

GLWA FY 2024–2028 Capital Improvement Plan

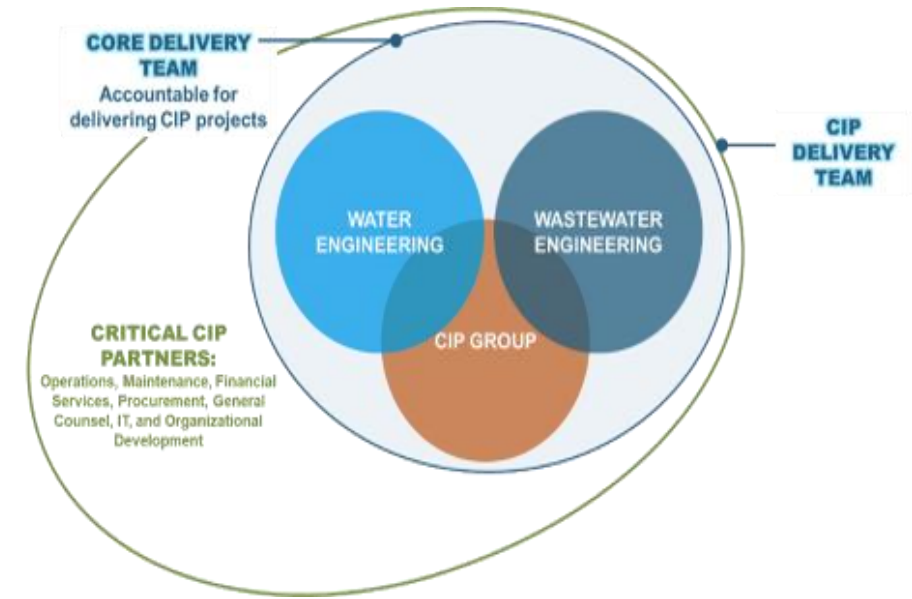
*GLWA Board of Directors Meeting
January 25, 2023, 2:00 p.m.*

Jody Caldwell, PE
Chief Planning Officer

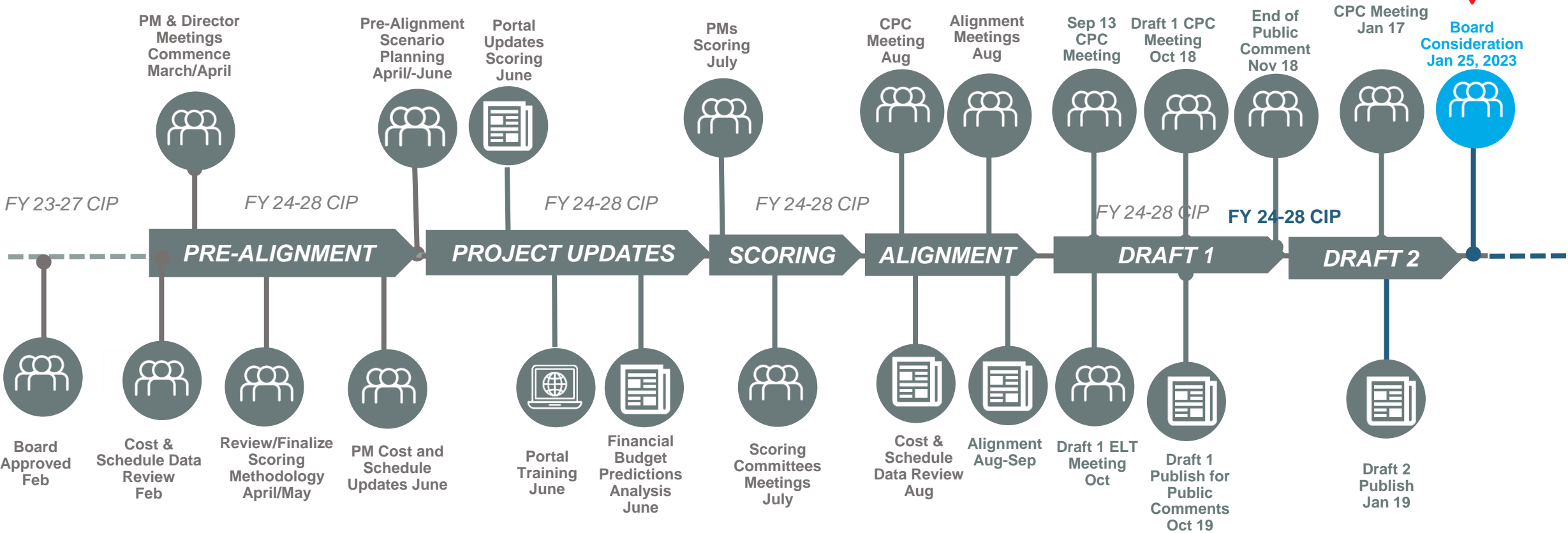
Dima El-Gamal, PHD, PE, LEED@AP
Capital Improvement Planning Director

OVERVIEW

- Five-year looking forward document with a 10-year outlook
- CIP alignment with GLWA's overall Financial Plan
- Stakeholder Input – Opportunities for Board, Member Partners & vendor community to provide input during development
- Compilation of projects from all areas of the organization
- Address projects that promote improved redundancy, system resiliency, and health & safety
- Conformance with recommendations of long-term master plans
- Meet regulatory and operational needs



WE ARE HERE TODAY



CIP AT A GLANCE

WATER

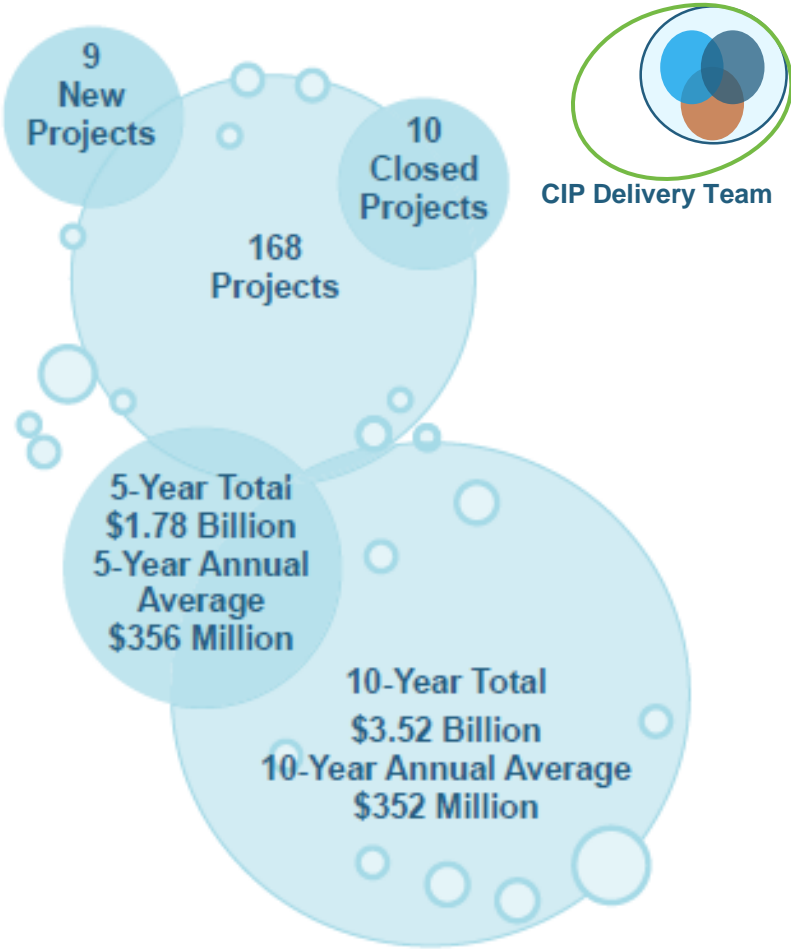
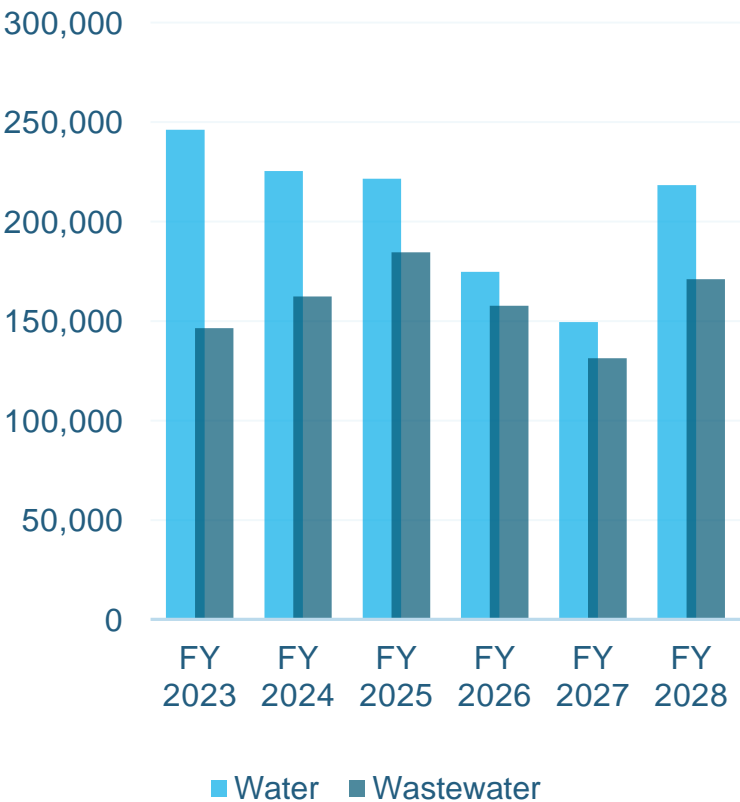
5-Year Total	\$986,616
5-Year Average	\$197,323
10-Year Total	\$1,957,610
10-Year Average	\$195,761

WASTEWATER

5-Year Total	\$798,176
5-Year Average	\$159,635
10-Year Total	\$1,560,661
10-Year Average	\$156,066

Note : Figures are shown in \$1,000's.

5-Year Outlook



CIP Delivery Team

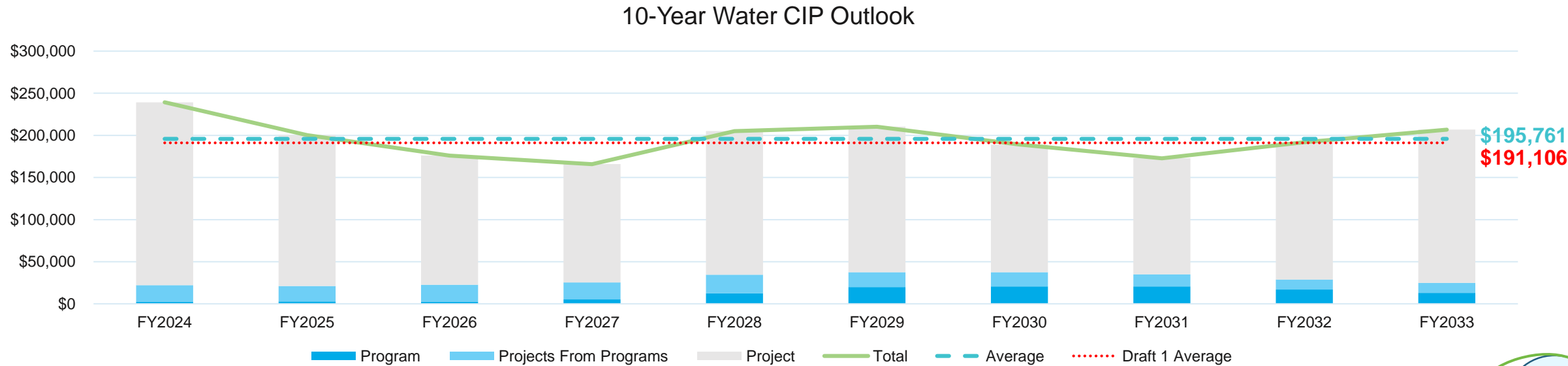
***5 NEW PROJECTS FROM PROGRAMS**

****IN ADDITION TO THE 168 PROJECTS, THERE ARE:
+2 RECLASSIFIED PROJECTS
+1 CANCELLED PROJECT**

FY2024-2033 10-YEAR WATER CIP OUTLOOK UPDATES

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
Programs	\$169	\$2,327	\$2,665	\$2,410	\$5,319	\$12,393	\$19,861	\$20,567	\$20,541	\$16,958	\$13,011
Projects From Programs	\$20,412	\$19,775	\$18,434	\$20,210	\$20,040	\$22,148	\$17,666	\$16,988	\$14,430	\$11,940	\$11,907
Projects	\$220,876	\$233,304	\$199,117	\$153,490	\$155,766	\$133,277	\$133,939	\$122,543	\$156,709	\$181,359	\$171,762
Total	\$225,789	\$239,260	\$200,422	\$176,034	\$165,813	\$205,087	\$210,312	\$189,062	\$172,765	\$191,957	\$206,898

Financial figures in \$1,000s and rounded

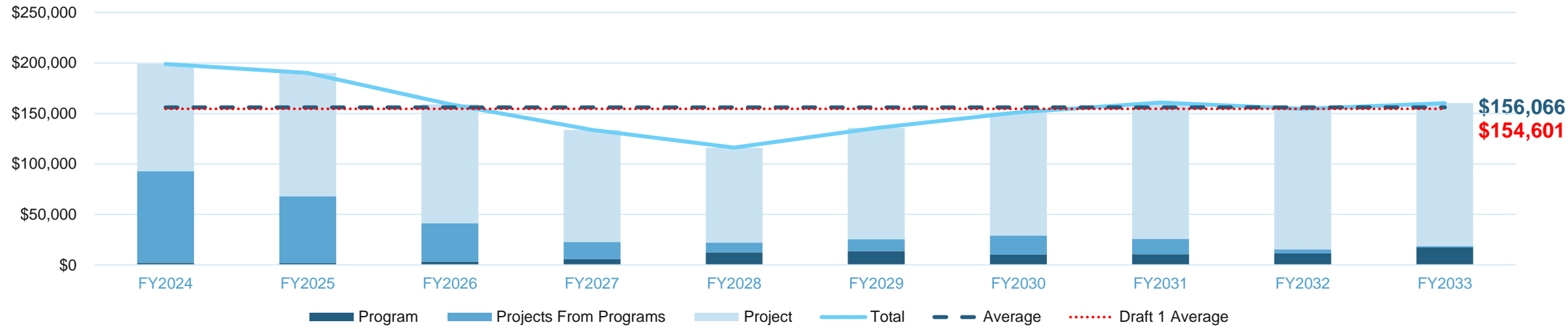


FY2024-2033 10-YEAR WASTEWATER CIP OUTLOOK UPDATES

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
Programs	\$802	\$2,240	\$1,730	\$3,243	\$5,716	\$12,502	\$13,623	\$10,117	\$10,637	\$11,391	\$17,150
Projects From Programs	\$71,503	\$90,527	\$66,322	\$38,202	\$17,140	\$9,625	\$11,772	\$19,005	\$15,244	\$3,956	\$1,513
Projects	\$67,108	\$106,294	\$122,107	\$117,599	\$110,875	\$94,053	\$110,268	\$121,954	\$134,987	\$139,287	\$141,581
Total	\$139,412	\$199,061	\$190,159	\$159,044	\$133,732	\$116,180	\$135,663	\$151,075	\$160,868	\$154,635	\$160,244

Financial figures in \$1,000s and rounded

10-Year Wastewater CIP Outlook

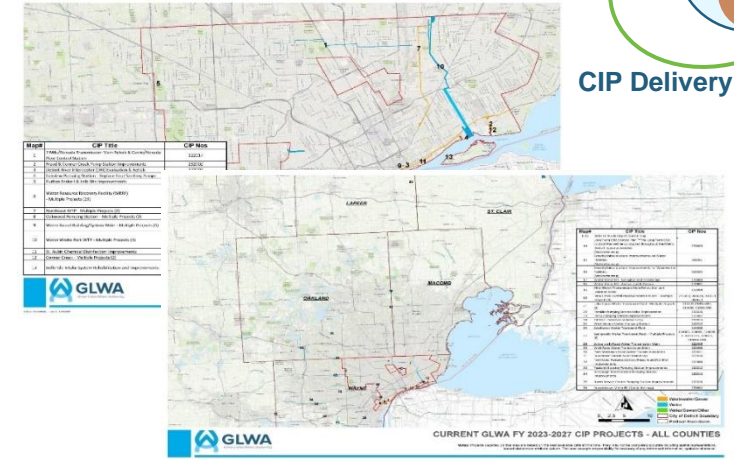


FY 2024-2028 CIP DOCUMENT

- 10-Year outlook table is now broken into three categories
- New project status: added future planned beyond 10 years
- Improved BCE reporting
- Actuals as of October 30, 2022



CIP Delivery Team



GLWA
Project Title: Water Works Park Sanitation Basin Structural Upgrade

Project Status: Future Planned - Ten-Year CIP
CIP Type: Project
Class Lvl 1: Water
Class Lvl 2: Treatment Plant and Facilities
Class Lvl 3: Water Works Park
Project New to CIP
Start/Life > 25 Yrs
Multiple Phases

Project Score: **76.3**

Project Manager: Jacob Mangum
Division: Water Projects
Managing Dept.: Water Eng

Project Title: Lake Huron WTP Pilot Plant

Scoring
Project Manager Weighted Score: 76.1

Criteria Name	Score	Score Criteria
Condition	5	A. Immediate replacement or rehabilitation required
Performance (Service Level/Reliability)	2	C. Project moderate to low positive impact on service levels and/or system reliability
Regulatory (Environmental/Legal)	4	B. Project not part of mandated or enforceable program, but directly related to expected future requirements will increase compliance
Operations and Maintenance	3	C. Project moderate positive impact on O&M; alleviate some ongoing O&M issues
Health and Safety	3	C. Likely to address minor hazard issues or concerns
Public Benefit	2	C. Additional revenue/savings for GLWA (<\$100k/yr)
Financial	3	D. Canceling project moderate financial consequences (revenue loss, repair/restoration, downtime, fines, litigation)
Efficiency and Innovation	5	D. efficiency Water use, effluent reuse/recycling or other GLWA strategic initiatives; Business process optimization and institutional knowledge Process efficiency for a more robust system and less O&M; knowledge capture; or time & cost savings

Review Committee Weighted Score: 50.7

GLWA
GLWA CIP Summary
Annual Five-Year Capital Improvement Plan
FY 2021 through FY 2025
Proposed as of January 10, 2020

Water System Cost Allocation	5-Yr Total	% of 5-Year Total
CTA	\$ 128,961	99.3%
Subtotal Only	\$ 6,450	0.7%
Sub Total	\$ 135,411	100.0%

Wastewater System Cost Allocation	5-Yr Total	% of 5-Year Total
CTA	\$ 662,455	99.3%
CTD 03/17	\$ 71,990	0.7%
Sub Total	\$ 734,445	100.0%

Budget Spending Plan Summary
5-Year Total: \$2.1 billion
5-Year Annual Average: \$420 million
10-Year Total: \$2.3 billion
10-Year Annual Average: \$230 million

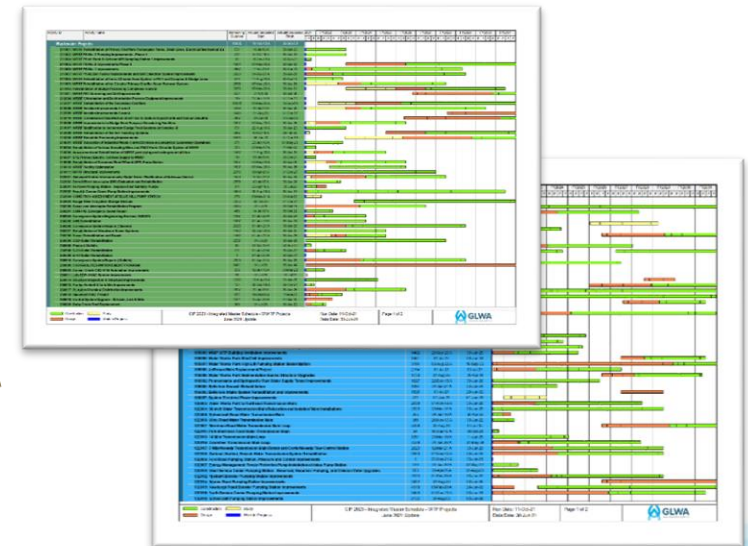
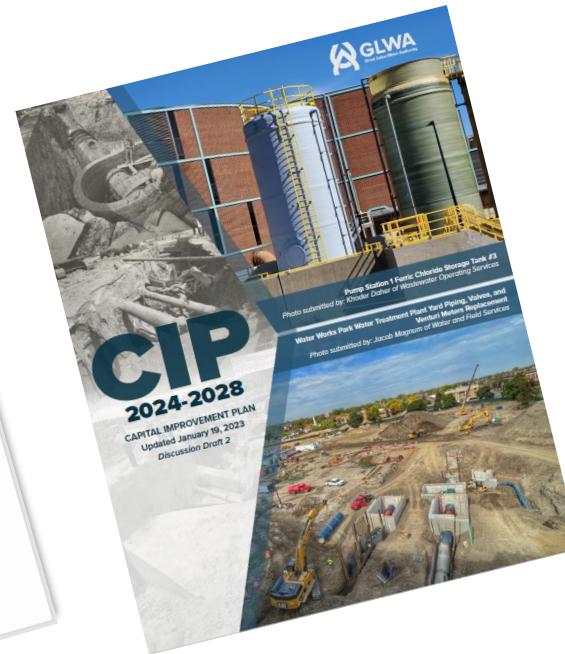
5 Year Plan Project Total
Total number of projects: 15
Total number of cost projects: 15

5 Year Total of Water Capital Projects
Increased by 10%: As with the water plan, increased by 10% in the planned spend. Considerations for maintaining our best in class water services view included during the development process. This resulted in a \$2.1 billion increase in last year's Board approved plan. The water conditions assessment information, from additional conditions assessment information, scope increase and the addition of six new water projects.

5 Year Total of Wastewater Capital Projects
Increased by 24%: As with the water plan, increased by 24% in the planned spend. The CIP process and reliability of the wastewater system drive the increase in the planned spend. The CIP process and reliability of the wastewater system drive the increase in the planned spend. The CIP process and reliability of the wastewater system drive the increase in the planned spend.

Typical CIP Development Schedule
The schedule below is for planning purposes. It reflects the past actual dates as well as proposed future dates and is subject to change. Specific approval dates and coordination with the Board of Directors is necessary to identify key milestones leading up to the ultimate approval of the 2021-2025 CIP.

Questions? Contact the Office of the Director of CIP at Director@glwa.com

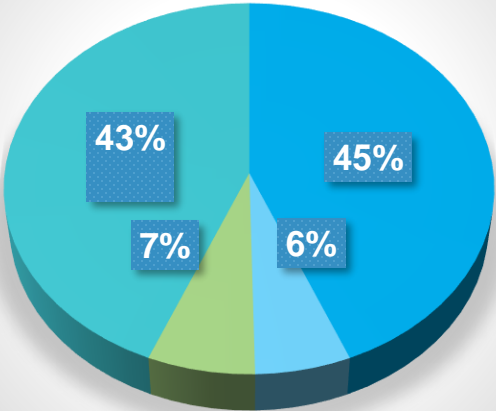


FY 24-28 STATISTICS and RECAP

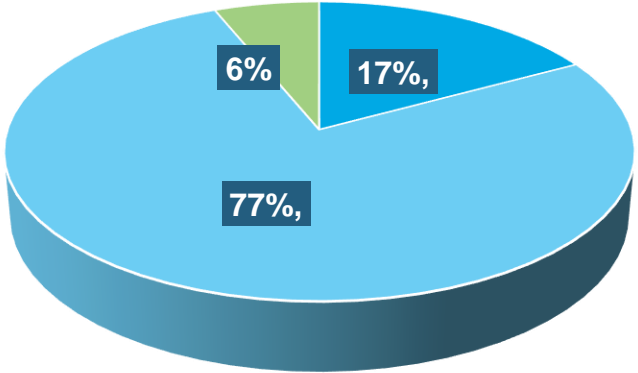


CIP Delivery Team

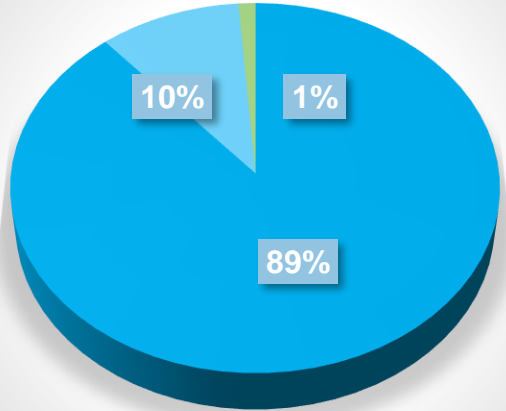
Water



■ Transmission ■ Pumps ■ Storage ■ Treatment

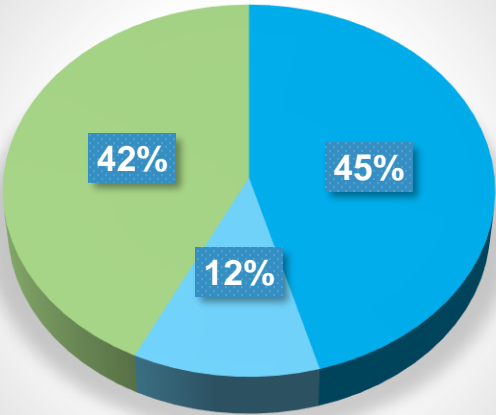


■ Active ■ Project Execution ■ Future Planned

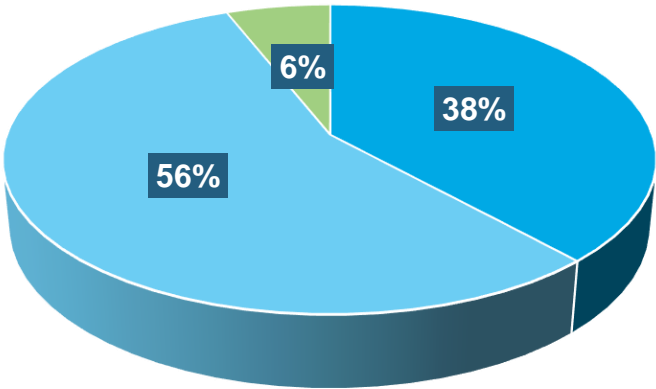


■ Construction ■ Design ■ Salary/Professional Services

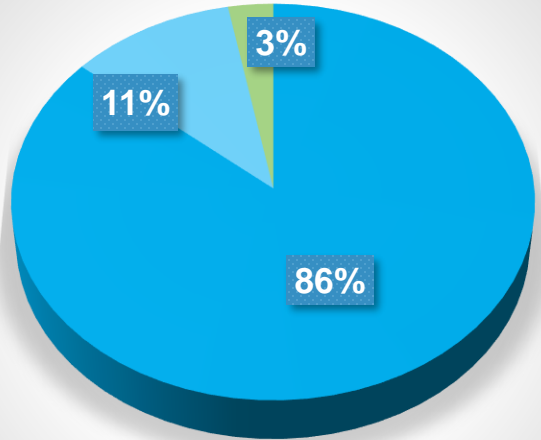
Wastewater



■ Conveyance/Pumps ■ CSO ■ Treatment

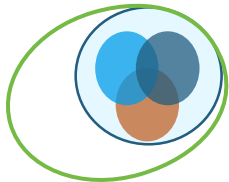


■ Active ■ Project Execution ■ Future Planned

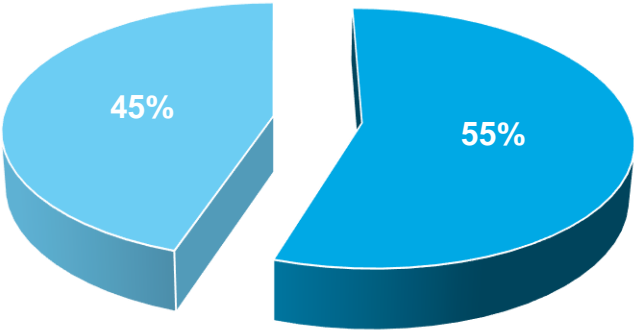


■ Construction ■ Design ■ Salary/Professional Services

FY 24-28 STATISTICS AND RECAP

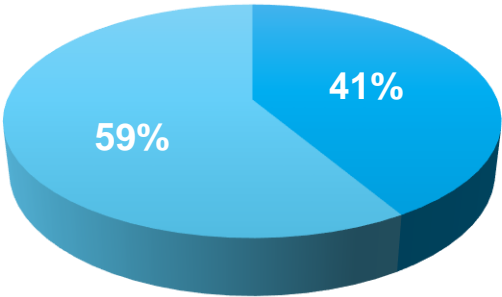


CIP Delivery Team



■ Water ■ Wastewater

WET WEATHER RESILIENCY



■ WWR

96-inch Water Transmission Main Relocation and Isolation Valve Installations

CIP Number: 122004

Project Status: Project Execution – Construction

Delivery Method: Construction Management At RISK (CMAR)

Score: 77.5

Design/Engineering: June 20 to Nov 28

Construction: Feb 22 to Aug 28

Total Project Budget: ~ \$269 M

Funding: Drinking Water Revolving Fund (DWRF)



- Addition of isolation valves along the 96-inch water transmission main to provide isolation and redundancy to Lake Huron WTP supply.
- Relocation of 2.5 miles of 96-inch transmission main currently located in the former G&H Industrial Landfill
- Installation of a new parallel main along 96" main between North Service Center station and Almont's master meter

REHABILITATION OF SCREENED FINAL EFFLUENT (SFE) PUMP STATION



CIP Number: 216008

Project Status: Project Execution – Design

Delivery Method: Progressive Design Build (PDB)

Score: 63.2

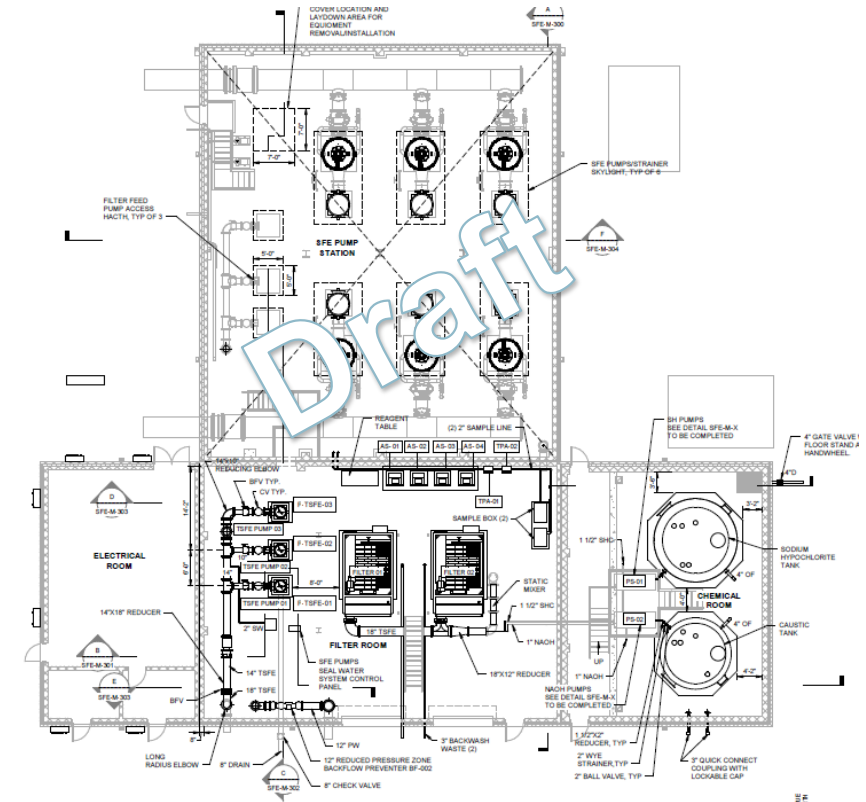
Design/Engineering (30%) : April 21-May 27

Construction: May 2024 to May 27

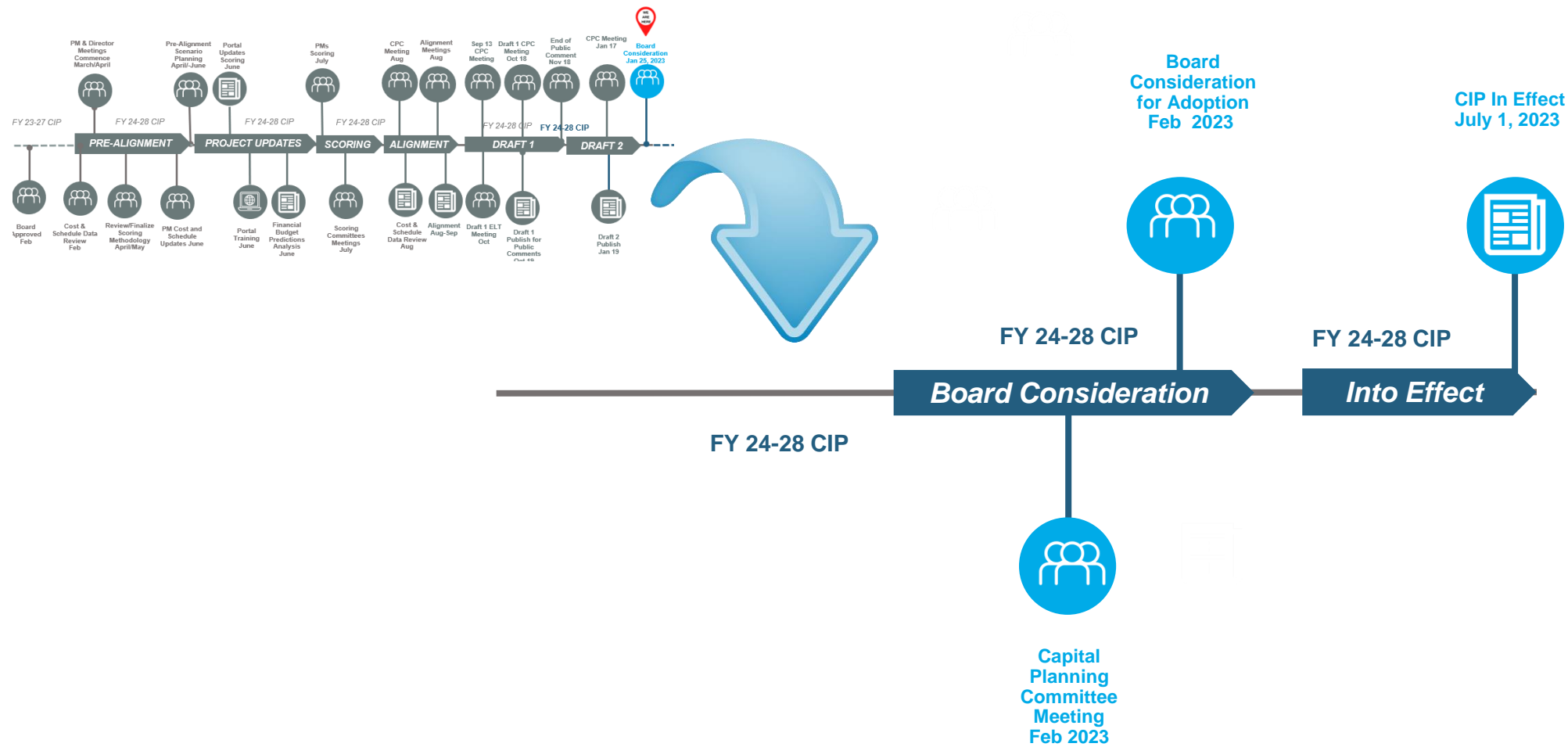
Total Project Budget: ~ \$63M

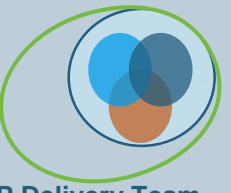
Funding: Bonds

- The SFE Pump Station provides SFE water to many of the GLWA WRRF treatment processes and needs to be completely rehabilitated to maintain uninterrupted supply of SFE water to these processes
- Project will provide service water for the plant
- Will be energy and resource efficient (Innovation). Provide a re-use of treated effluent.



FY 24-28 CIP-WHAT'S NEXT ?





CIP Delivery Team

QUESTIONS & THANK YOU

