



# Alignment of the CIP and Wastewater Master Plan

*GLWA Board Meeting  
July 24, 2019*



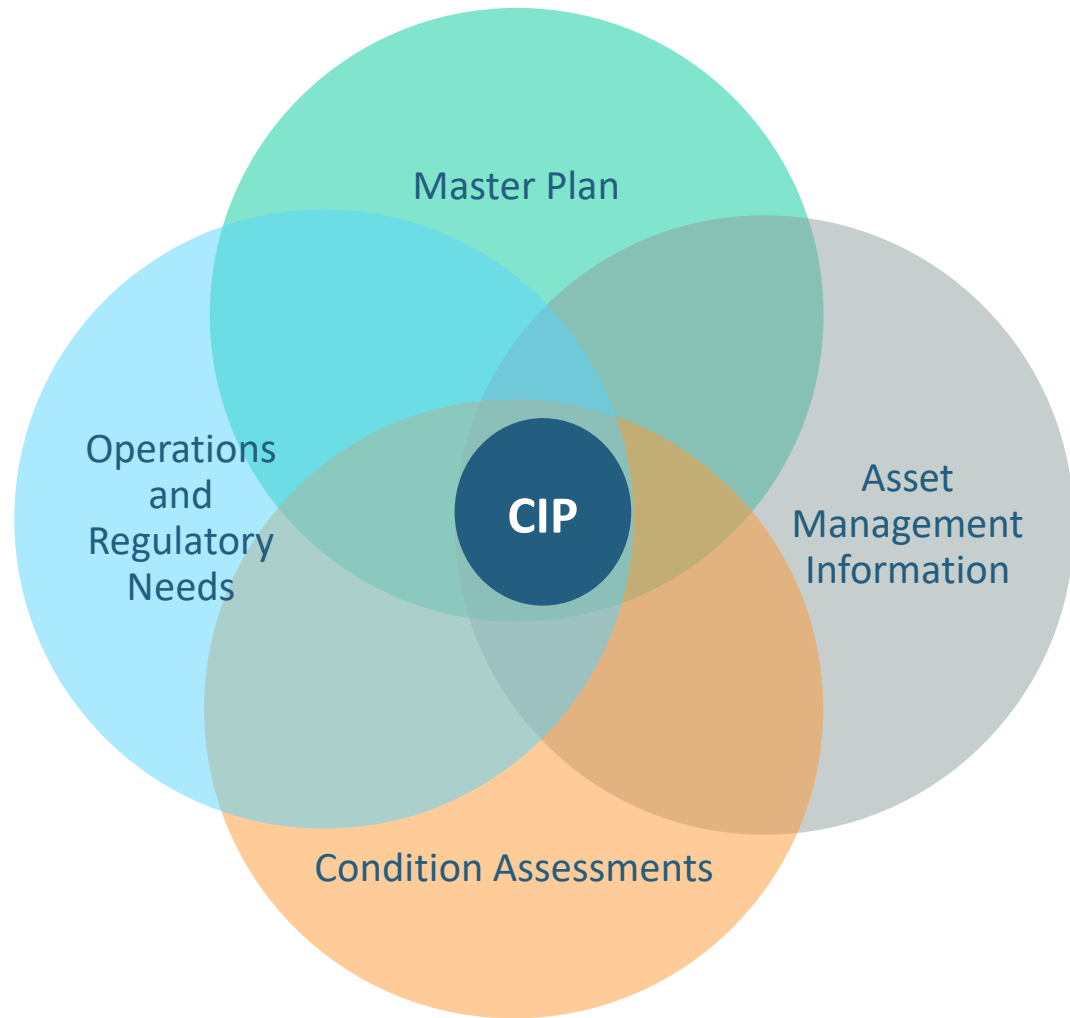
# Agenda

- ◆ Considerations and Initiatives that Inform the CIP
- ◆ How We Integrate and Align
- ◆ What Projects Have Been Aligned
  - ◆ Water Resource Recovery Facility Projects
  - ◆ Combined Sewer Overflow Projects
  - ◆ Field Services and Systems Control Projects
- ◆ Going Forward
- ◆ Questions

# Considerations and Initiatives that Inform the CIP



# Considerations in the CIP Development



# Initiatives that Inform the CIP's Development

## *Wastewater Asset Condition Assessments*

- ◆ Wastewater Interceptor System Inspections
- ◆ Pumping Station Inspections
- ◆ WRRF Scheduled Replacement Plans
- ◆ CSO Condition Assessments

## *Asset Management Program*

- ◆ Maintenance Work Order Records
- ◆ Asset Management Plans

## *Wastewater Master Plan*

- ◆ Long Term Planning Document
- ◆ Regional Focus
- ◆ Collaborative Approach

# How We Integrate and Align



# CIP Alignment with Wastewater Master Plan

| Team Member  | Master Plan Team | CIP Team |
|--|------------------|----------|
| Suzanne Coffey, Chief Planning Officer                 | ✓                | ✓        |
| Navid Mehram, Chief Operating Officer                  | ✓                | ✓        |
| Dan Alford, Director of WW Engineering and Maintenance | ✓                | ✓        |
| Chris Nastally, CSO Manager                            | ✓                | ✓        |
| Todd King, Director of Field Services                  | ✓                | ✓        |
| Biren Saparia, Systems Control Manager                 | ✓                | ✓        |
| Sherri Gee, Systems Planning Manager                   | ✓                |          |
| Ali Khraizat, Director of CIP                          | ✓                | ✓        |
| Master Plan Consultant, CDM Smith                      | ✓                |          |
| CIP Program Delivery Consultant, AECOM                 |                  | ✓        |

# Key Elements that Ensure Alignment

- Master Plan consultant has considered alternatives for existing, planned, and future CIP projects that are currently in the FY20-24 CIP
- Conversely, the projects that are already in the FY2020-2024 CIP have been included in consideration alongside new ideas that have emerged in the WWMP alternatives analyses
- WWMP alternative selection is currently underway and as alternatives emerge for consideration by member partners in workshops, key GLWA team members are present to understand, comment and plan accordingly
- In-depth discussions were held with key GLWA team members on each specific component of the wastewater system to share information and ideas



# Master Plan Meetings to Ensure CIP Alignment

| Meeting Date  | System Components and CIP Projects |
|---------------|------------------------------------|
| November 2018 | WRRF Biosolids                     |
| December 2018 | Interceptors                       |
| January 2019  | WRRF Preliminary Treatment         |
| February 2019 | WRRF Primary Treatment             |
| February 2019 | WRRF Secondary Treatment           |
| March 2019    | WRRF Disinfection                  |
| May 2019      | CSO Control                        |
| July 2019     | WRRF Biosolids                     |
| July 2019     | Trunk Sewers and Interceptors      |
| July 2019     | Pumping Stations                   |

# What Has Been Aligned



# Water Resource Recovery Facility

| CIP No. | Project Title  | PROJECT STATUS | ASSET MANAGEMENT | WWMP NO CHANGE | WWMP ALIGN |
|---------|--|----------------|------------------|----------------|------------|
| 211001  | Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery | A              | ✓                | ✓              |            |
| 211002  | Pump Station No. 2 Pumping Improvements  | A              | ✓                | ✓              |            |
| 211004  | Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements   | A              | ✓                | ✓              |            |
| 211006  | Rehabilitation of Main Lift Pumps at Pump Station No. 1  | A              | ✓                | ✓              |            |
| 211007  | Replacement of Bar Racks at Pump Station No.2  | A              | ✓                |                | ✓          |
| 211008  | Rehabilitation of Ferric Chloride Feed Systems   | A              | ✓                |                | ✓          |
| 212003  | Aeration System Improvements   | A              | ✓                |                | ✓          |
| 212006  | CS-1781 Rouge River Outfall (RRO) Disinfection (Alternative)   | A              | ✓                | ✓              |            |
| 213002  | Rehabilitation of Central Offload Facility   | A              | ✓                |                | ✓          |
| 213005  | WRRF Complex I Steam heaters   | A              | ✓                | ✓              |            |
| 213007  | Modification to Incinerator Sludge Feed Systems at Complex -II   | A              | ✓                | ✓              |            |
| 214001  | Relocation of Industrial Waste Control Division and Analytical Lab   | A              | ✓                | ✓              |            |

# Water Resource Recovery Facility

| CIP No. | Project Title  | PROJECT STATUS | ASSET MANAGEMENT | WWMP NO CHANGE | WWMP ALIGN. |
|---------|--|----------------|------------------|----------------|-------------|
| 216004  | Rehabilitation of Various Sampling Sites and PS#2 Ferric Chloride System at WRRF | A              | ✓                | ✓              |             |
| 216007  | DTE Primary Electric 3rd Feed Supply to WRRF                                     | A              |                  | ✓              |             |
| 216008  | Rehabilitation of Screened Final Effluent (SFE) Pump Station                     | A              | ✓                | ✓              |             |
| 211005  | Pump Station No. 2 Improvements Phase II at Wastewater Treatment Plant (WRRF)    | FP             | ✓                |                | ✓           |
| 211009  | Rehabilitation of the Circular Primary Clarifier Scum Removal System             | FP             | ✓                |                | ✓           |
| 212004  | Chlorination and Dechlorination Process Equipment Improvements                   | FP             | ✓                |                | ✓           |
| 212007  | Rehabilitation of the Secondary Clarifiers                                       | FP             | ✓                | ✓              |             |
| 212008  | WRRF Rehabilitation of Intermediate Lift Pumps (ILPs)                            | FP             | ✓                | ✓              | ✓           |
| 213006  | Improvements to Sludge Feed Pumps at Dewatering Facilities                       | FP             | ✓                | ✓              |             |
| 213008  | Rehabilitation of the Ash Handling Systems                                       | FP             | ✓                | ✓              |             |
| 216006  | Assessment and Rehabilitation of WRRF yard piping and underground utilities      | FP             | ✓                | ✓              | ✓           |

# CSO Facilities

| CIP No. | Project Title                      | PROJECT STATUS | ASSET<br>MANAGEMENT | WWMP<br>NO CHANGE | WWMP ALIGN |
|---------|------------------------------------|----------------|---------------------|-------------------|------------|
| 260600  | CSO Facilities Improvement Program | A              | ✓                   | ✓                 |            |

| CIP No. | Project Title                            | Project Description  |
|---------|--|--|
| 260601  | Oakwood Drain Valve Project              | Replacing drain valves, upgrading electrical   |
| 260602  | Fire Alarm Imp.                          | Fire alarm Improvements  |
| 260603  | Conner Creek Gate Project                | Improvements to Effluent Gates   |
| 260604  | Baby Creek CON-219                       | Baby Creek Influent Meters   |
| 260605  | Facility Assessment Proj (CS-299)        | Defining Facility Needs & CIP for CSO Facilities   |
| 260606  | Puritan Fenkell Roof Replacement         | Replacing PF roof (25 years old)   |
| 260607  | Leib Electrical Imp Projects             | Replacing actuators and flooded conduits.  |
| 260608  | 7 Mile Roof Replacement                  | Replacing SM Roof (25 years old)   |
| 260609  | 7 Mile Site Improvements                 | Fixing site drainage and paving issues   |
| 260610  | Baby Creek MAU Replacement               | Replacing 2 failed Makeup Air Units  |
| 260611  | Leib HVAC Improvements                   | Replacing failed HVAC Equipment  |
| 260612  | Puritan Fenkell & 7 Mile Level Sensors   | Replacing failed instrumentation @ Puritan Fenkell & 7 Mile  |
| 260613  | Baby Creek HVAC Improvements             | Modifying HVAC control sys, and headworks & electrical room HVAC to improve conditions for operators/equipment |
| 260614  | CSO Facility Struct. Improvement Program | Performing structural inspections & improvements   |
| 260615  | Puritan Fenkell & Leib Site Improvements | Improving site drainage, paving & lighting at PF & Leib  |

# Field Services and Systems Control

| CIP No.           | Project Title   | PROJECT STATUS | ASSET MANAGEMENT | WWMP NO CHANGE | WWMP ALIGN. |
|-------------------|---|----------------|------------------|----------------|-------------|
| 222002            | DRI Evaluation and Rehabilitation (including NIEA cross maintenance tunnel)   | A              | ✓                | ✓              | ✓           |
| 222004            | Collection System Elements Improvements                                       | A              | ✓                |                | ✓           |
| 232001            | Fairview Pumping Station - Replace Four Sanitary Pumps                        | A              | ✓                | ✓              |             |
| 232002            | Freud & Conner Creek Pump Station Improvements                                | A              | ✓                | ✓              | ✓           |
| 260200            | Sewer and Interceptor Evaluation and Rehabilitation Program                   | A              | ✓                | ✓              | ✓           |
| 260500            | CSO Outfall Rehabilitation  | A              | ✓                | ✓              |             |
| 222001            | Oakwood District Intercommunity Relief Sewer Modification at Oakwood District | FP             | ✓                |                | ✓           |
| 222003            | North Interceptor East Arm (NIEA) Evaluation and Rehabilitation               | FP             | ✓                | ✓              |             |
| <del>232003</del> | <del>Northeast Pumping Station</del>  | <del>FP</del>  |                  |                |             |

# Going Forward



# Going Forward

- 💧 Continued collaboration between WWMP consultant, WWMP teams, member partners, and GLWA team members
- 💧 Existing CIP projects are incorporated into the WWMP considerations
- 💧 CIP's future direction will be integrated with selected alternatives of WWMP
- 💧 WWMP will be finalized this fall and winter
- 💧 FY21-26 CIP approval process will follow its standard process this fall and winter. As such, all WWMP alternative selections will not be finalized and in the upcoming CIP. Complete inclusion will be the following year
- 💧 The work to date on the CIP will result in more specificity in the year 6 through 10 CIP projections
- 💧 Focused studies will be initiated based upon WWMP recommendations



# Questions





**GLWA**

*Great Lakes Water Authority*

**Have a Great Day!**