



**Cheryl Porter**  
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## Memorandum

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**To:** Honorable GLWA Board of Directors

**Thru:** Cheryl Porter, COO – Water and Field Services

**From:** Todd King, Field Services Director, Bryon Wood, IT Manager – Applications Delivery

**cc:** GLWA Executive Leadership Team

**Date:** March 16, 2021

**RE:** Current Summary of GLWA Water System Valve Exercising Program

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GLWA initiated a pilot valve exercising program in 2018 that exercised approximately 450 valves of 24-inches diameter and greater throughout the GLWA transmission system. The pilot program was completed in 2019 and was used to develop a comprehensive valve location, assessment, and exercising program based on that initial sample. The follow-on effort began with Board approval of the Hydromax contract in September 2020.

The following table summarizes the total of our system efforts to date.

**Table 1: Work Conducted as of March 1, 2021**

	No. of Valves	Assigned	Located	Assessed
<b>Air Valves</b>	2,844	766	735	698
<b>Blow-off Valves</b>	1,922	1,555	1,398	1,362
<b>System Valves</b>	4,913	724	689	679
<b>Total No. of Valves</b>	<b>9,679</b>	<b>3,045</b>	<b>2,822</b>	<b>2,739</b>
<b>% of Total No. of Valves</b>	---	<b>31%</b>	<b>29%</b>	<b>28%</b>

## System Valve Operational Statistics

The pilot program determined that while the majority of GLWA’s valves in the water system were operable, there was significant effort to locate them and make them available for operation. In addition, 74 of 427 (17%) system valves were inoperable.

A preliminary assessment of the data under the current program indicates that 55 of 252 (22%) of the main system valves have been determined to be inoperable. Overall, the current rate of inoperability as of today is 122 of 679 valves or 18%. Please note that this is preliminary, “live” data and may be subject to change after further data validation.

**Table 2: Work Completed as of March 1, 2021**

	Assessed	Operable	Inoperable	Repaired	Replaced
<b>Air Valves</b>	698	672	26	0	0
<b>Blow-off Valves</b>	1,362	1,362	0	0	0
<b>System Valves</b>	679	557	122	7	1
<b>Total No. of Valves</b>	<b>2,739</b>	<b>2,591</b>	<b>148</b>	<b>7</b>	<b>1</b>

*Total = Operable + Inoperable  
Repaired and replaced are in “Operable”*

To date, there are 122 system valves that have been identified for repair or replacement. One 16-inch valve has been replaced in Auburn Hills, and two 42-inch valves in Dearborn are scheduled for replacement this year. The remaining valves designated as “inoperable” will be evaluated with respect to necessity as part of the Linear System Integrity Program and DWSD/GLWA joint transmission main decommissioning process prior to being scheduled for repair or replacement.