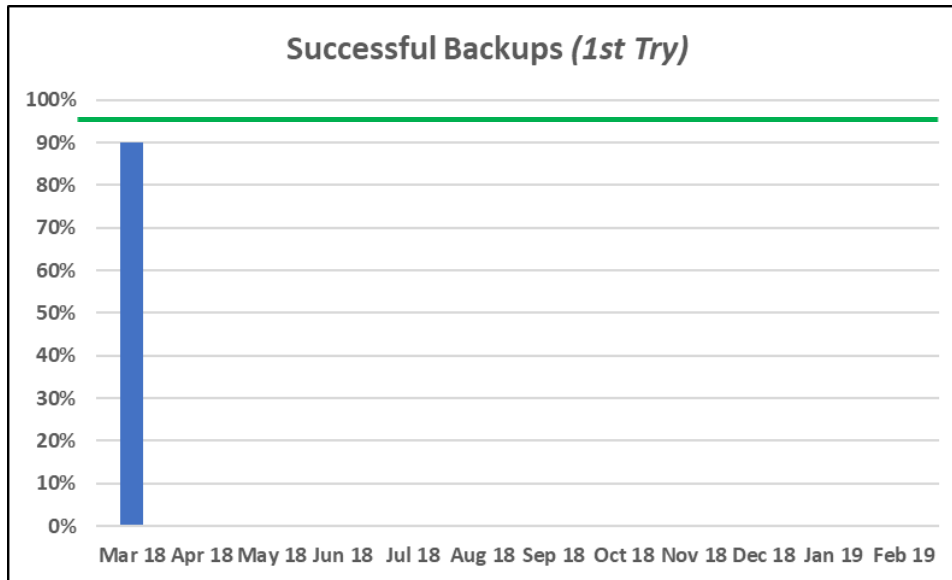


- GLWA has 59 network-connected sites, including offices, plants, pump stations and other facilities.
- Network connectivity allows employees to access the applications needed to do their work and connects plants and pump stations to the intranet to report operational data

- An incident is a technology issue that prevents 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%.

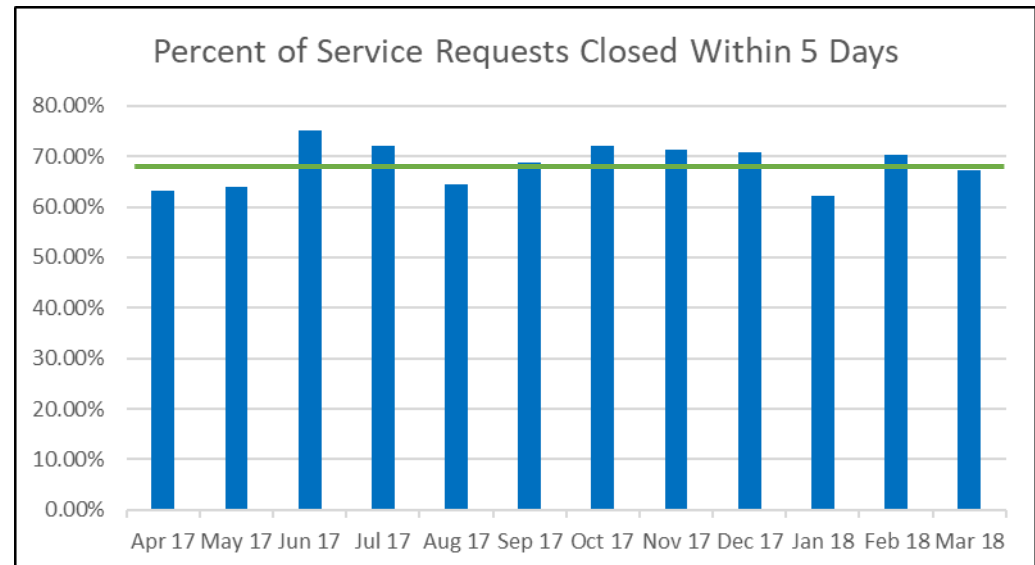


Information Technology

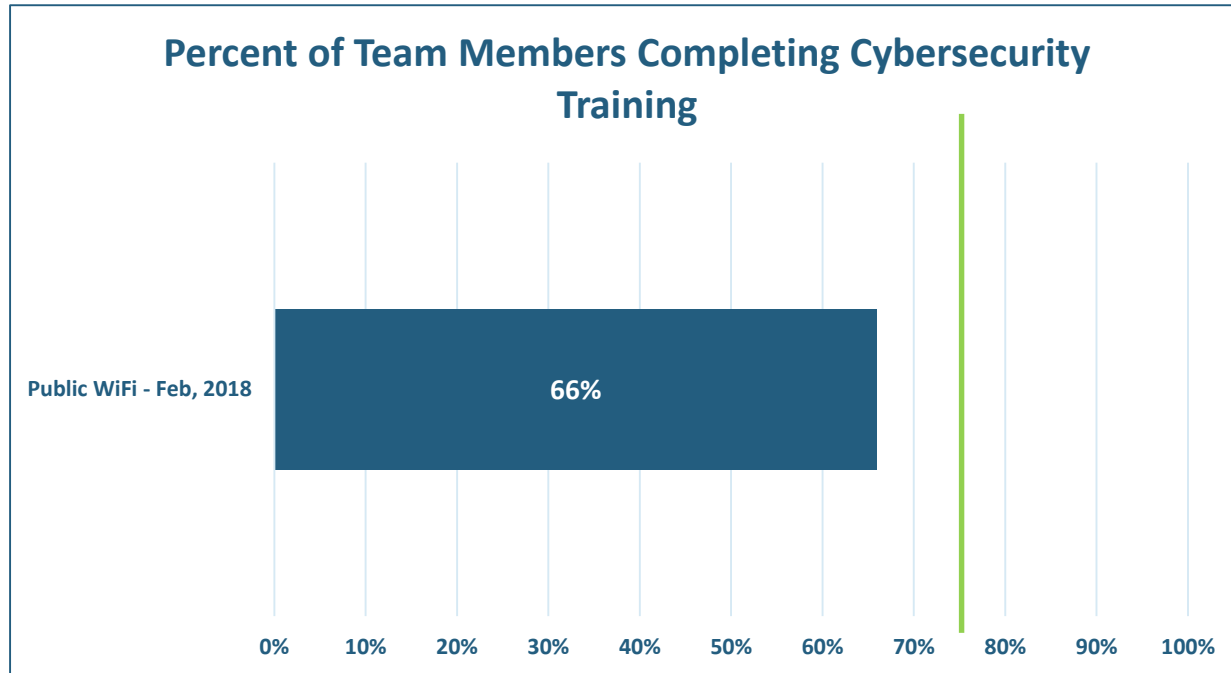


- Backups ensure that GLWA's information is safe in case of unexpected disruptions.
- Successfully backing up on the first try streamlines operations and frees up resources for other tasks.

- 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.



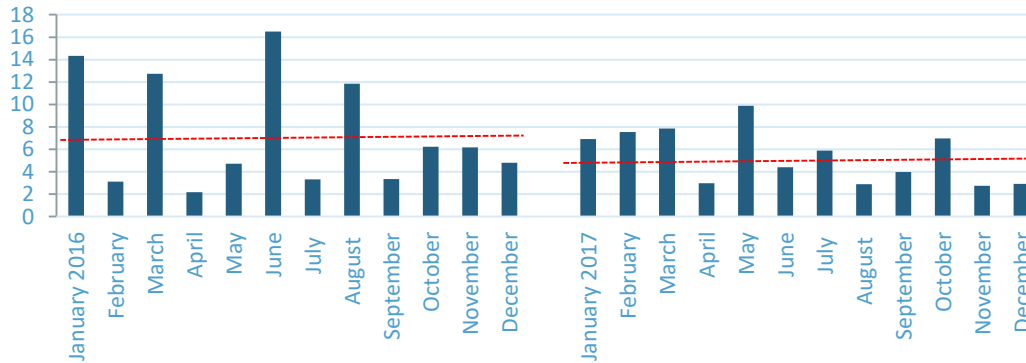
Information Technology



- End users are responsible for 80% of cybersecurity breaches.
- Well trained users are less likely to take action that could cause a breach

Key Workers' Compensation Metrics

Workers' Compensation Frequency Experience
Total Reportable Cases per 100 Full Time Equivalents (FTE's)



One measure of workplace risk mitigation efforts is the number of claims relative to hours worked (the exposure base).

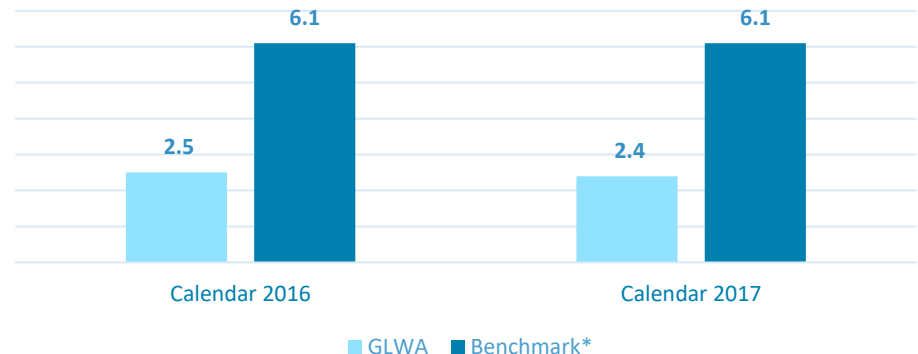
The horizontal dashed lines represent a favorable improvement in the average frequency rate from 6.9 to 5.4 for calendar years 2016 and 2017, respectively.

The rate improvement is the result of an 11 percent decline in claim counts year-over-year, while total hours worked during the same period increased 12 percent.

GLWA's recordable claim frequency rate has declined slightly year-over-year while and remains well below the benchmark rate.

*benchmark based on Bureau of Labor Statistics for non-fatal injury and illness incident rates per 100 full-time equivalents for local government, Michigan, Utilities, Water/Sewage and Other Systems. <https://data.bls.gov/iirc/calculate.do> (2016 is latest BLS data available)

Workers' Compensation Frequency Experience
Total Recordable Cases per 100 Full Time Equivalents (FTE's)
GLWA Rate vs. Benchmark Rate



GREAT LAKES WATER AUTHORITY

24 x 7 OCCUPATIONAL INJURY TRIAGE PROGRAM METRICS

Period: January 1, 2017 – December 31, 2017

1. Total Call Volume & Mix Including Follow Up Calls:

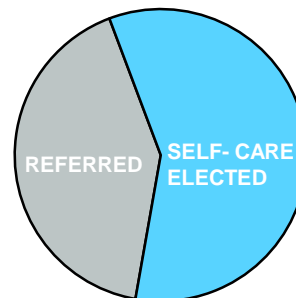
			Referred	Self Care
ON TIME CALLS (within 24 hours)	53	85.5%	37.7%	62.3%
LATE CALLS (> 24 hours)	9	14.5%	66.7%	33.3%
Total # of Calls YTD:	62	100.0%		

2. Stay-At-Work Rate Calculation

On Time Calls w/Self Care	33	
Late Calls w/Self Care	3	
Less: Follow Up Calls Ultimately Referred	(6)	
Total Stay at Work w/Self Care	30	(A)
Total # of Calls	62	
Self Referred Before Triage	(4)	
Adjusted Total # of Calls	58	(B)
Stay at Work Rate:	51.8%	(A)/(B)

3. Estimated Savings:

Total Stay at Work w/Self Care	30
x Average Medical Only Cost (estimated)	\$435
= Estimated Medical Charges Avoided	\$13,060
+ Per Claim Med Only Charges Avoided x \$140 ea.	\$4,203
+ MBR Fees Avoided (assumes 1 bill/claim at \$8.50 ea.)	\$255
= Total Estimated Cost Avoidance:	\$17,518
- Total Costs (sum of Jan- Dec 2017 invoices)	-\$4,083
	\$13,435
= Net benefit of program (positive ROI)	329%



Over **60 percent** of all calls made to the MEDCOR Nurse triage call center within 24 hours of an incident resulted in the employee initially electing self-care vs. a referral to a medical clinic.

Initial Call Metrics