

Memorandum

To: HONORABLE BOARD OF DIRECTORS

From: Sue McCormick, CEO

CC: William M. Wolfson, CACO

Date: January 2, 2019

RE: EXPLANATION OF CEO December 2018 KPIs – “RED, YELLOW, GREEN REPORT”

OVERVIEW: Last month we indicated to you that we were reviewing this data to determine what, if any, “red”, “yellow”, and “green” measures might be appropriate for valve exercising and rehabilitation project. Before reviewing the metrics, it may be helpful to review where we started on this project, why it is important, how other utilities handle the area, and what our long-term goal is for valve operations.

We have previously discussed GLWA’s valve exercising and rehabilitation project with the Board. We indicated that we were in the process of establishing a program and that the American Water Works Association (AWWA) recommends regular valve exercising and maintenance for utilities. These valve programs bring many long-term benefits such as: accurate records of valve location and condition; the ability to quickly isolate main breaks reducing disruption to member-partners; more efficient asset management. capital planning and extended valve life; and less GLWA costs, including team member overtime, associated with system emergencies. While these long-term benefits are important, for GLWA there are several short-term benefits from a valve exercising and rehabilitation program; Most important amongst these benefits is the establishment of a baseline for system assets and their condition that will drive long-term maintenance standards and capital investment.

Ultimately, GLWA’s goal is that 100% of its valves will be operational. However, in attempting to establish “red”, “yellow” and “green” measures for the KPIs related to this project, we could not locate established utility service sector standards through organizations such as AWWAAWWA standards. In fact, we found that many water utilities do not have robust valve maintenance programs and others have no established programs at all. The only benchmark, we were able to locate is the following general statement in an 2017 article by Newconcept Tools entitled *Keep it Moving; The Importance of Valve Exercise and Maintenance*, “Unfortunately, the national average for valve operability is an astoundingly low 60%, meaning that the valves you need to operate will work less than two-thirds of the time.” In another article Dennis Blakely of Wachs (GLWA’s vendor on its

valve project) explains this statistic saying; “The water systems I deal with are reluctant to undertake a valve exercising program based on perceived expense, manpower requirements, and the repair work that may be created.” (These quotes likely refer to retail systems. A wholesale system such as GLWA’s has less redundancy than a typical retail system, underscoring the heightened need and value of appropriate valve maintenance.)

After conducting this review, two things are clear: 1) While AWWA has established standards for the process and documentation of the exercising of valves, it does not have standards for the frequency or scope of this process. 2) GLWA is “ahead” of many utilities in establishing KPIs for valve exercising and rehabilitation, and 3) given the lack of baseline data, suspected deferred system maintenance, and the greater consequences of failure within a wholesale system, GLWA is best served by establishing interim “red”, “yellow”, and “green” metrics until a baseline is established and a long-term strategy to ensure full valve operability is in place.

For its current valve exercising and rehabilitation project addressing key system components, GLWA has established an initial goal of assessing the condition of at least 25 valves per month. For measurement of progress towards this goal; 25 assessments will be considered “green” 21 to 24 assessments per month will be considered “yellow”, and 20 or less assessments will be considered “red.” This month this metric debuts as a “red.”

While GLWA’s long-term goal is 100% valve operability, in the short-term 90 to 100% operability will be considered “green”, 80 to 90% will be considered “yellow”, and below 85% will be considered “red.” This month the metric debuts as “red.” We will reassess the viability of both the assessment and operability metrics in July 2019 and at least annually thereafter.

Last month there were no “red” and one “yellow” indicator. This month there are two “red” and two “yellow” indicators. The two “red” metrics are the new measures discussed above. This month, our Wide Area Network connectivity was at 100.00% for the first time ever. Congratulations to our Information Technology Team for achieving this extremely difficult goal.

Discussion of specific results on next page

EUM Attribute	Measure	Significance	Criteria	Status
Infrastructure Strategy and Performance	Water - 25 or more valves exercised per month	Reduced risk of unplanned downtime or emergency repairs	Green=25 or more per month Yellow= 21 -24 per month Red = 20 or less per month	RED

Explanation and Responsive Actions: This month GLWA encountered valves that were considered inoperable and had access issues due to vaults being filled with debris, valves being paved over, valves being capped and sealed, damaged gears etc... These valves have been noted for repair.

EUM Attribute	Measure	Significance	Criteria	Status
Infrastructure Strategy and Performance	Water - 100% of GLWA valves assessed are operational.	Reduced risk of unplanned downtime and service interruption	Green = 90-100% Yellow = 80 - ,90% Red = <80%	RED

Explanation and Responsive Actions: Reason for “red” on the Valves Operational: 29.7% are currently defined in one of three categories – minor repair, rehabilitation or replacement. Where the valve ultimately ends up is determined at the end of the contract which means that a valve can go from minor repair to rehabilitated during the contract and may be operational by the end of the contract period.

EUM Attribute	Measure	Significance	Criteria	Status
Enterprise Resiliency	At least 99% of GLWA system data back-ups will be successful on the first attempt.	Network management protects data and promotes Employee Productivity	Green = 90 - 100% first attempt success Yellow =85 - <90% first attempt success Red <85% first attempt success	YELLOW

Explanation and Responsive Actions: This measure declined from a 99% success rate (“green”) in November to a 92% success rate (“yellow”) last month. The primary reason for

this decline appears to be configuration issues with the back-up software. GLWA believes these issues have been addressed and further responsive action is not necessary at this time.

EUM Attribute	Measure	Significance	Criteria	Status
Enterprise Resiliency	GLWA security patrols will produce an average of 2 security reports (incident and facility inspection) per patrol	Risk prevention	Green = 1.9 - 2.7 average reports per patrol Yellow = 1.5 - <1.9 or ,>2.7 - 2.9 average reports per patrol Red = <1.5 or >2.9 average reports per patrol	YELLOW

Explanation and Responsive Actions: Although the number of patrols actually increased in December, this measure changed from “green” to “yellow” as the number of reports per patrol declined. GLWA believes this decline is due to unanticipated end of year separations that stretched existing resources. To address this belief, GLWA has hired two new officers and will use contracted personnel to supplement existing resources as may be necessary during the coming month(s).