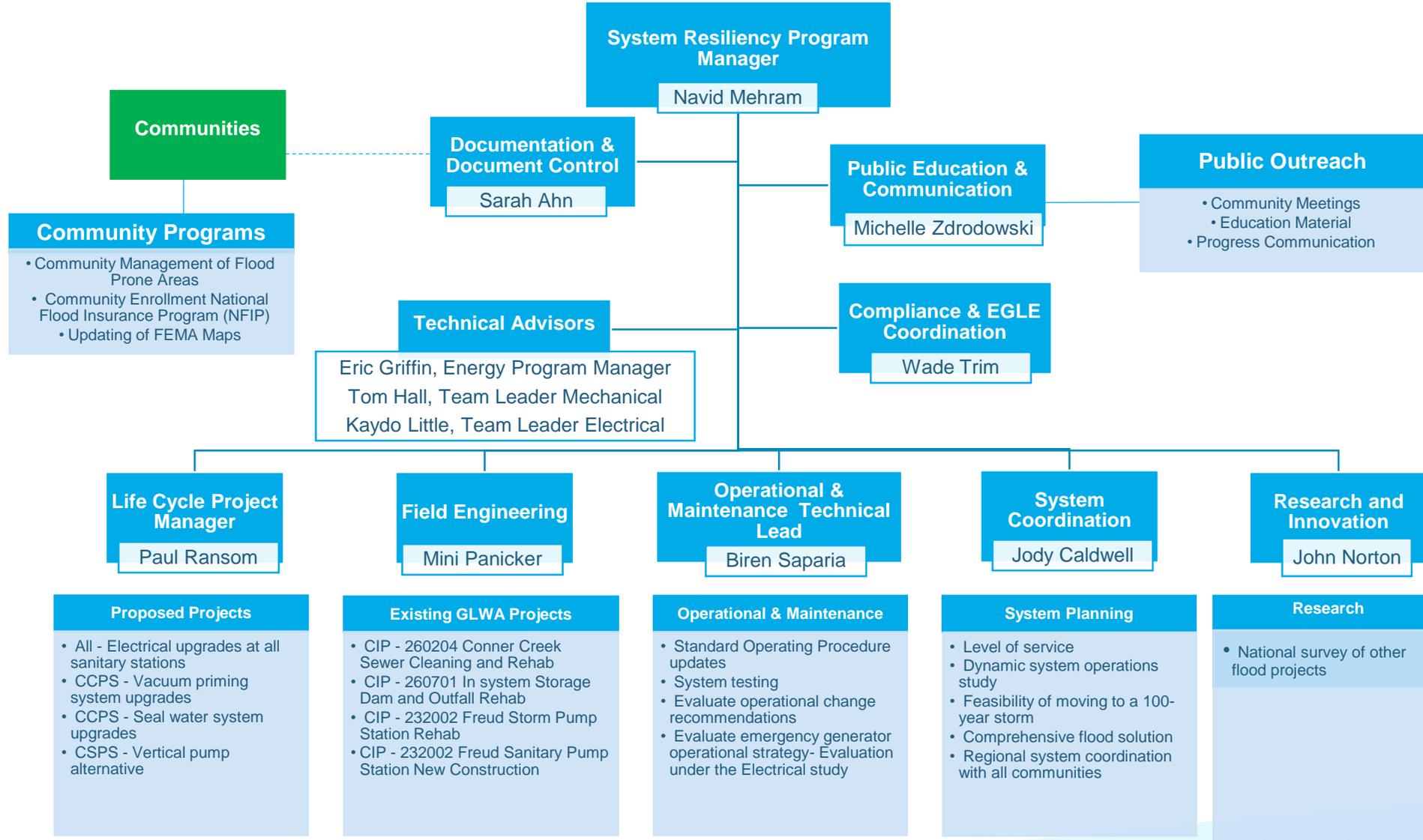




# Resiliency Team Progress GLWA Board of Directors Update

2/22/2023 | Navid Mehram, P.E.

# Resiliency Delivery Team



# Community Programs



## You're Invited to Join GLWA for a Flood Mitigation and Resiliency Planning Member Meeting

February 23, 2023 10 a.m. – 2 p.m.

It is our hope that this meeting will provide you with valuable resources and information as we collectively prepare for future flood mitigation needs and system resiliency events in a time of increasing climate change pressures. **The speakers will cover topics such as the National Flood Insurance Program, commercial insurance resources, Hazard Mitigation Grant Program, and other related information and tools to mitigate impacts of climate change.** Following a complimentary lunch to allow for networking and the opportunity to meet the speakers, the speakers will participate in a panel discussion covering topics that may be more specific to our region.



**James G. Sink,**  
Regional Flood  
Insurance Liaison  
FEMA Region 5



**John Hurley,**  
Managing  
Director  
Marsh McLennan



**Matthew  
Occhipinti, P.E.,**  
NFIP Coordinator/  
Floodplain Engineer  
EGLE



**Matt Schnepf,**  
Hazard Mitigation  
Unit Manager  
Michigan State  
Police



**Scott Bailey,**  
Program Analyst  
FEMA Region 5



# Proposed Projects

- **Electrical upgrades at all sanitary stations**
  - The RFP is in draft review and hope to be advertised soon.
- **Vacuum priming system upgrades**
  - Design is under way; alternatives have been proposed for GLWA review.
- **Seal water system upgrades**
  - Design is under way; alternatives have been proposed for GLWA review.
- **Vertical pump alternative**
  - GLWA is finalizing negotiations on the proposal and anticipating issuance of authorization within 30-45 days.

# Existing GLWA Projects

- **CIP - 260204 Conner Creek Sewer Cleaning and Rehab**
  - Spot repairs continue from the upstream portion of the Connor Creek Sewer; Access structure #2 buildout is complete and soon to start cutting the top of the sewer; excavation continues for access structure #3; Contractor has acquired a lot in place for decanting the removed debris. Debris removal will start soon.
- **CIP - 260701 In system Storage Device and Outfall Rehab**
- Submittals continue from the contractor. Gates and actuators, level transmitters, control panels etc. are long lead items; 20 plus weeks. Permit applications are submitted to City of HP, Dearborn, Hamtramck, and Detroit.
- **CIP - 232002 Freud Storm Pump Station Rehab**
  - Design is in the final phase. The anticipated advertisement in the next 3 - 6 months.
- **CIP - 232002 Freud Sanitary Pump Station New Construction**
  - GLWA is working with the City of Detroit planning and development department for approval. Changes to the façade and exterior fencing have been requested. GLWA is evaluating the changes and incorporating the changes. The next step will be re-zoning of the new pump station sites.

# Operations and Maintenance

- **Standard Operating Procedure Update**
  - GLWA is in the process of reviewing its standard operating procedures and making corrections, as necessary.
- **System Testing of the Vacuum System**
  - A strategy for testing the vacuum system is being developed. This test is weather dependent.
- **Evaluate Operational Changes**
  - GLWA has made attempts to test the operational changes recommended. This is a weather dependent test, and additional testing and wet weather are necessary to determine the feasibility of the change.
- **Evaluate Emergency Generator Operations**
  - This item will be captured under the Electrical Resiliency Study.

# System Planning

- **Comprehensive Flood Solution**
  - GLWA continues to work with U.S. Army Corp of Engineers to scope the project for the Flood Risk Management Study for southeast Michigan. Since the appropriation was not approved in 2022, GLWA, in partnership with the Army Corp, has requested the use of the Planning Assistance to States (PAS) program to initiate the study effort in anticipation of the Water Resource Development Act (WARDA) appropriation in the fall of this year.
    - **Level of service**
    - **Dynamic system operations study**
    - **Feasibility of moving to a 100-year storm**
- **Regional system coordination with all communities**
  - GLWA has re-initiated individual meetings with Eastside, Westside and Central Member Partners.

# Research

- **National Survey of Flood Projects**
  - Currently in the scope development phase within our Energy, Research and Innovation Team to determine the desired outcome of the survey.

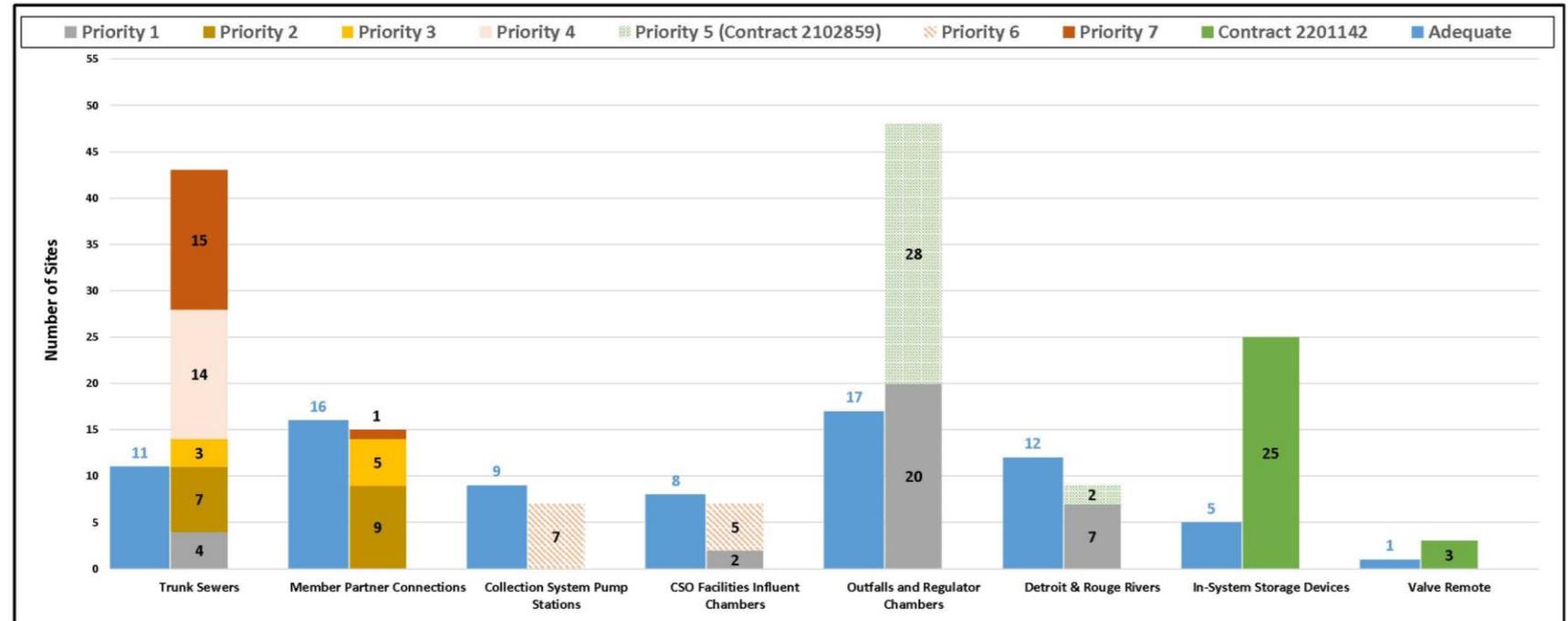
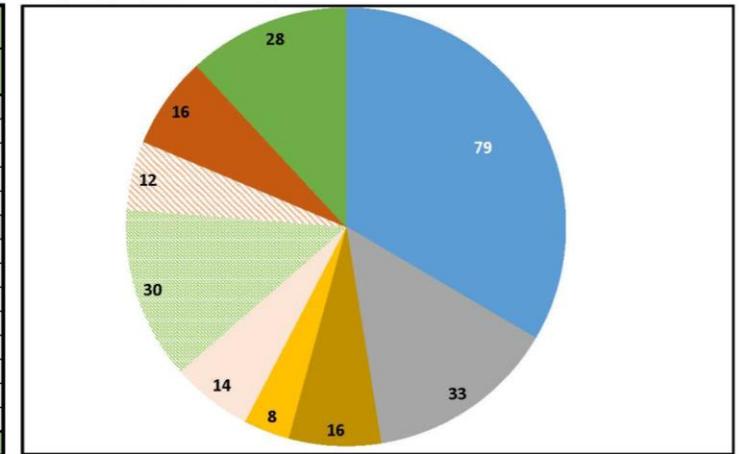
GLWA continues to review the sewer system instrumentation and make corrections in a phased approach.

GLWA released \$2.3M for revisions to nearly 63 sites. This will complete Priority 1, 2 & 4 of the project.

### Baseline Conditions

Engineering Services for GLWA Collection System Level Sensors and Precipitation Gauges Program (TOES 30T 2200729)

Level Sensor Group	Priority #	No. of Sites (some sites may include multiple sensors)		
		Adequate Installation	Need Improvement (or New Installation)	Total
<b>Trunk Sewers</b>				
Original L-Series	1, 4, 7	7	24	31
10 L-Sites Surveyed in 2022	1, 2	2	8	10
Sewage Meters (DT-S-00)	1, 4, 7	2	8	10
Hydraulic Viewers	3	0	3	3
<b>Member Partner Connections</b>				
Existing Flow Meters	3	16	6	22
9 Additional Sites (L-Sites & Flow Meters)	2	0	9	9
<b>Collection System Pump Stations</b>	6	9	7	16
<b>CSO Facilities Influent Chambers</b>	1, 6	8	7	15
<b>Outfalls and Regulator Chambers (Contract #2102859)</b>	1, 5, Other Contracts	17	48	65
<b>River (Detroit &amp; Rouge) Level Sensors</b>	1, 5	12	9	21
<b>In-System Storage Devices (Contract #2201142)</b>	Other Contracts	5	25	30
<b>Valve Remote (Contract #2201142)</b>	Other Contracts	1	3	4
<b>TOTAL</b>		<b>79</b>	<b>157</b>	<b>236</b>



Progress to Date (1/27/2023)

Engineering Services for GLWA Collection System Level Sensors and Precipitation Gauges Program (TOES 30T 2200729)

Priority	Level Sensor Group	No. of Sites Need Improvement (or New Installation)	Cost (\$)	Improvement Implementation Next Steps (% Complete)									
				Trouble Shooting/ Reprogramming*	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	
					Rim Survey	Below Grade Inspection	Develop Design LS Installation Concept	Installation of LS's and Below-Grade Measurements	Review Installation and Below-Grade Measurements	Other Work	Review As-Built Installation Sheets & Final Testing	Post Installation Data Evaluation	
1	- Original L Series - 10 L-Sites - Sewerage Meters - CSO Facilities Influent Chambers - River (Detroit & Rouge) Level Sensors	33	505,000	90%	Not Applicable								
2	- 10 L-Sites - 9 Additional Sites (L Sites & Flow Meters)	16	943,000	Not Applicable	100%	100%	95%	15%	0%	100%	0%	0%	
3	- Hydraulic Viewers (New Sensor Sites) - Existing Flow Meters	8	TBD		100%	100%	15%	0%	0%	80%	0%	0%	
4	- Original L Series - Sewerage Meters	14	860,000		100%	100%	98%	0%	0%	100%	0%	0%	
5	- Outfall and Regulator Chambers - River (Detroit & Rouge) Level Sensors	30	TBD		100% (WT/ASI 2018)	100% (WT/ASI 2018)	On Going Under CONTRACT NO. 2102859			100%	On Going Under CONTRACT NO. 2102859	0%	
6	- Collection System Pump Stations - CSO Facilities Influent Chambers	12	TBD		0%	0%	0%	0%	0%	0%	0%	0%	
7	- Original L Series (Remaining) - Sewerage Meters (Remaining)	16	TBD		100% (Spalding 2019)	0%	0%	0%	0%	0%	0%	0%	
Other Contracts	- System Storage Devices - Valve Remotes	28	TBD		On Going Under CONTRACT NO. 2201142						100%	On Going Under CONTRACT NO. 2201142	0%
<b>TOTAL</b>		<b>157</b>	<b>2,308,000</b>										

\*Subject to review when adequate data is available

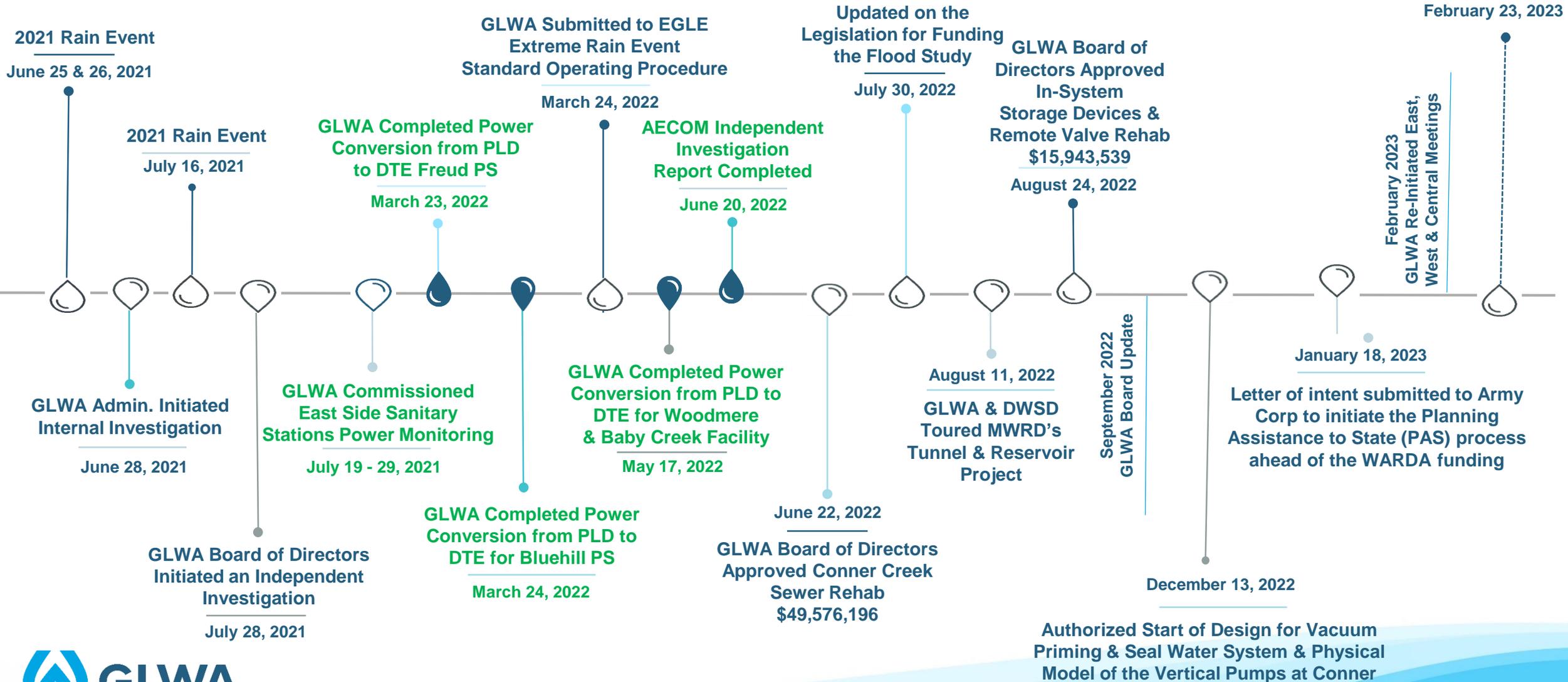
Not Applicable

Completed

On Going

Not Started

# GLWA Resiliency Effort Timeline



Thank you