



SUMMARY OF FY 2018 – 2023 STORMWATER UNFUNDED NEEDS

JANUARY 10, 2017

STORMWATER MANAGEMENT SYNOPSIS

- Stormwater Management consists of three interconnected elements: Flood Control/Drainage, Water Quality/Regulatory Compliance, and Operations & Maintenance
- Two of these are as old as civilization – Flood Control/Drainage and the Operations & Maintenance needed to assure adequate Flood Control/Drainage
- Stormwater Quality/Regulatory Compliance is the newest element first appearing in the 1970's, with the first major regulations in the 1980's, with ever more stringent regulatory requirements bringing us to the present with many specific regulatory programs: VSMP, E&S, TMDLs, and the NPDES MS4 program (all this the subject of the June 7, 2016 presentation to Council)
- Sea Level Rise and the apparent increase in the frequency of storms with major rainfall is revealing those areas now (or soon to be) experiencing Recurrent Flooding (this topic was included in the April 22, 2014 presentation to Council)
- Recent storm events have produced major flooding in several areas such as Ashville Park, Sherwood Lakes, Windsor Woods, PA Plaza/Pecan Gardens, the Lakes, Eastern Shore Drive, and the Central Resort Area (Two of these have been subject of previous council presentation: Central Beach District Drainage – June 23, 2015 and Eastern Shore Drive Drainage Improvements Project Briefing Part II – April 22, 2014.)
- Funding for Stormwater Management has not kept up with these increasing demands
- The presentation to Council on December 13, 2016 identified the main current unfunded needs in Stormwater Management

THREE MAJOR FUNCTIONAL COMPONENTS FULLY INTEGRATED

Water Quality / Regulatory Compliance

- Program Compliance / Ongoing Activities / Projects
- June 2016 Estimated Annual Program Cost \$8 to \$12M
- FY17 Funding \$4.2M (CIP & Operating Annual Funding)
- Unfunded Request
 - Projects = \$5.5M annually + \$13M one time
 - Staff for Implementation of Program Elements: 10 FTEs

Center of Excellence

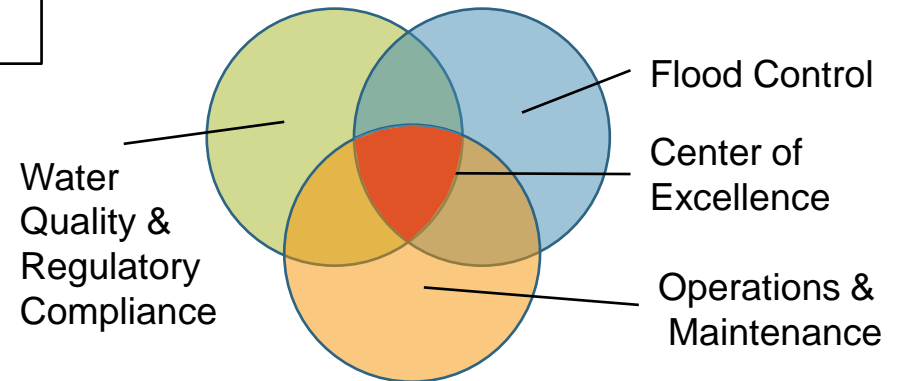
- Stormwater Management Strategic Planning
- FY17 Funding \$0.4M
- Completion of Citywide SWM Master Plan \$2.3M
- 5 FTEs – Center of Excellence

Operations and Maintenance

- Regulatory Compliance/ Aging Infrastructure/ Expanded Infrastructure
- FY17 Funding \$37.1M
- Unfunded Request \$55.5 M
 - Operations and Maintenance Projects
 - Staff for Implementation: 12 FTEs

Flood Control

- Program and Manage Stormwater Drainage Improvement Projects
- FY17 Funding \$7.3M
- 8 Projects \$360M
- 3 FTEs – Flood Control Projects



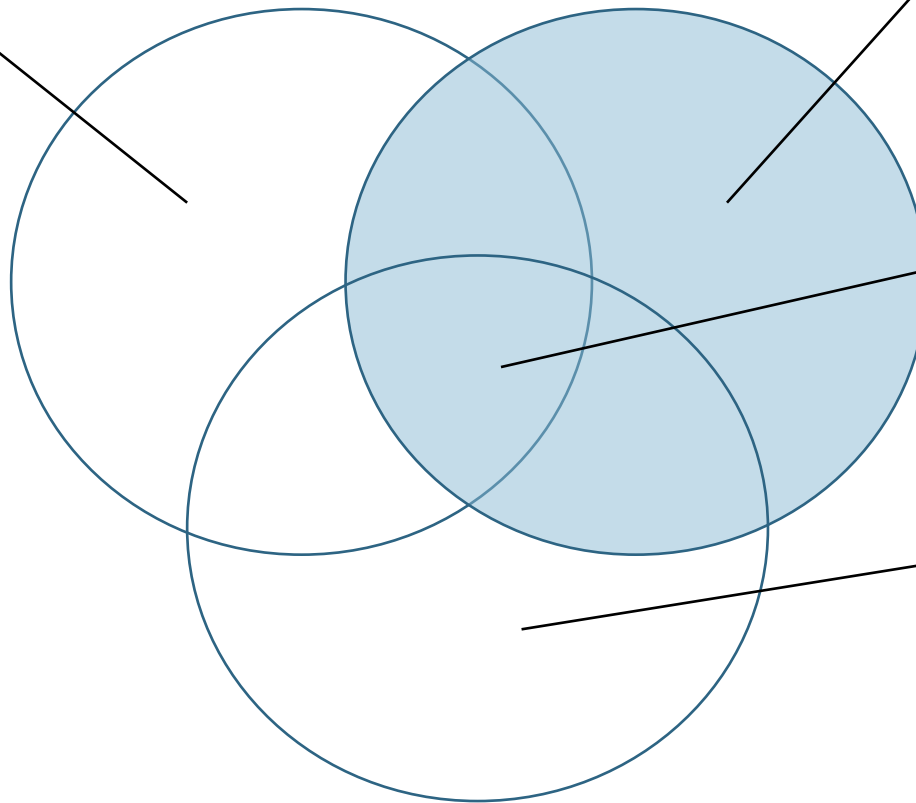
FLOOD CONTROL

**Water
Quality**

Flood Control

**Center of
Excellence**

**Operations &
Maintenance**



FLOOD CONTROL

- Needs are associated with new flood control CIP projects.
- Capital Improvement Program
 - \$359.9M of Flood Control projects
- Flood Control Projects Additional Staff
 - FY18 \$381k (to support 3 FTEs)
 - FY 19 and beyond \$283K annually (to support 3 FTEs)

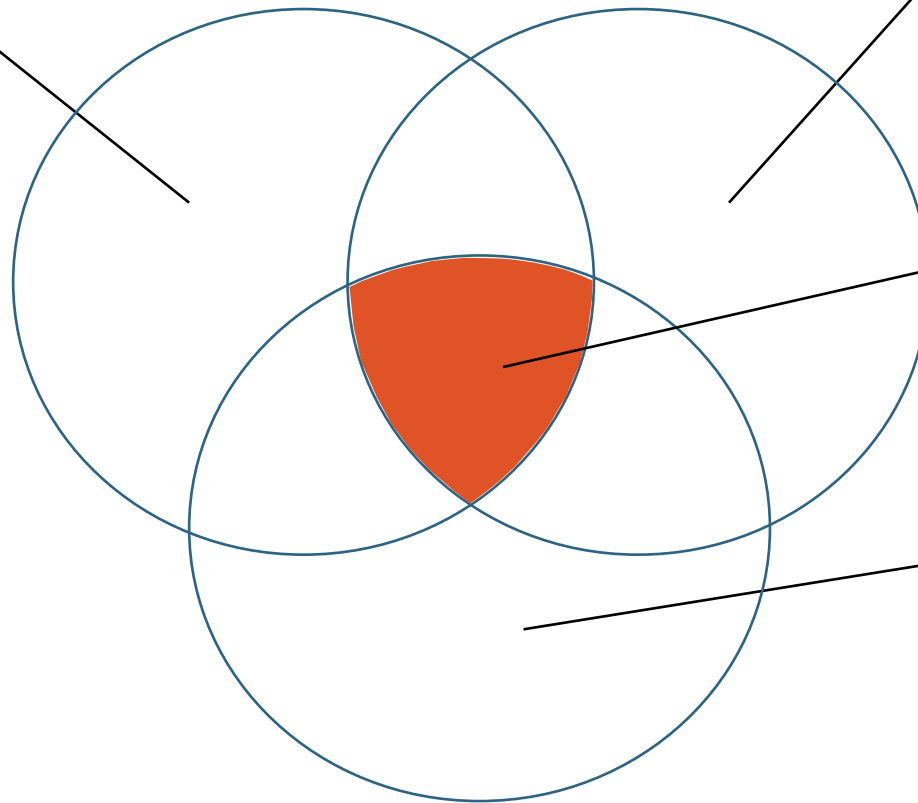
FLOOD CONTROL NEEDS

| CIP # | Project Title | Total Requested |
|--------|--|-----------------|
| 7-400 | Aragona Drainage Improvements | 1,400,000 |
| 7-028 | Windsor Woods Drainage | 31,100,000 |
| SW-FC4 | Princess Anne Plaza/Pecan Gardens Drainage Improvements | 66,000,000 |
| SW-FC3 | The Lakes Drainage Improvements | 28,000,000 |
| 7-029 | Eastern Shore Drive Drainage - Phase II | 65,400,000 |
| SW-FC1 | Ashville Park Drainage Improvements | 35,000,000 |
| SW-FC2 | Sherwood Lakes Drainage Improvements | 20,000,000 |
| 7-041 | Central Resort District Drainage Improvements | 113,000,000 |
| | Total | 359,900,000 |

CENTER OF EXCELLENCE

**Water
Quality**

Flood Control



**Center of
Excellence**

**Operations &
Maintenance**

CENTER OF EXCELLENCE

- The Center of Excellence twofold Mission:
 - Stormwater Strategic Planning
 - Citywide Stormwater Master Planning
 - City Comprehensive Plan for Sea Level Rise and Recurrent Flooding
 - Development of Regional Stormwater Management Plans
 - Development of Maximized Stormwater Practices for Tidewater Areas
 - Special Stormwater Services
 - Technical Support to the Planning / DSC for complex Private Development Projects
 - Technical Support for SWM Public / Private Agreements
 - Development and Maintenance of Stormwater Standards
 - Management and Data Analysis of the City System of Rain and Tide Gauges

CENTER OF EXCELLENCE

- Unfunded Needs
 - Completion of Citywide Stormwater Management Master Plan: \$2.3M
 - Additional Staff Resources
 - FY18 \$637K (to support 5 FTEs)
 - FY 19 and beyond \$518K annually (to support 5 FTEs)

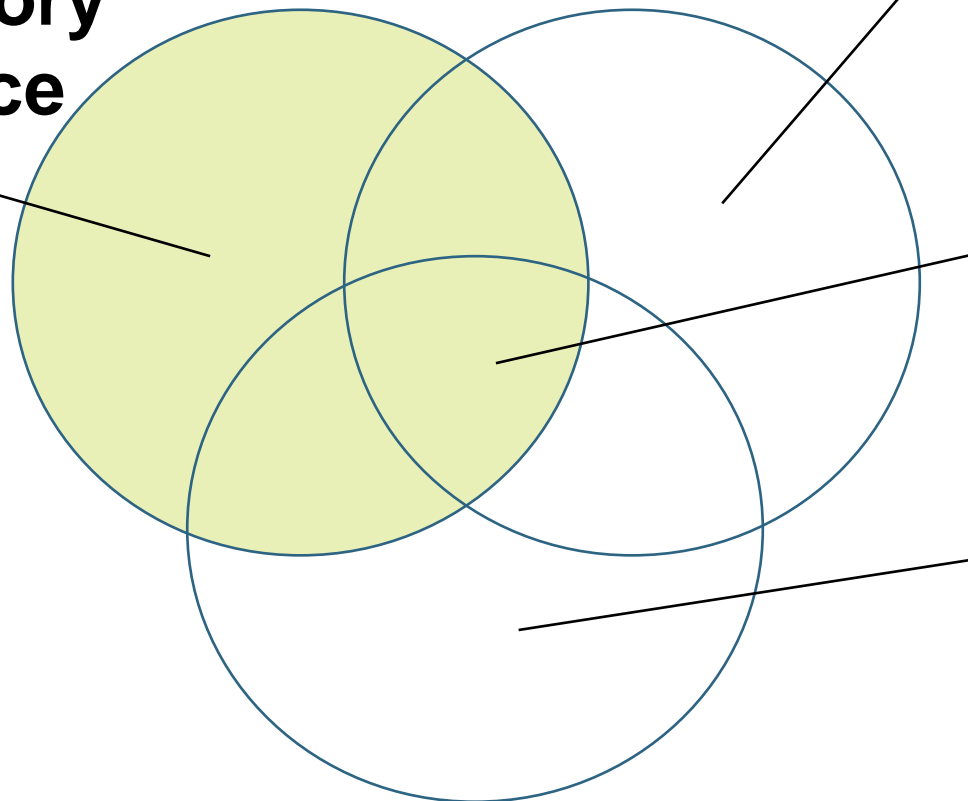
WATER QUALITY

**Water Quality
& Regulatory
Compliance**

Flood Control

**Center of
Excellence**

**Operations &
Maintenance**



MS4 STORMWATER PERMIT FY 2018 UNFUNDED NEEDS

**\$1M = \$0.8M CIP
+ \$0.2M Operating**

\$1M-\$1.5M

Program
Administration
and Reporting

June 2016

\$8M-\$12M

December 2016

**\$8.1M = \$5.5M CIP
+ \$2.6M Operating**

Stormwater
Pollution
Reduction

Operational
Requirement

MS4
Program

**\$3.4M = \$1.7M CIP
+ \$1.7M Operating**

\$4M-\$5.5M

**\$2.9M = \$2.5M CIP
+ \$0.4M Operating**

\$2M-\$3M

Infrastructure
Data
Management

Public
Outreach
and
Education

**\$0.4M = \$0.3M CIP
+ \$0.1M Operating**

\$0.5M-\$1M

**\$0.4M = \$0.2M CIP
+ \$0.2M Operating**

\$0.5M-\$1M

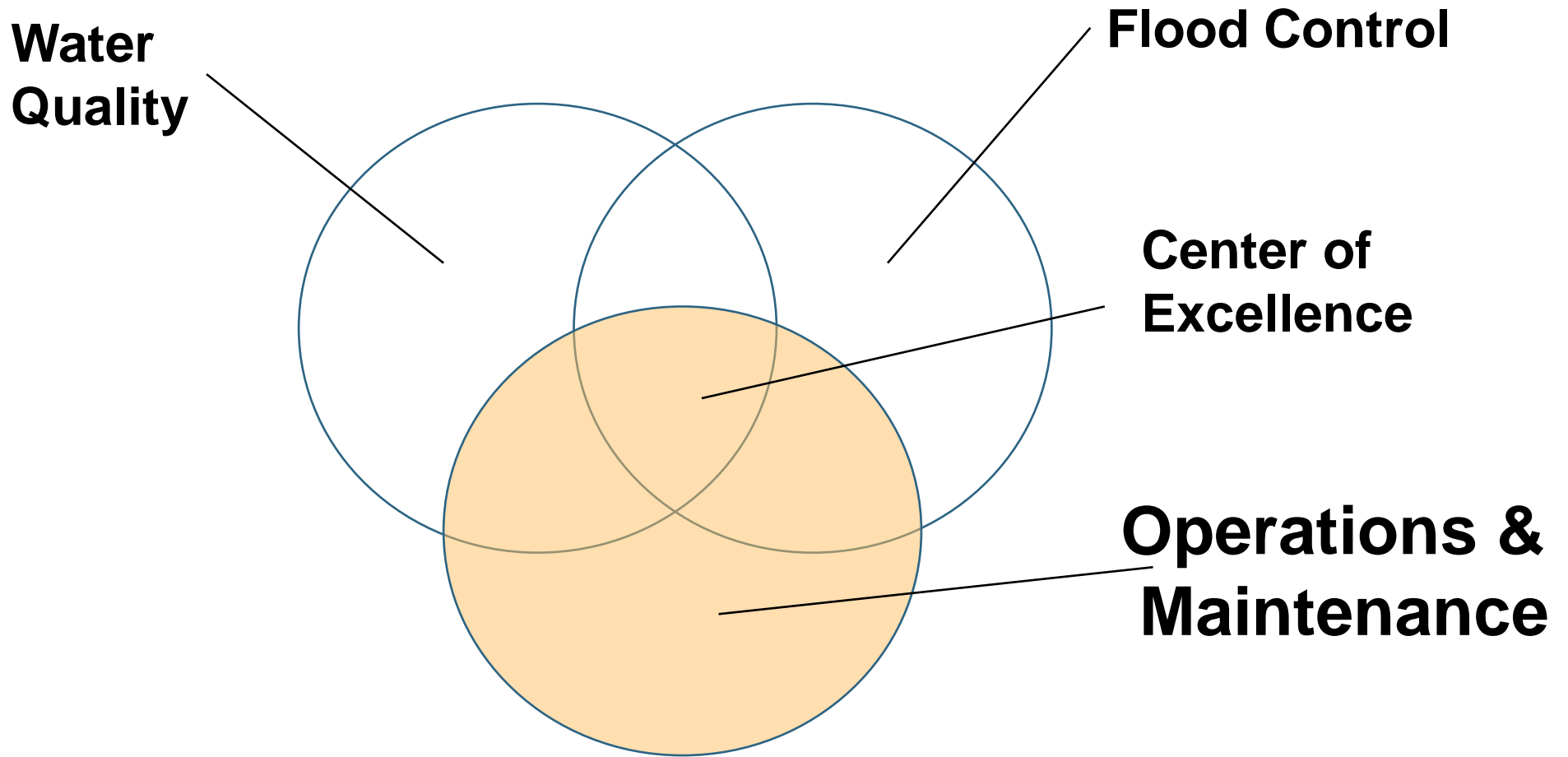
**Total SW Permit Program
\$4.2M + \$8.1M = \$12.3M**

WATER QUALITY

FY 2018 UNFUNDED NEEDS

- All needs are associated with compliance with the MS4 permit.
- Operational (Staffing and Equipment)
 - FY17 Adopted \$1.05M
 - FY18 \$626k (additional to support 6 FTEs)
 - FY19 \$474K (to support an additional 4 FTEs)
 - Total FY19 and beyond \$1.1M annually (to support 10 FTEs)
- Capital Improvement Program
 - \$5.5M annually + \$13M one time
 - Annual implementation costs of the new and expanded permit program elements including Chesapeake Bay and Local TMDL projects
 - Chesapeake Bay TMDL Action Plan Requirements: Implementation of projects to meet the First Phase (5% reductions); costs associated with the remaining 95% reductions are not included

OPERATIONS AND MAINTENANCE



OPERATIONS AND MAINTENANCE NEEDS:

| Project Title | | FY 18 | Total Requested | Program Rationale |
|---------------------|--|------------|-----------------|--------------------------|
| 7-411 | Oceanfront Storm Water Facilities Maintenance : | 900,000 | 5,400,000 | Critical Aging Structure |
| 7-412 | Storm Water Pump Station Modifications : | 500,000 | 3,000,000 | Critical Aging Structure |
| 7-023 | Primary Infrastructure Improvements II | 500,000 | 3,000,000 | Reduced Cycle Time |
| 7-026 | Residential Drainage Cost Participation Phase II | 100,000 | 600,000 | Citizen Requests |
| 7-412 | Storm Water Pump Station Modifications | 500,000 | 3,000,000 | Infrastructure Lifespan |
| 7-415 | Lake & Canal Management Phase II | 500,000 | 3,000,000 | Reduced Cycle Time |
| 7-416 | SW Infrastructure Rehabilitation & Improvements II | 2,500,000 | 22,500,000 | Infrastructure Lifespan |
| 7-NEW | Shore Drive/Hollis Road Drainage | 3,000,000 | 3,000,000 | Flooding |
| 7-NEW | Canal Management Phase I | 2,000,000 | 12,000,000 | Reduced Cycle Time |
| Total of All Tiers: | | 10,500,000 | 55,500,000 | |

OPERATIONS AND MAINTENANCE NEEDS:

- Unfunded Needs
 - Capital Improvement Program
 - \$55.5M of O & M projects
 - Additional Staff Resources
 - FY18 \$1.52M (to support 12 FTEs)
 - FY 19 and beyond \$880K annually (to support 12 FTEs)

DISCUSSION

NEXT STEPS