



DWSD Capital Improvement Program Update

December 7, 2016

Agenda



**CS-1812 Capital Improvement
Program Management Office Request
for Proposals** **3**

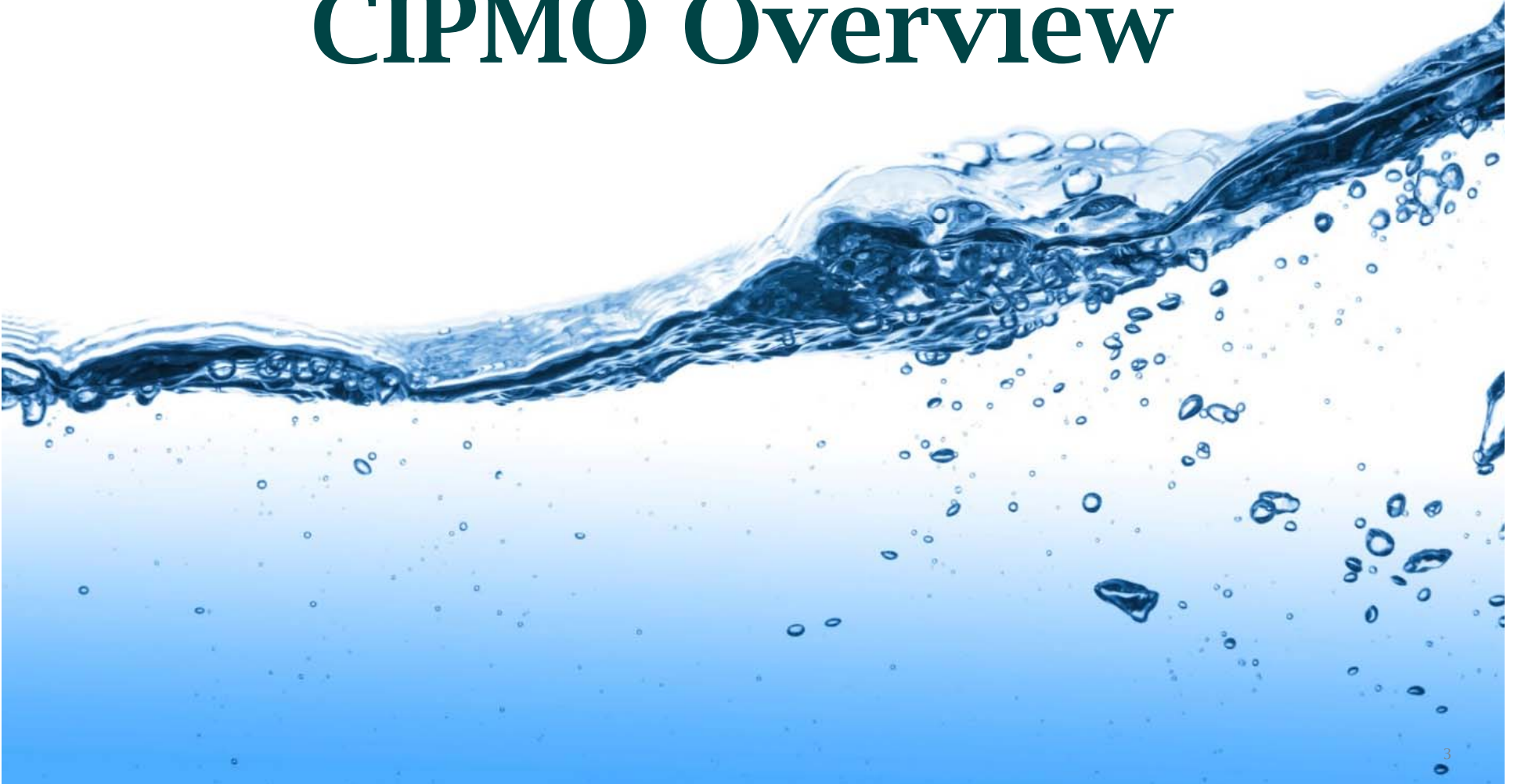
Review of Existing CIP Projects **24**

New CIP Projects for FY18 **29**

Questions and Discussion **32**



CIPMO Overview



DWSD Current State



Description	Water	Sewer
Historical Investments	Less than 1% per year	Less than 1% per year
Replacement/ Rehabilitation	15% of ~2,700 miles	15% of ~3,000 miles
Breakage	1,500 water main breaks per year	200 sinkholes and cave-ins per year
Average Age	95 years	95 years

Note: Above information subject to some exceptions.

CIPMO Goals



- **Implementation focus** - safety, on budget, on schedule and with a high degree of quality.
- **Water main replacement projects** - reduce non-revenue water and improve service levels.
- **Sewer inspection and lining projects** - reduce sinkholes and cave-ins.
- **Existing green infrastructure program** - reduce stormwater flow for treatment and untreated CSO discharges.
- **Increase coordination** - with other utilities and agencies (i.e., City departments/Wayne County/State of Michigan/utilities).
- **Maximize value of all funding sources**- greatest volume of work for appropriate cost.

CIPMO Services Overview



- Five year contract with two one-year optional extensions.
- \$300 million - \$400 million program spend.
- Program administration.
- Two pilot areas (to inform on technical issues).
- Advanced metering infrastructure.
- Asset management driven prioritization.
- CIP documentation.
- CIP implementation.
- Water and sewer standards and policies update.
- Sustainable program implementation.
- As-needed assistance.

Comparable Cities with PMOs



- Other cities contract PMO services to manage large water and sewer capital improvement programs
 - Northeast Ohio Regional Sewer District (NEORSDD) – Cleveland, OH
 - Chicago, IL
 - Allegheny County Sanitary Authority (ALCOSAN) - Pittsburgh, PA
 - San Francisco, CA
 - Hamilton County/Cincinnati, OH
 - New York City, NY
 - Winnipeg, Canada
- DWSD needs expertise and resources to effectuate its CIP and development of internal staff in the near term is not a realistic option

DWSD Resources



- Procurement, Engineering, Program Management resources are inadequate to manage activity level.
 - Staff split with GLWA, high number of retirements, as well as planned/potential retirements all affecting DWSD.
 - Not able to manage well at old funding levels, let alone at an accelerated pace with substantially more activity.
 - Much of the GIS system information is not current due to lack of resources and competing priorities.
- Outside resources are needed to maximize benefit of funding and to accelerate repair and rebuild of water and sewer systems.

Development of DWSD Staff



- A formal training and employee development program is a requirement of the RFP to transition the workload to DWSD staff during the tail end of the contract term.
- This requirement is dissimilar to how other cities have historically approached PMOs, with many staying on for a decade or more.
- The contract will include language and teeth (i.e., penalties) to ensure a transition occurs during the contract term.

Inclusion Program



- CIPMO inclusion program has the following components:
 - ***Detroit-Based/Disadvantaged/Minority/Small/Woman-Owned Business Enterprise Program*** - an inclusion/subcontracting program to provide opportunities for these types of businesses and City residents on DWSD projects.
 - ***Detroit Residents Employment Opportunities*** - particular attention given to Detroit resident groups facing high unemployment.
 - ***Underrepresented Minority Internship Program*** - recruits underrepresented minorities in school to train and develop potential field services maintenance or engineering staff for DWSD.
- Each of the three proponents to the RFP have substantial Detroit-based resources and are committed to developing that further.

Pilot Program

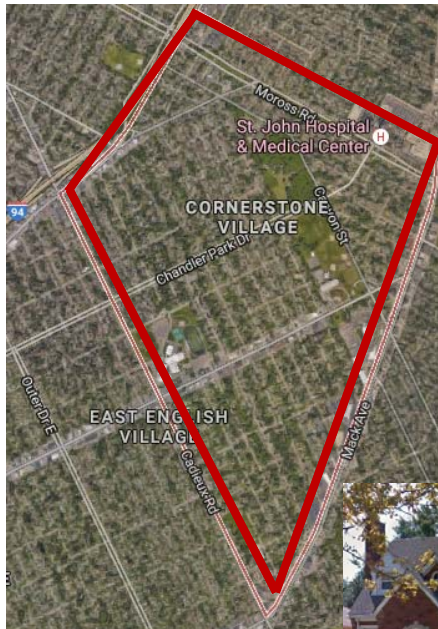


- Pilot acts as testing phase that will provide useful lessons to be utilized throughout the contract.
- Scope of work for pilot areas includes:
 - Review existing data, inspect and document condition of assets.
 - Obtain flow metering data, conduct fire flow and pressure ratings.
 - Develop and calibrate water hydraulic model.
 - Develop and evaluate alternatives for improving level of service.
 - Implement program policy for LSL replacement.
 - Develop and evaluate water and sewer system replacement/rehabilitation alternatives.
 - Develop an implementation plan for water and sewer system renewal.

Pilot Program Areas



Cornerstone Village



Google. (2016). [Cornerstone Village]



Google. (2016). [Cornerstone Village, Lanoo Street]

North Rosedale Park



Google. (2016). [North Rosedale Park]



Google. (2016). [North Rosedale Park, Greenview Avenue]

DWSD Funding



- GLWA Water Bond issuance, DWSD receives \$90M, historically low interest rate
- Bonds for sewer work will be issued at the time GLWA goes to market
- Investment in local infrastructure will be 2-3 times the annual spend in recent years from \$20-30M > \$50-80M
- Maximize use of SRF funds as applicable

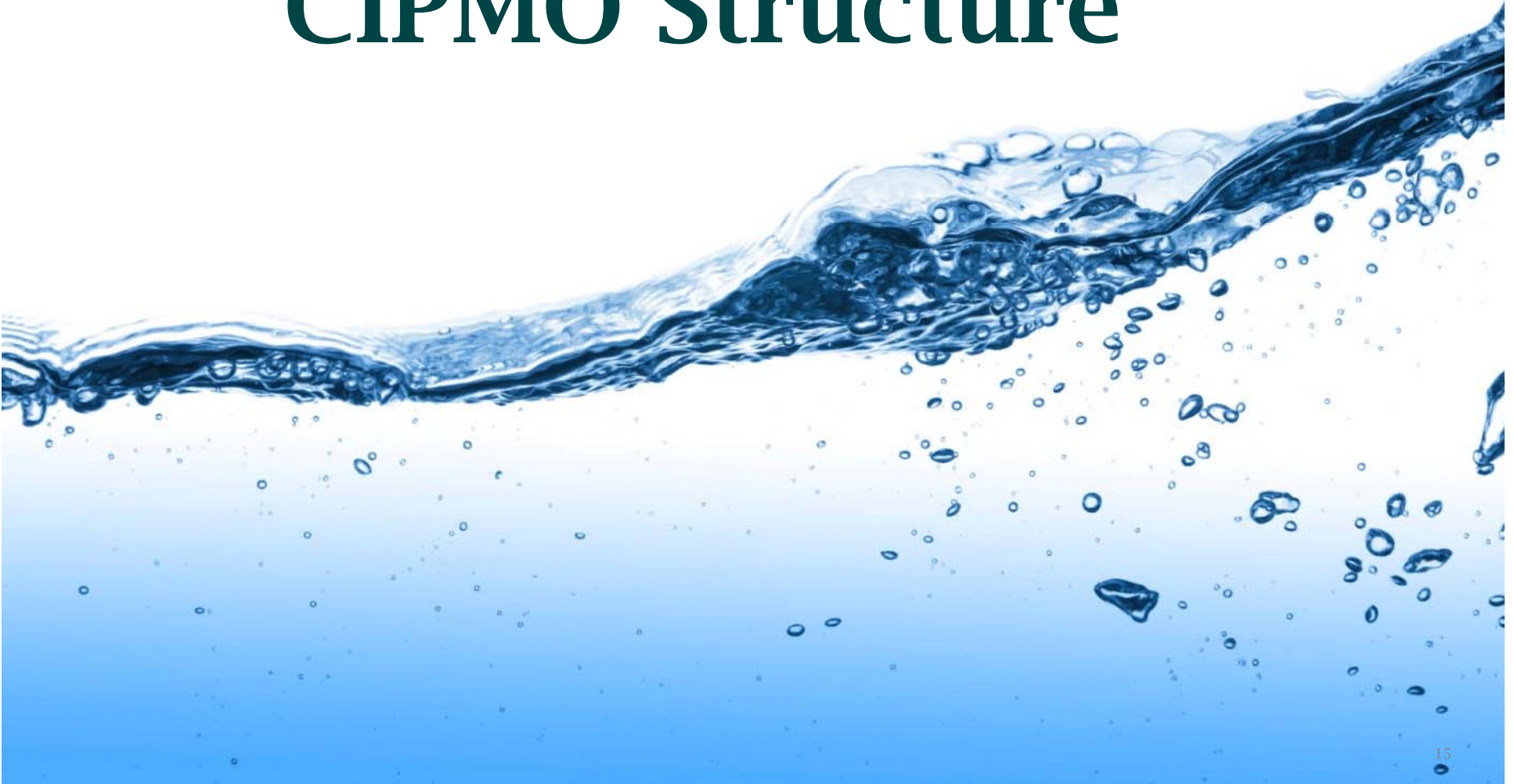
Preliminary CIPMO Sources and Uses



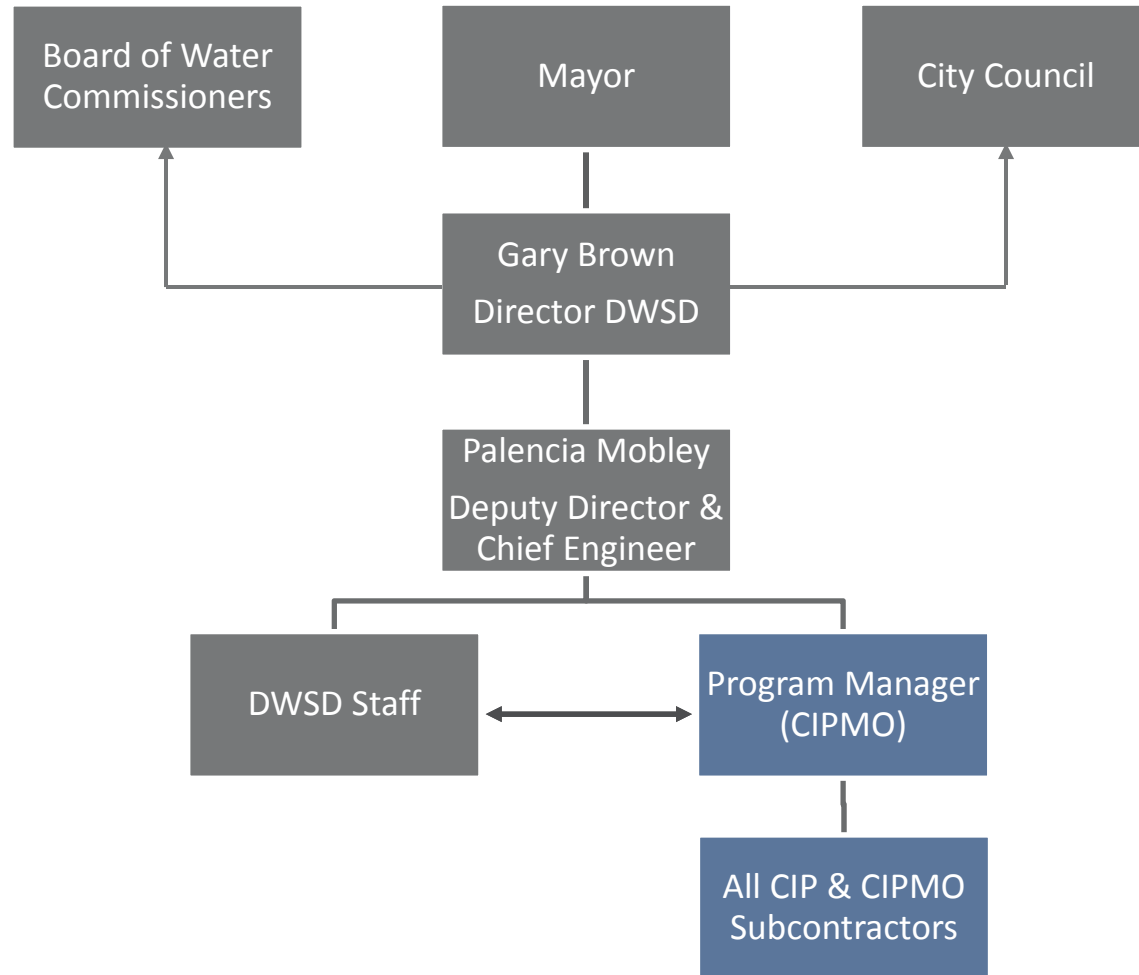
(\$ Millions)	FY2018	FY2019	FY2020	FY2021	FY2022	5-Year Total
Sources						
Water						
Bonds	\$ 40	\$ 33	\$ 40	\$ 40	\$ 10	\$ 163
Revenue	-	7	-	-	30	37
Total Water	40	40	40	40	40	200
Sewer						
Bonds	20	40	32	32	32	156
Revenue	20		8	8	8	44
Total Sewer	40	40	40	40	40	200
Total Sources	\$ 80	\$ 80	\$ 80	\$ 80	\$ 80	\$ 400
Uses						
Water	40	40	40	40	40	200
Sewer	40	40	40	40	40	200
Total Uses	\$ 80	\$ 80	\$ 80	\$ 80	\$ 80	\$ 400



CIPMO Structure



Organizational Chart



- CIPMO co-located with DWSD staff at the Huber facility.
- CIPMO to integrate and work in parallel with DWSD staff.

DWSD Maintains Proper Control



Table of Authorities			
	Roles & Tasks	CIPMO	DWSD
1.	CIP Development	Recommends	Approves
2.	Program Scoping	Prequalifies*/prioritizes	Approves
3.	Metering Technical Specs	Recommends	Approves
4.	Design Management	Approves	Stamps
5.	Contractor Management**	Oversees contractors	May participate
6.	Contractor Inspection**	Approves	Audits
7.	RFP Issuance**	Issues RFP	Audits
8.	Contractor Selection**	Recommends	Approves
9.	PO Issuance**	Issues PO	Audits
10.	Change Orders**	Recommends	Approves
11.	Subcontractor Payment**	Makes payment	Audits
12.	Liaison with Other Depts./Agencies	Provides service	May participate
13.	Standards Development and Update	Drafts	Approves
14.	Program Control - day-to-day	Manages	None
15.	Program Control - strategic matters	Recommends	Approves
16.	CIPMO Initial Staffing Level	Recommends	Approves
17.	CIPMO Changes to Staffing Level	Recommends	Approves
18.	GIS Database Updating	Updates	Hosts
19.	Inclusion Program	Recommends	Approves

* CIPMO should ensure consistency with Master Plan and across individual projects.

** Includes design, construction or metering

RFP Issuance/Contractor Selection



- **CIPMO develops Bid Documents**
- **Vendors submit proposals**
- **CIPMO evaluates proposals**
 - DWSD staff will be a part of the evaluation process
- **CIPMO recommends contract for award**
- **DWSD presents contract to BOWC for approval**
 - Per RFP DWSD approves all contractor selection
- **CIPMO contracts with DWSD approved firm**

Commercial Structure



- **Single-point of contact** – one point of contact (the “prime”) for DWSD to contract and interface with.
- **Bonding** - CIPMO prime shall furnish performance and payment bonds.
- **Self-Performance** – permitted for all functions of this contract other than construction (self-performance of design and engineering services permitted).
- **Subcontractor management** - CIPMO to issue RFPs, POs and payments to subcontractors → Quicker payments, more bidders, more competitive bidding
- **Reporting** - Quarterly and annual reports on program completion including DBB/MBE/WBE and Detroit resident participation levels
- **Faster Execution and Implementation** – **Less than 60 days** from advertisement to award; DWSD contracts on average take **6 months or more** from advertisement to award.

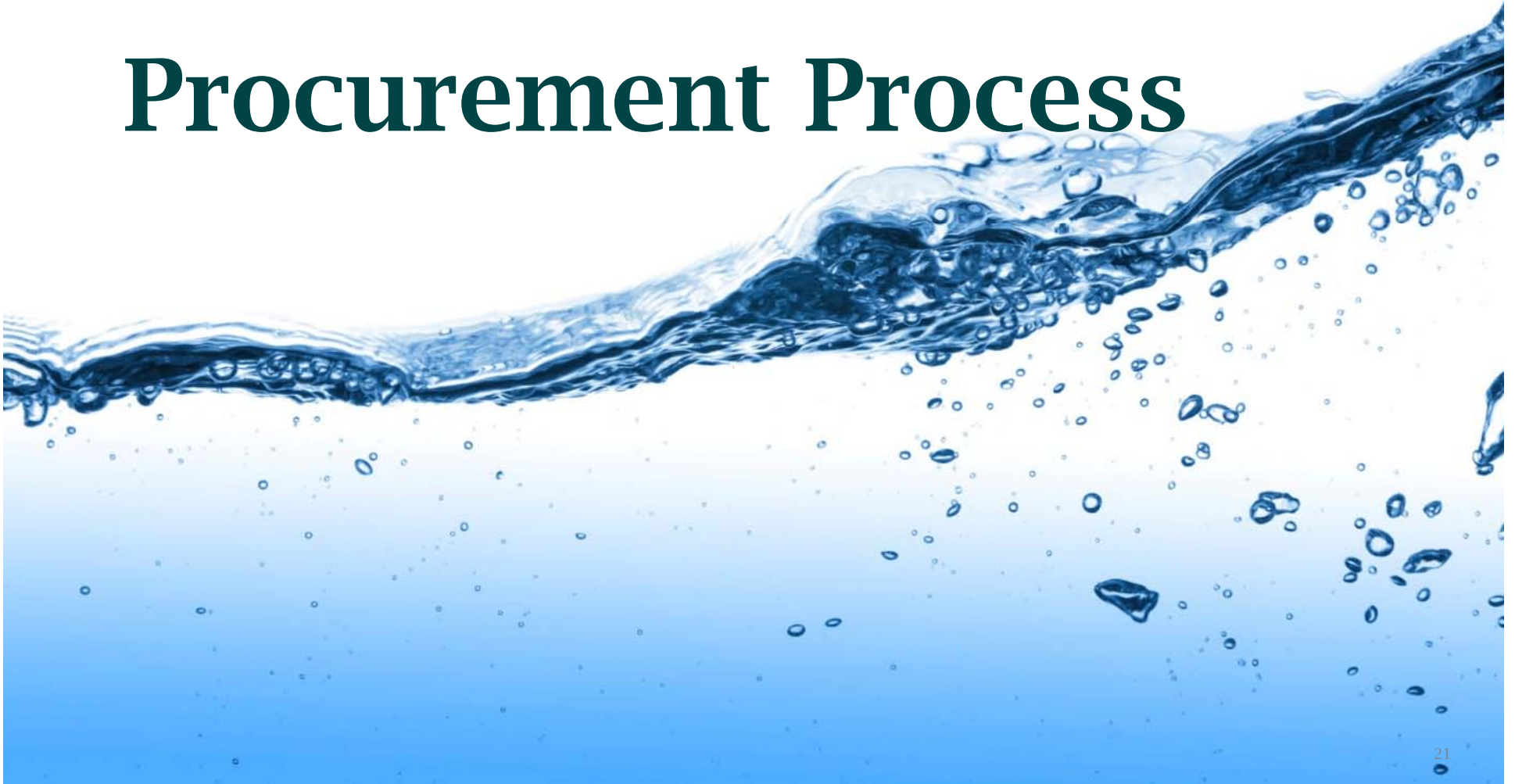
Key Benefits of Structure



- **Lessons learned** from similar DWSD contracts.
- **Need for speed.**
- **Mitigate administrative bottlenecks** until DWSD can balance internal capabilities with PMO's ability to execute.
- **Provide for flexibility** to utilize full PMO capabilities upfront and toggle back to DWSD over time (i.e., construction contracts).
- **Fusion implementation** poses risks to timely execution in near term.



CIPMO Procurement Process



Status of RFP Process



RFP Procedure Item	Status
RFP Issued	July 22, 2016
Number of RFP Downloads	102 Firms
Number of Firms in Attendance at Pre-Proposal Conference	44 Firms
RFP Responses Received	3 Bids (27 Total Team Member Firms)
Evaluation Committee in Evaluation Phase	Formal Interviews – November 2017

Proposed Approval Schedule



Decision Phase	Target Date
Proposals Submitted	September 2, 2016
Evaluation and Selection Process Completed	November 2016
Contract Negotiation Completed	December 2017
BOWC Approval	January 18, 2017
City Council Approval	January 31, 2017
Pre-FRC Review	February 7, 2017
FRC Approval	February 17, 2017
Launch CIPMO	March 2017
Pilot Project Construction Bids	Q4 2017



Review of Current CIP Progress



Water Main Program Highlights



- Contracts WS-685, 686, 697: 11 miles of main completed, 3.5 miles remaining
- Work completed in 18 months or less due to timing and favorable weather for winter 2015-2016
- Added an emergency replacement to WS-686 for Dix Rd (Oakwood to Mellon)
- Fast tracked design of W. Outer Drive (Livernois to 7 Mile & Schafer to McNichols), Wayne County to resurface in 2017 and 2018

Sewer Repair Program Highlights



- Emergency repair for Tireman sewer at Greenfield completed
 - Cost \$2.5 Million, Duration 7 Months
 - Inspected sewer to its terminus at Trinity and sewer was in great condition, solids accumulation 2-3 feet in depth for last 1500 feet



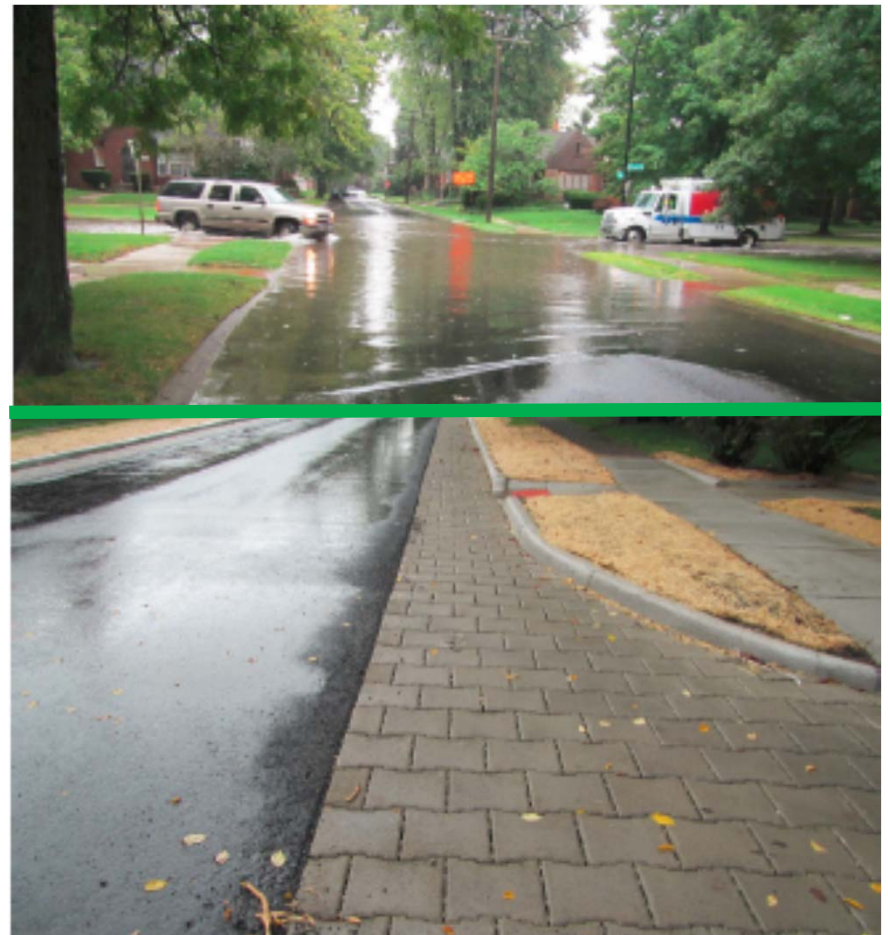
Green Infrastructure Program Highlights



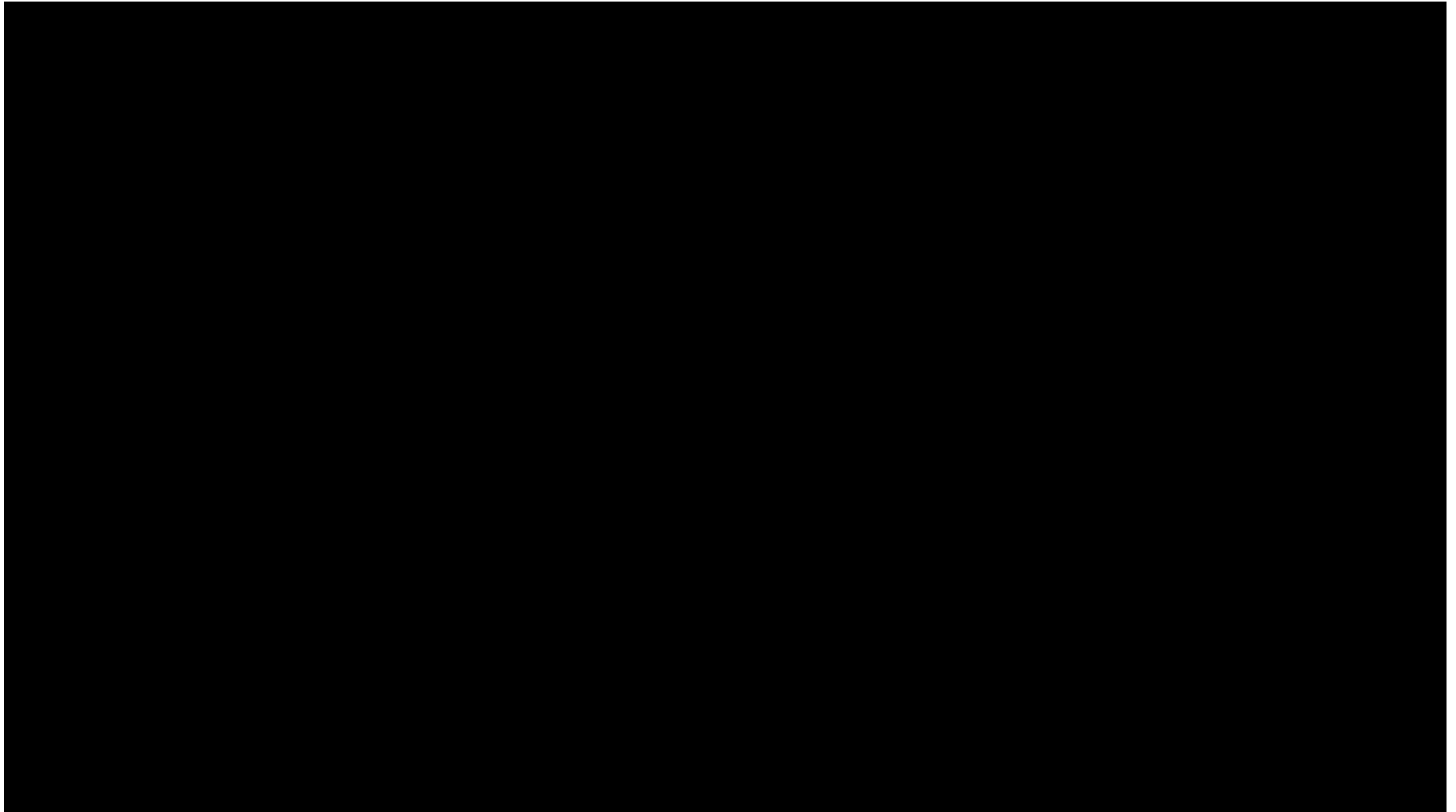
- Bioswales on Tireman in front of residences



- Pervious pavement in the parking lanes on Keeler Street reduce street flooding



Viola Liuzzo Park Project





New CIP Projects for FY17 and 18

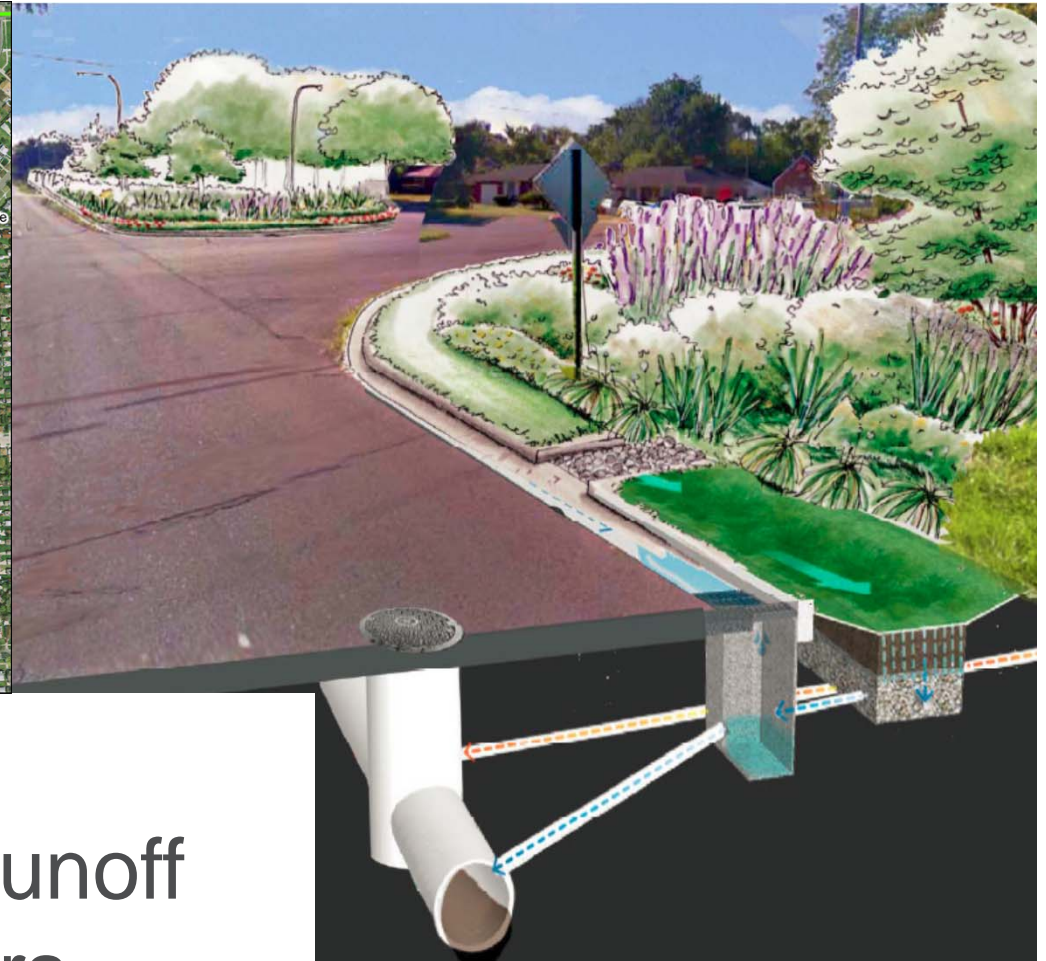
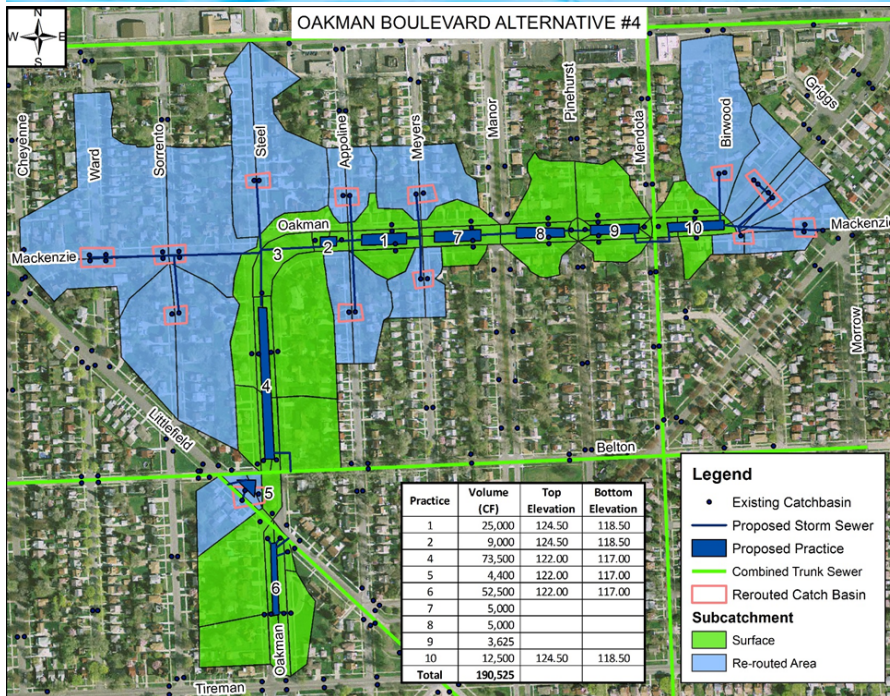


New Projects Summary Table



Type	Description	Start	Finish	Cost
Water	WS-698 Water Main Replacement	3/1/2017	9/1/2018	\$ 10,000,000
Water	WS-703 Water Main Replacement	4/1/2017	10/1/2018	\$ 13,000,000
Water	WS-704 Water Main Replacement	7/1/2017	1/1/2019	\$ 12,000,000
Water	WS-705 Water Main Replacement	7/1/2017	1/1/2019	\$ 9,000,000
Sewer	DWS-903 Inspection and Rehabilitation of Sewers City Wide	7/1/2017	6/30/2020	\$ 60,000,000
Sewer(G)	Crowell Rec Center and EcoSite Modifications	4/1/2017	12/31/2017	\$ 900,000
Sewer(G)	Oakman Blvd Phase I	7/1/2017	12/31/2018	\$ 2,700,000
Sewer(G)	Oakman Blvd Phase II	7/1/2017	12/31/2018	\$ 1,900,000
Sewer(G)	Vacant Lot Bioretention	5/1/2017	6/30/2018	\$ 900,000
Sewer(G)	O'Shea Park	6/1/2017	12/31/2017	\$ 600,000
		Total Water		\$ 44,000,000
		Total Sewer		\$ 60,000,000
		Total Sewer (G)		\$ 7,000,000

Oakman Boulevard Project



- 63 acres managed
- 1.4 Million Gallons runoff removed from sewers

Questions/Discussion

