

gwinnettcounty



Department of
Water Resources



2014 Business Plan



September
2013

Mission



The mission of the Gwinnett County Department of Water Resources is to provide excellent water, wastewater, and stormwater services at the best possible value to our customers.

Water & Sewer

Linear Assets

- Water Distribution System
- Sewage Collection System



Vertical Assets

- Water Production Facilities
- Wastewater Treatment Facilities
- Sewage Pump Stations



- **Asset Replacement Value of \$6 Billion**

Water & Sewer Major Initiatives

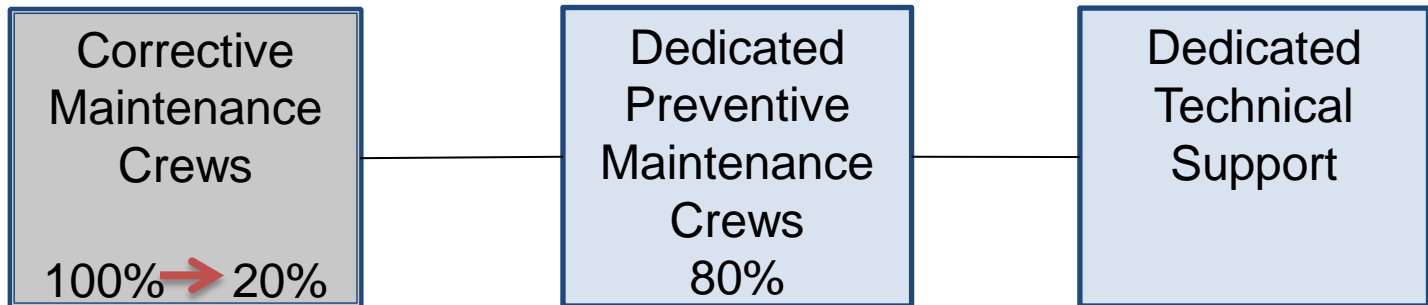
- **New Assets (Growth) → Rehab and Replacement**
 - In 2003 - 12% of the CIP was asset rehab/replacement
 - In 2014 - 91% of the CIP will be asset rehab/replacement
- **Reactive Maintenance → Preventive Maintenance**
- **Optimize Operations**



Asset Management in Linear Assets Distribution and Collection System

1. Right People  Right Knowledge

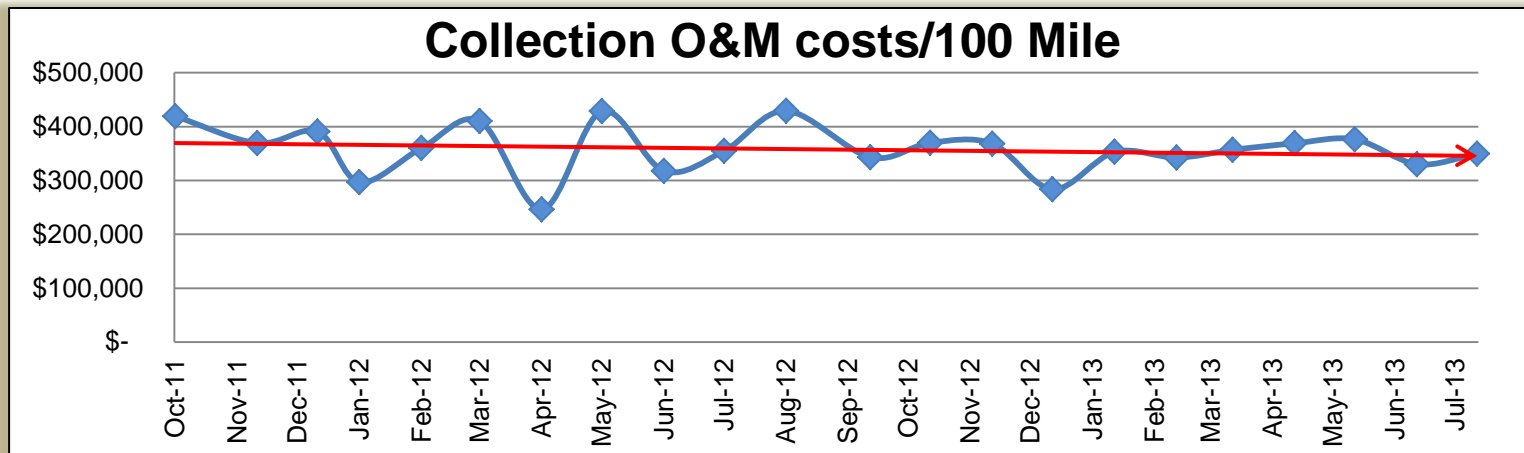
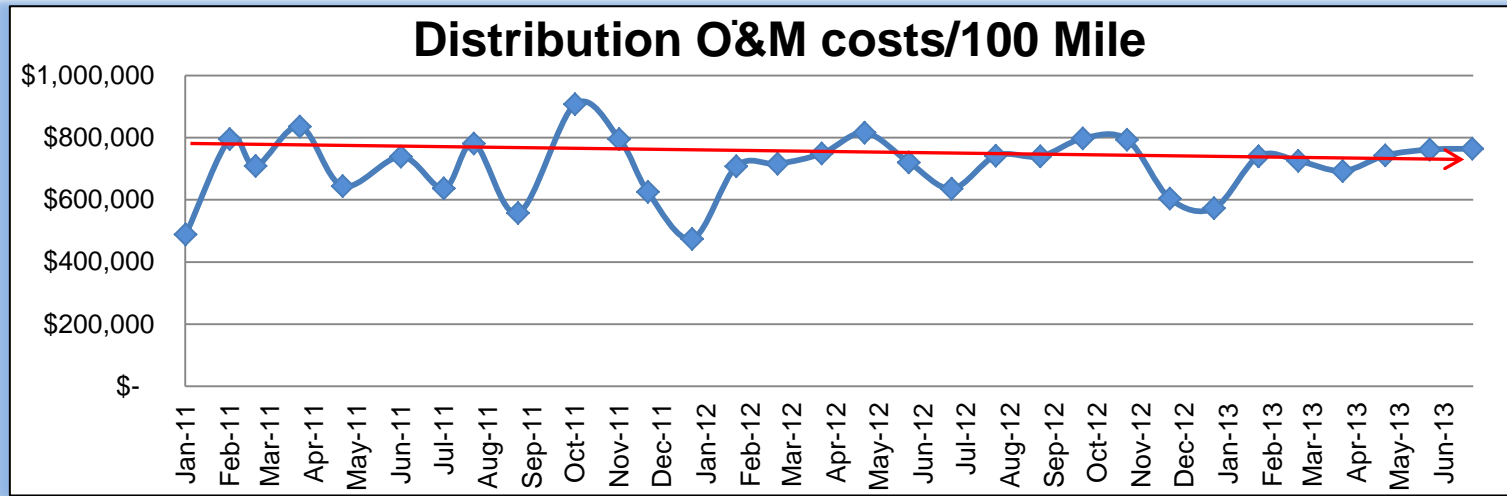
2. In the Right Place - Organizational Alignment



3. Change in Mindset

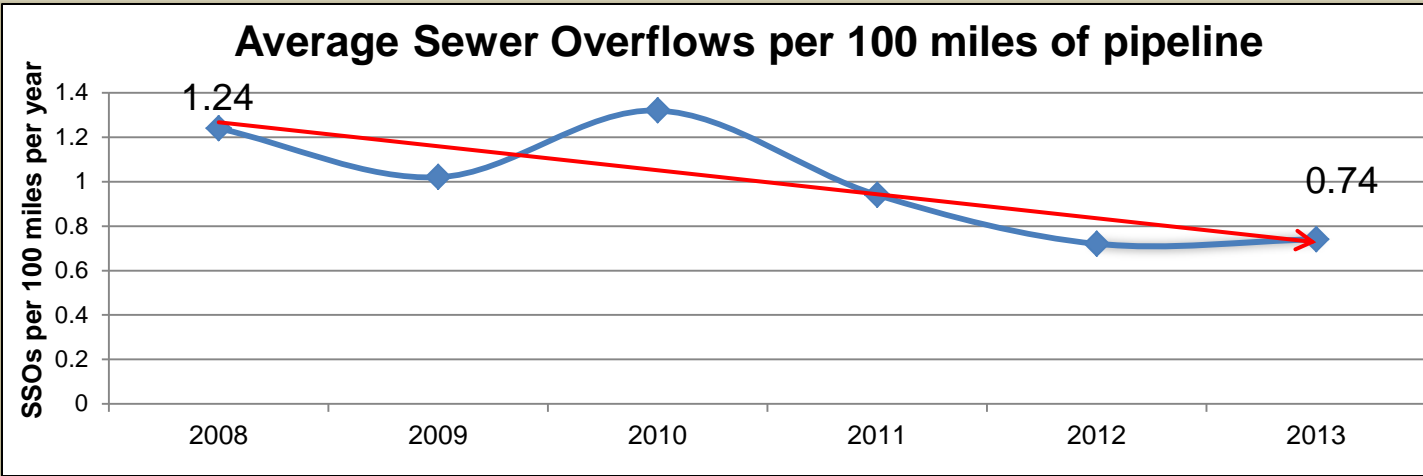
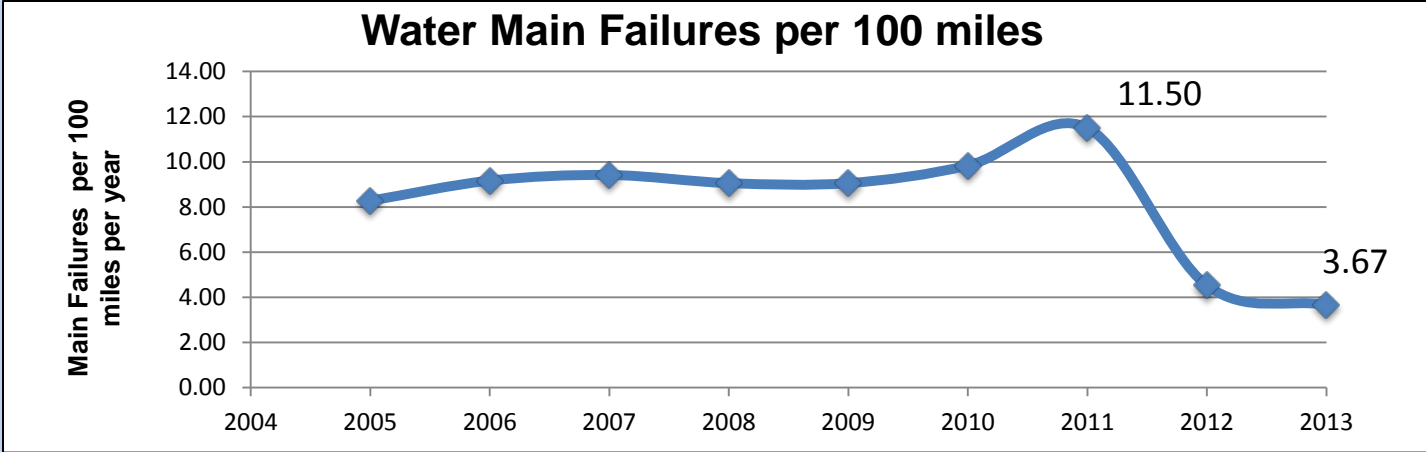
Linear Assets

O&M Costs – Distribution and Collection



Linear Assets

Water Main Failures and Sewer Overflows



Next Steps

Asset Management for Vertical Assets

Optimize Asset Management

Asset Replacement Value - \$3 Billion

Optimize Operations

Power and Chemicals \$19 Million/year



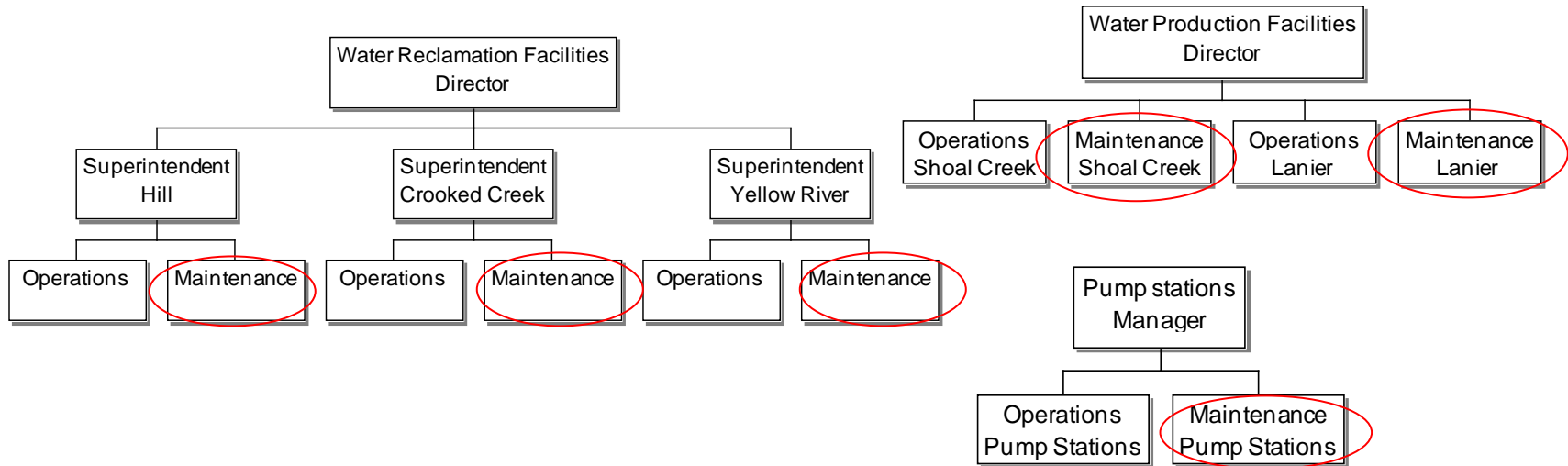
Vertical Assets

Water & Sewer Facilities

Where is Asset Management for Vertical Assets?

- ✓ Computerized Maintenance Management System to Store Asset Information Implemented
- 80% of the Asset Information is in the System
- On Average only 51% of the Maintenance is Preventive
Industry standard is 80%
- Limited Asset Condition Assessment has been Done
- Asset Management Plans have not been Developed

Current Organization for Vertical Assets

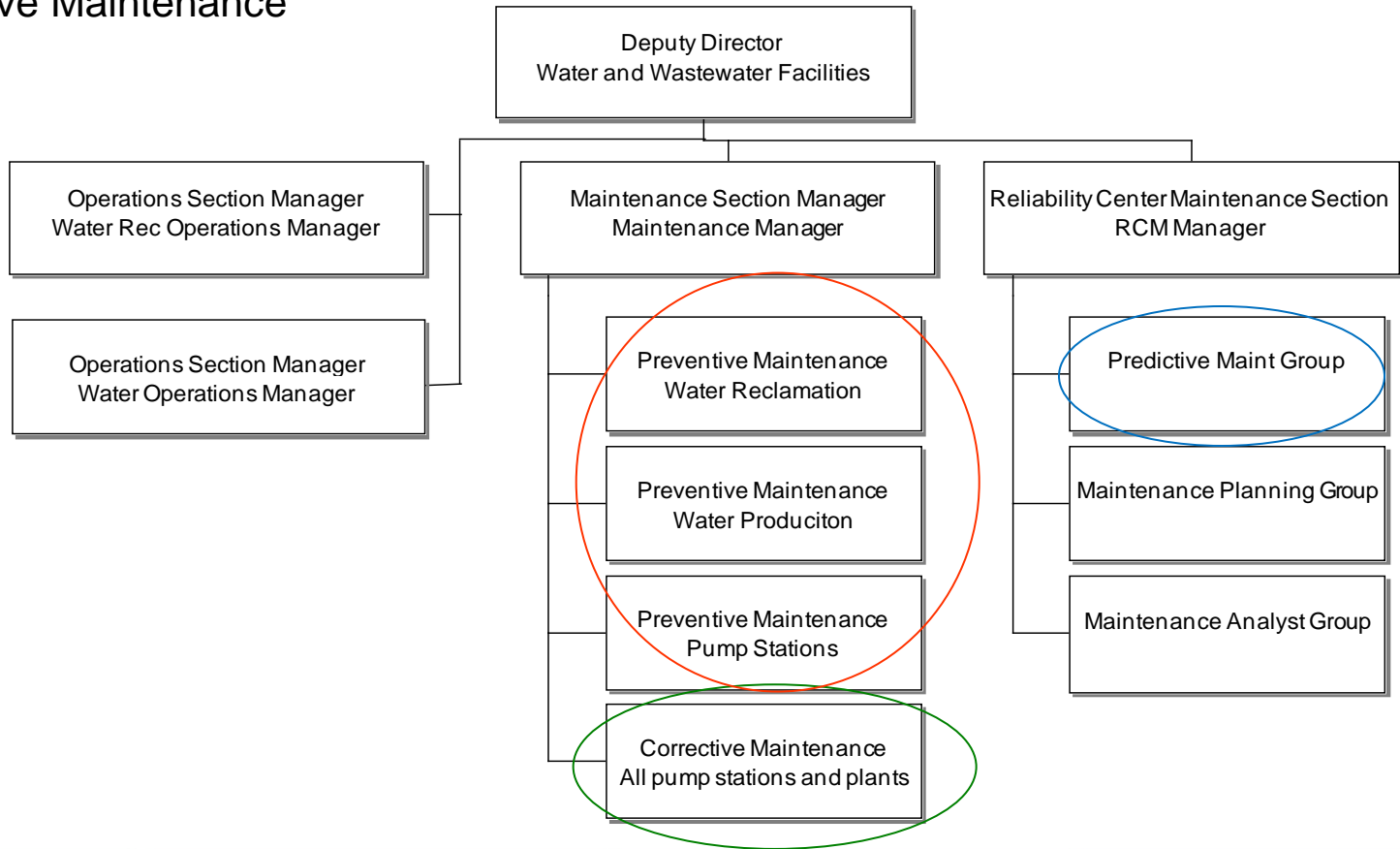


Reorganization Goals

- Excellent Maintenance Practices Applied Across all Facilities
- Technical Support for Operations and Asset Management

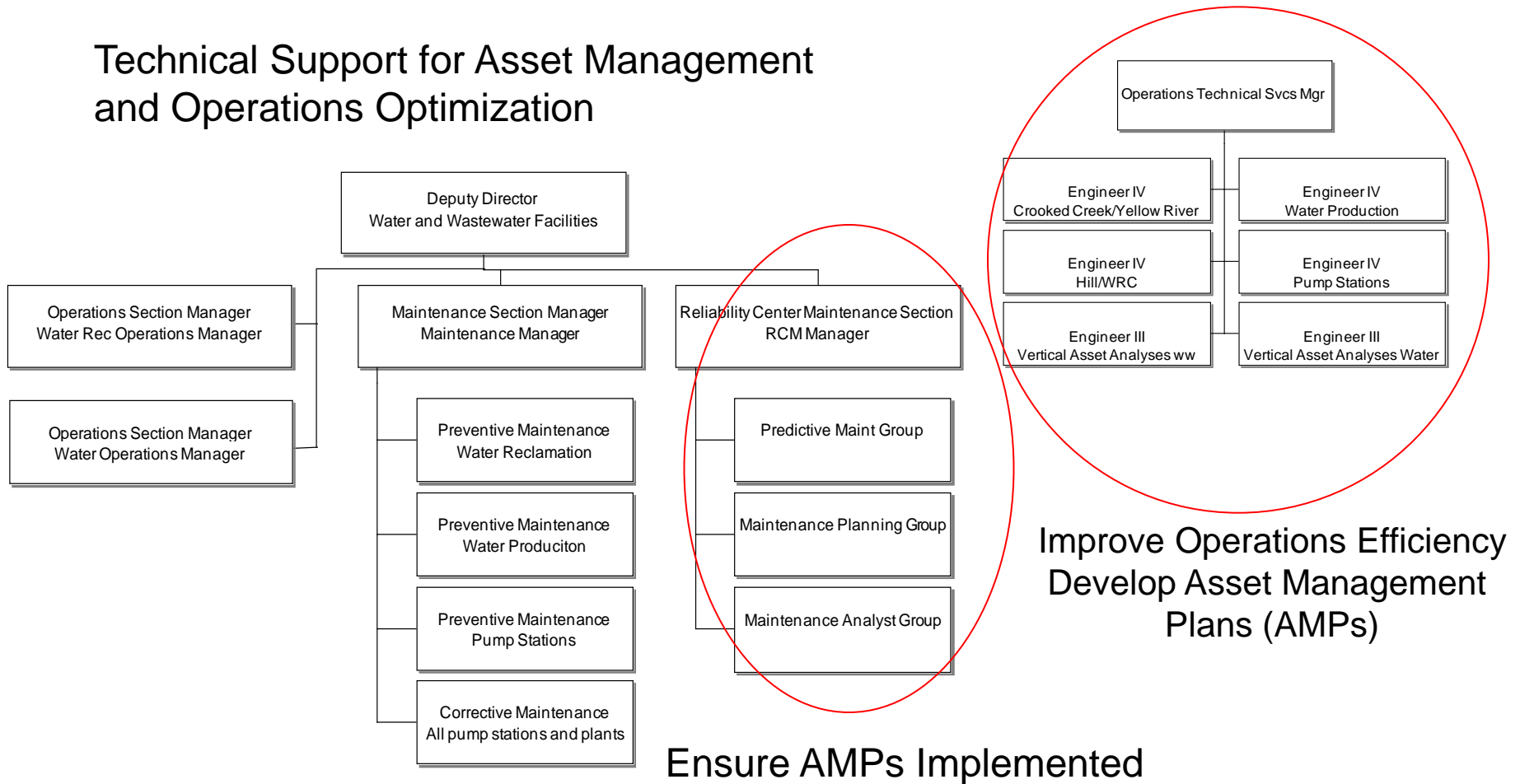
Proposed Organization for Vertical Asset Management

- Central Management of Maintenance
- Dedicated Staff for Preventive, Predictive, and Corrective Maintenance



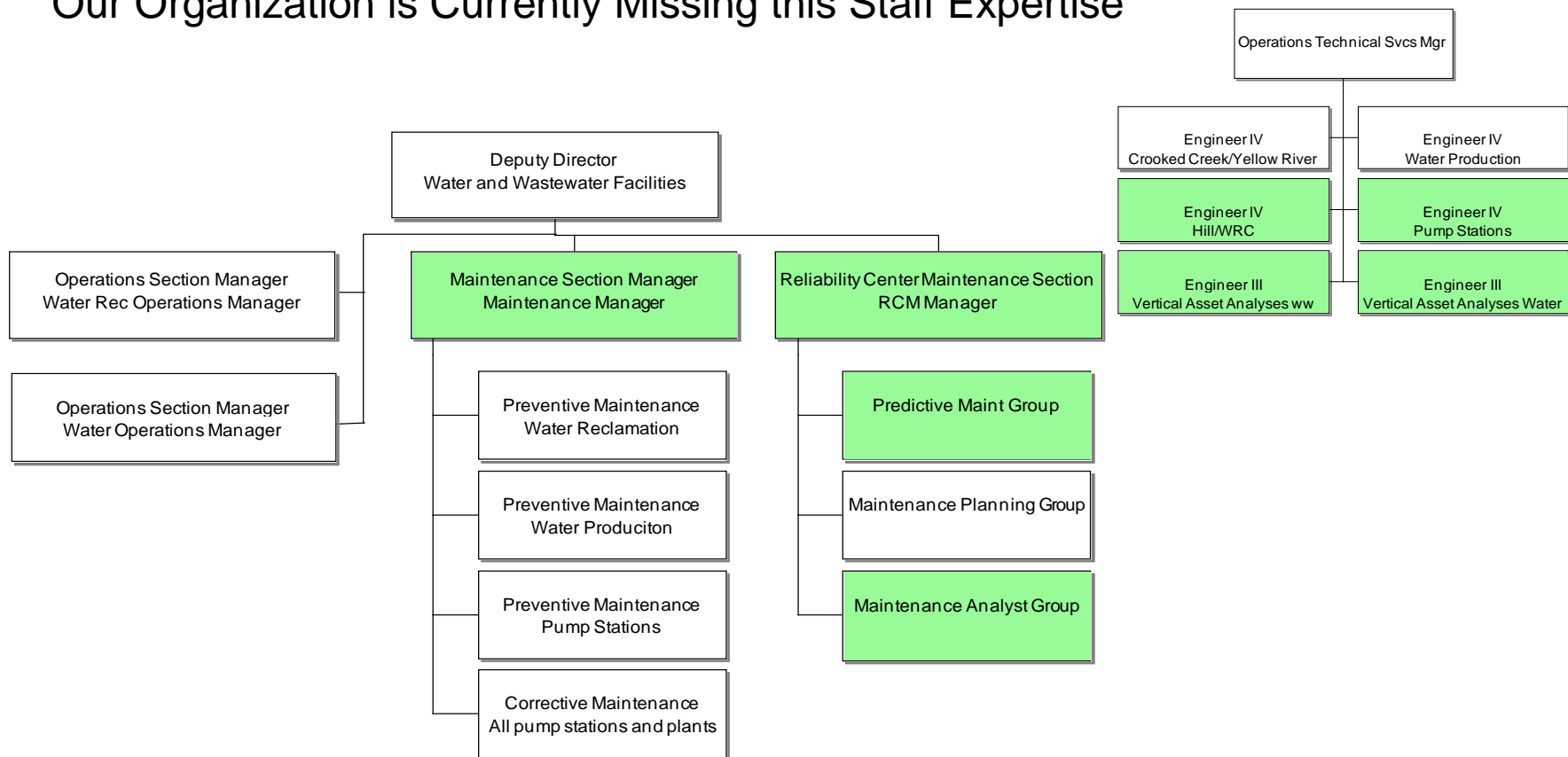
Proposed Organization for Vertical Asset Management

Technical Support for Asset Management and Operations Optimization



Proposed Organization for Vertical Asset Management

Our Organization is Currently Missing this Staff Expertise



Water and Sewer

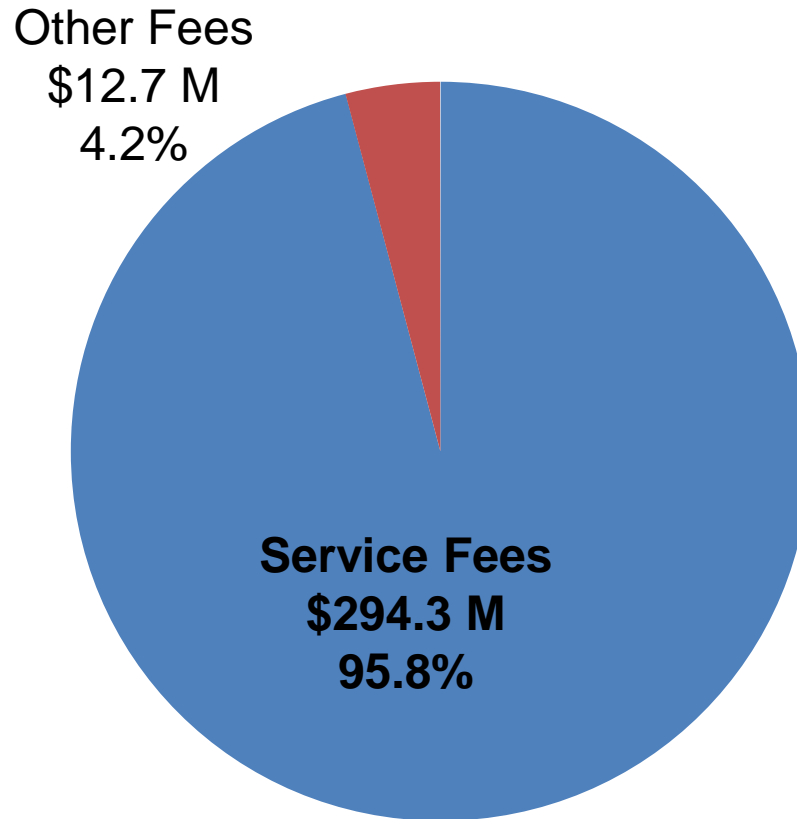
- ✓ Understanding of our Assets and how to Manage them
 - Better position to take on new assets (growth)
 - Extend the useful life of assets
 - Improved materials, equipment and installation methods
 - Reduce overall cost of maintenance
 - Reduce emergencies
- ✓ Operational Optimization
 - Reduce cost of conveyance, treatment, and pumping
 - Improve Service



2014 Water & Sewer Budget Summary

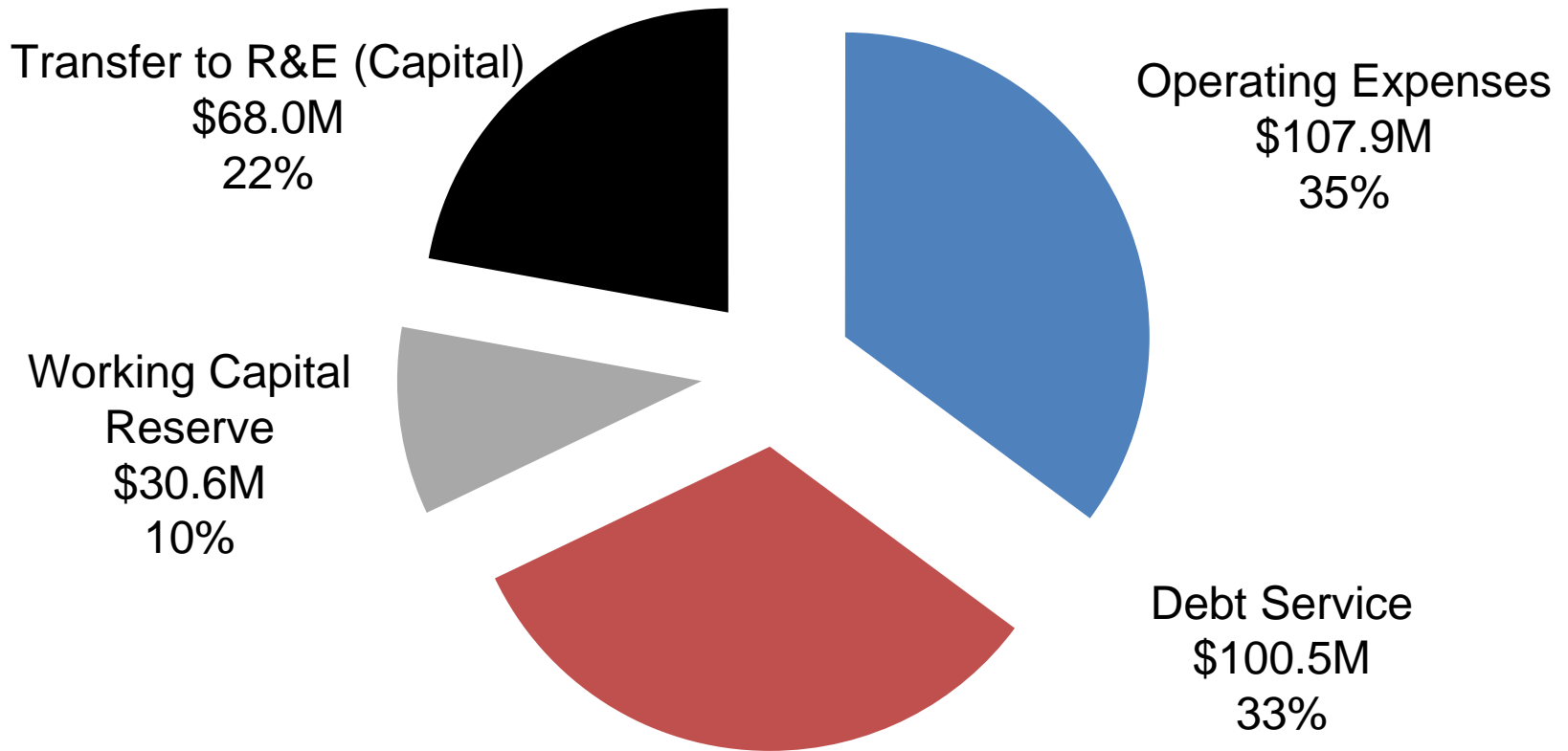
Water & Sewer - Revenue

2014 Revenue \$307.0M



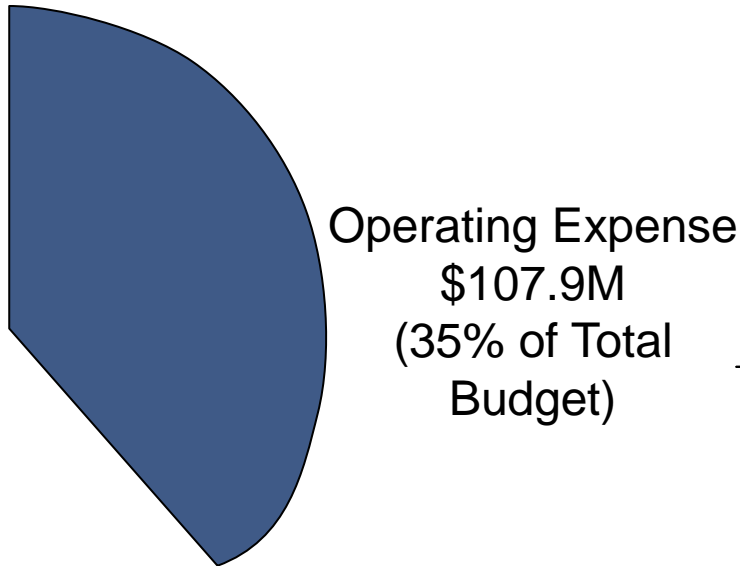
Water & Sewer - Budget

2014 Budget \$307.0M



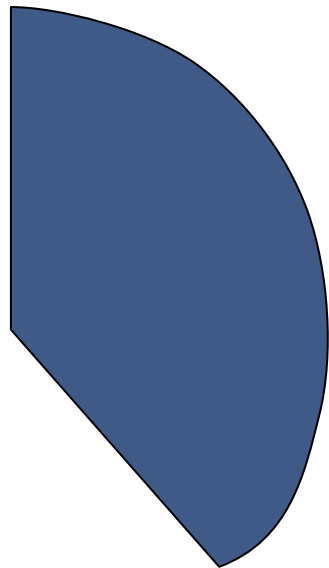
Water & Sewer Operating Budget

Major Expense Category

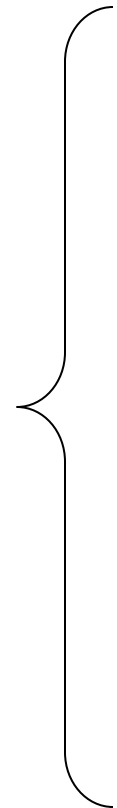


| Category | \$ | % Operating Budget | % Total Budget |
|-----------------------|---------|--------------------|----------------|
| Personnel Services | \$37.6M | 34.8% | 12.2% |
| Utilities | \$14.6M | 13.5% | 4.7% |
| Industrial R&M | \$11.3M | 10.4% | 3.7% |
| Professional Services | \$10.6M | 9.8% | 3.5% |
| Chemicals | \$8.6M | 8.0% | 2.8% |
| Other | \$25.2M | 23.5% | 8.2% |

Water & Sewer Operating Budget Function

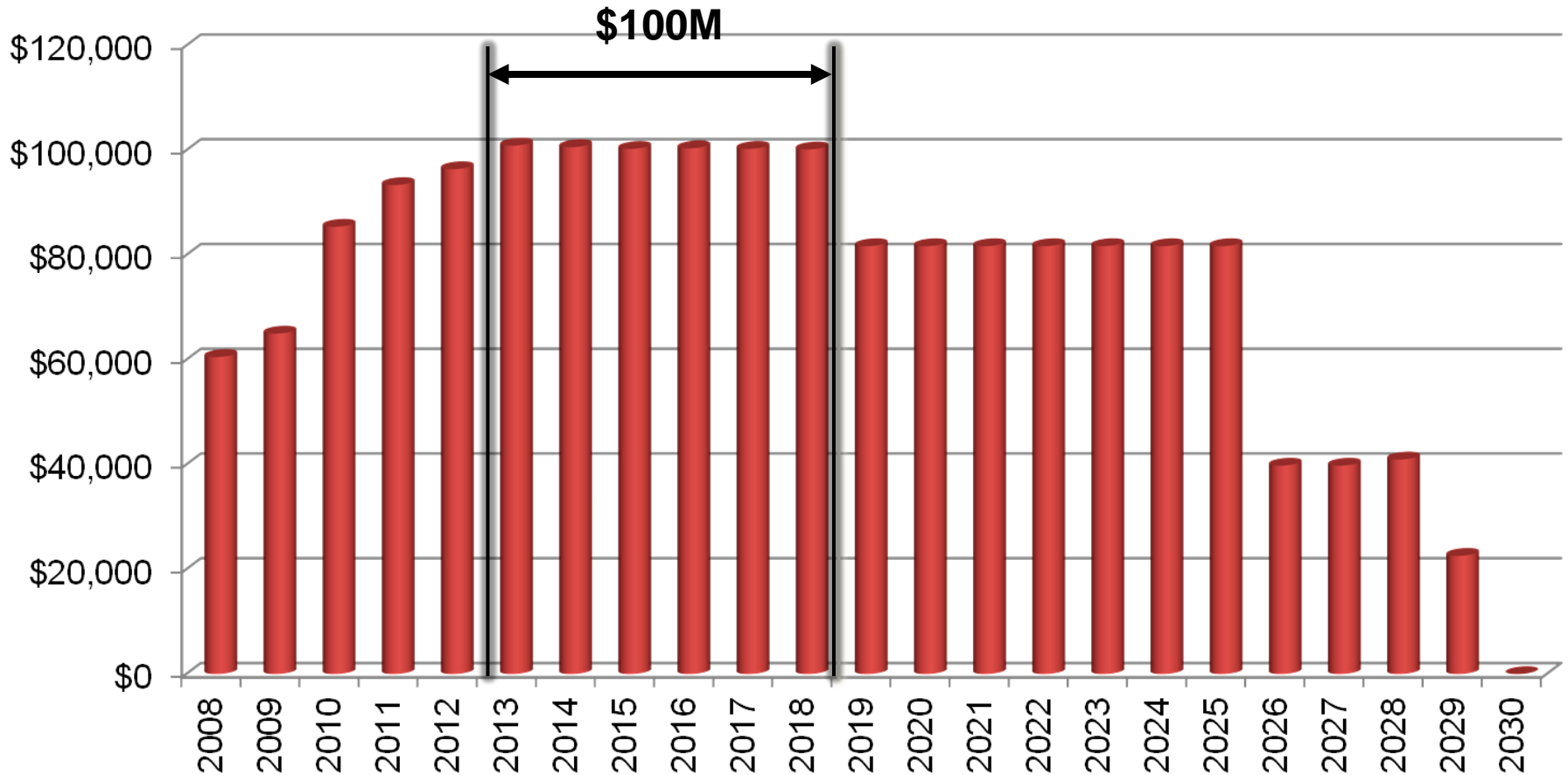


Operating Expense
\$107.9M
(35% of Total
Budget)



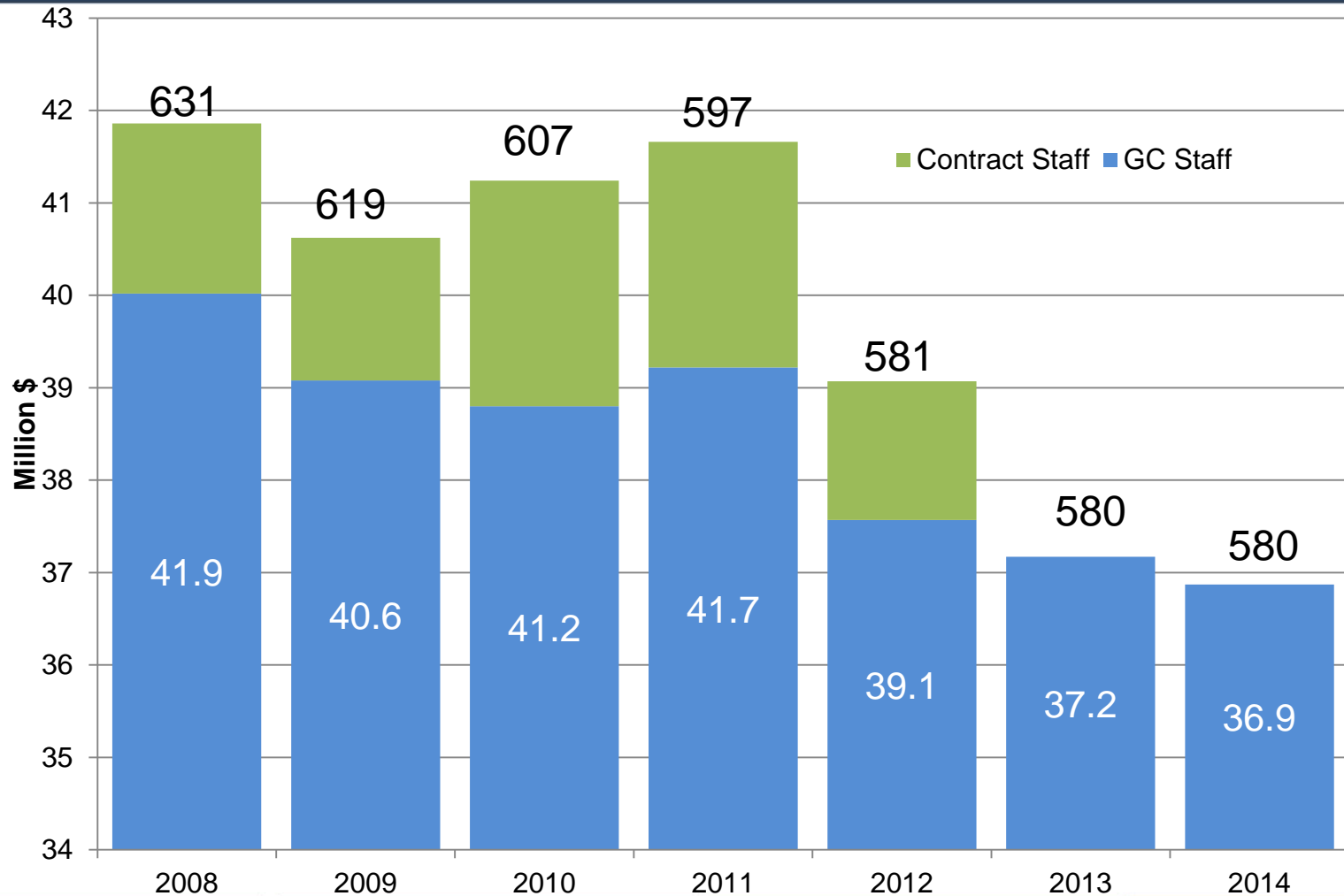
| Function | \$ | % Operating Budget |
|---------------------------------|---------|--------------------------|
| Water Reclamation | \$39.2M | 36.4% |
| Field Operations | \$19.4M | 17.9% |
| Water Production | \$16.6M | 15.4% |
| Customer Service | \$13.2M | 12.3% |
| Engineering & Construction Mgt. | \$12.4M | 11.4% |
| Dept. Admin | \$7.1M | 6.6% |

W&S Debt Service Trend



* In thousands

DWR Staffing #/ Costs, million \$



2014 Water & Sewer Capital Budget

Summary Capital Budget

| (\$ Thousands) | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>Total</u> |
|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Wastewater Treatment | 33,150 | 31,700 | 53,000 | 33,600 | 30,100 | 29,100 | 210,650 |
| Wastewater Collection | 17,400 | 17,350 | 23,100 | 23,200 | 23,200 | 21,200 | 125,450 |
| Water Distribution | 22,600 | 12,600 | 13,600 | 16,000 | 15,700 | 13,600 | 94,100 |
| Water Treatment | 10,000 | 15,000 | 10,000 | 16,000 | 18,000 | 14,000 | 83,000 |
| Watershed Protection | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 36,000 |
| Fleet/ITS/Other | 6,270 | 4,621 | 7,057 | 6,098 | 5,820 | 5,325 | 35,191 |
| Utility Relocation | <u>3,500</u> | <u>1,000</u> | <u>1,000</u> | <u>1,000</u> | <u>1,000</u> | <u>1,000</u> | 8,500 |
| Sub-Total | 98,920 | 88,271 | 113,757 | 101,898 | 99,820 | 90,225 | 592,891 |
| Capital Reserves | <u>2,513</u> | <u>28,123</u> | <u>2,247</u> | <u>13,402</u> | <u>15,480</u> | <u>14,995</u> | 76,760 |
| Total | 101,433 | 116,394 | 116,004 | 115,300 | 115,300 | 105,220 | 669,651 |

Capital Budget Wastewater Treatment

| (\$ Thousands) | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>Total</u> |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Crooked Creek | 11,050 | 16,600 | 33,400 | 14,000 | - | - | 75,050 |
| Water Rec Facility Rehab | 9,000 | 15,000 | 15,000 | 15,000 | 15,000 | 14,000 | 83,000 |
| Biosolids Program | 13,000 | - | 4,500 | 4,500 | 15,000 | 15,000 | 52,000 |
| Other | 100 | 100 | 100 | 100 | 100 | 100 | 600 |
| Total | 33,150 | 31,700 | 53,000 | 33,600 | 30,100 | 29,100 | 210,650 |



Capital Budget Wastewater Collection

| (\$ Thousands) | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>Total</u> |
|------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Pump Station Rehab | 9,300 | 8,200 | 11,000 | 12,000 | 12,000 | 11,000 | 63,500 |
| Collection System Rehab | 3,350 | 4,500 | 6,500 | 6,500 | 6,500 | 6,500 | 33,850 |
| Pump Station Decommissioning | 3,100 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 18,100 |
| Sewer Assessment Program | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 9,000 |
| Other | <u>150</u> | <u>150</u> | <u>1,100</u> | <u>200</u> | <u>200</u> | <u>200</u> | <u>2,000</u> |
| Total | 17,400 | 17,350 | 23,100 | 23,200 | 23,200 | 22,200 | 126,450 |



Capital Budget Water Distribution

| (\$ Thousands) | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>Total</u> |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Distribution System Rehab | 16,800 | 10,000 | 9,500 | 10,000 | 10,000 | 9,000 | 65,300 |
| Water Meter Installations | 2,500 | 2,000 | 3,500 | 5,000 | 5,000 | 4,000 | 22,000 |
| Other | 3,300 | 600 | 600 | 1,000 | 700 | 600 | 6,800 |
| Total | 22,600 | 12,600 | 13,600 | 16,000 | 15,700 | 13,600 | 94,100 |



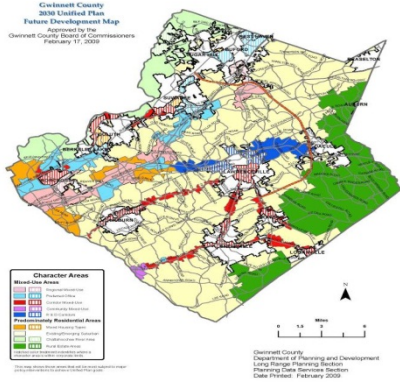
Capital Budget Water Production

| (\$ Thousands) | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>Total</u> |
|---------------------------|--------------|--------------|-------------|--------------|--------------|--------------|---------------|
| Water Facility Rehab | 4,500 | 10,000 | 10,000 | 10,000 | 10,000 | 9,000 | 52,500 |
| Disinfection Improvements | <u>5,500</u> | <u>5,000</u> | <u>0</u> | <u>6,000</u> | <u>8,000</u> | <u>5,000</u> | <u>29,500</u> |
| Total | 10,000 | 15,000 | 10,000 | 16,000 | 18,000 | 14,000 | 82,000 |



Capital Budget W&S Reserves

| (\$ Thousands) | <u>2013</u> | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> |
|-------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Capital Needs | | 0 | 19,400 | 0 | 200 | 8,600 | 6,000 |
| Economic Development | | 0 | 4,500 | 0 | 5,961 | 2,000 | 3,000 |
| Stabilization Reserves | | <u>2,513</u> | <u>4,223</u> | <u>2,247</u> | <u>7,241</u> | <u>4,880</u> | <u>5,995</u> |
| Total | 9,047 | 2,513 | 28,123 | 2,247 | 13,402 | 15,480 | 14,995 |
| Cumulative Total | 9,047 | 11,560 | 39,683 | 41,930 | 55,332 | 70,812 | 85,807 |



Stormwater – 3 Core Programs

- Drainage System Management

- pipes/ponds
- 1350 miles of pipe
- Total Replacement Value: \$3 Billion



- Dam Rehabilitation & Management

- Regulated by GA Safe Dams



- Watershed Restoration

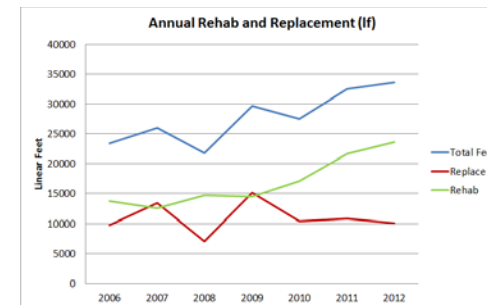
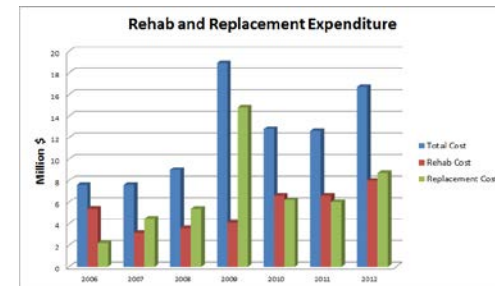
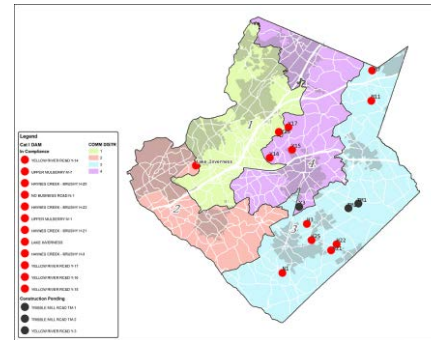
- Restoring severely eroded streams
- Regulated by Permits



Stormwater

Past Initiatives: Progress Highlights

- **Dam Rehabilitation Complete by Next Summer**
 - 15 High Hazard Dams
 - Cost to date: \$18.5M
 - Remaining: \$3M
- **Watershed Restoration: In Compliance**
- **Pipe Condition Assessment: 50% Complete**
- **Delivering more Pipe Rehab/Replacement**
- **Asset Management Integrated into Processes**



Stormwater

Major Initiatives – Manage Deteriorating Metal Pipe

- **Continue to build Asset Knowledge**

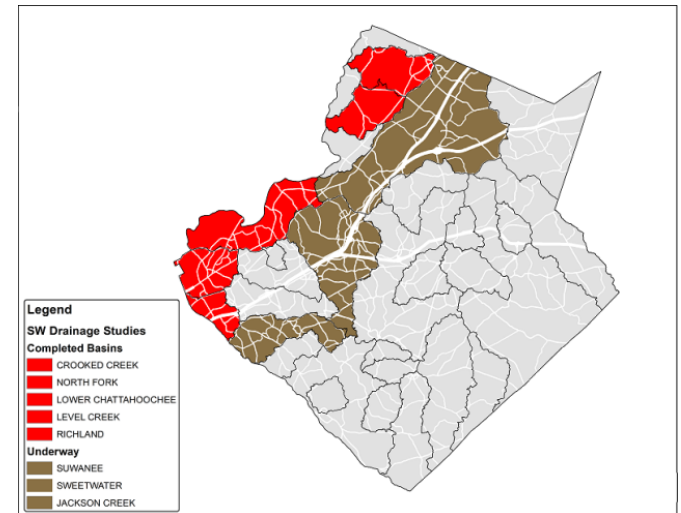
- Complete Pipe Condition Assessment
- Pipe Capacity Analysis Underway
- Replacement Planning Model
- Reduce Risk and Liability
 - Right Pipe - Right Time - Right Material

- **Increase No-Dig Rehab**

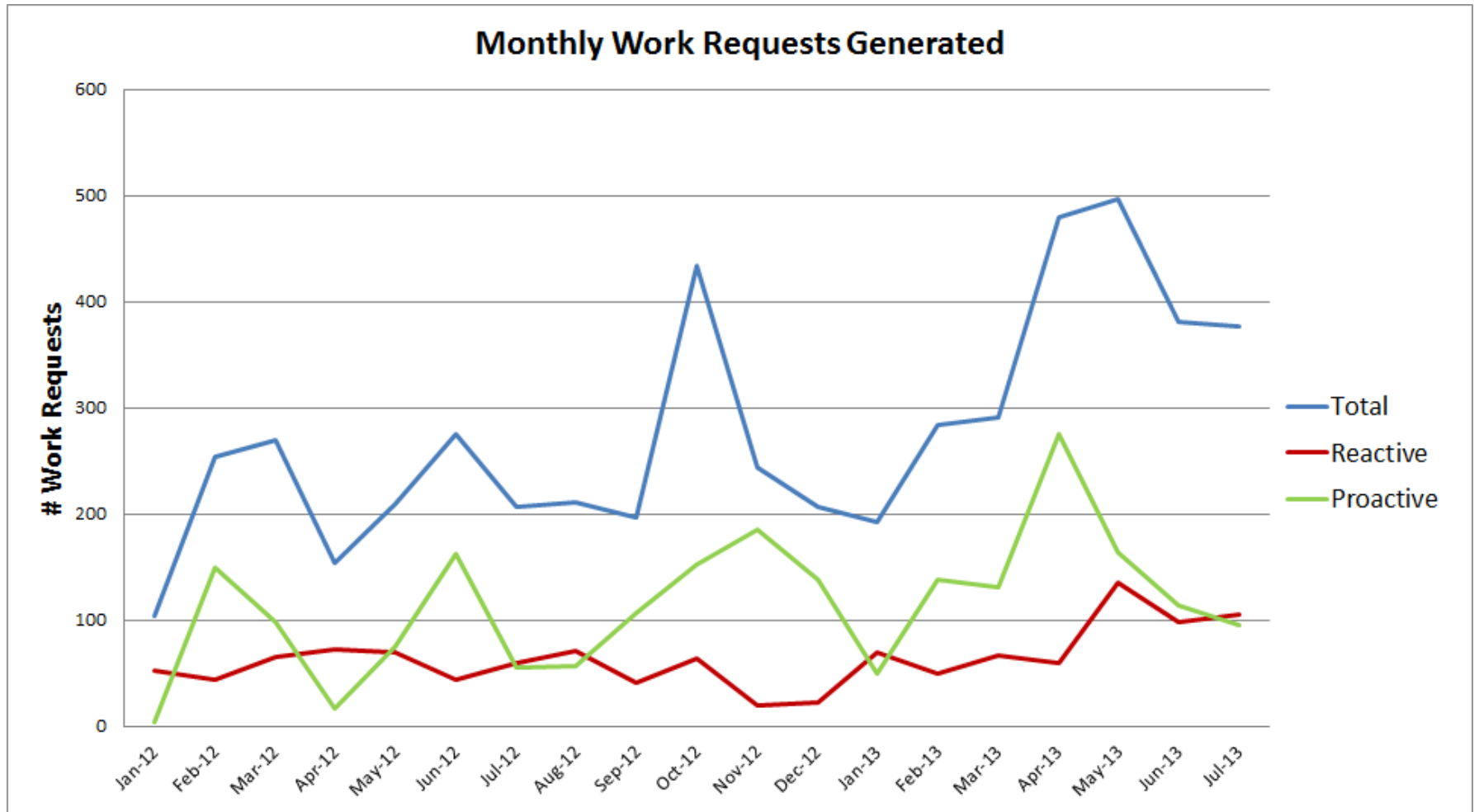
- CIPP, CCCP, and slip lining
- 60% of the cost of replacement

- **Proactive Project Identification**

- Reactive (citizen generated) → Proactive (Internally identified)
- Intervene before rehab is precluded



Reactive to Proactive



Our Challenge

**Minimize liability and customer disruption by
Replacing or Rehabilitating:**

The Right Pipes ...

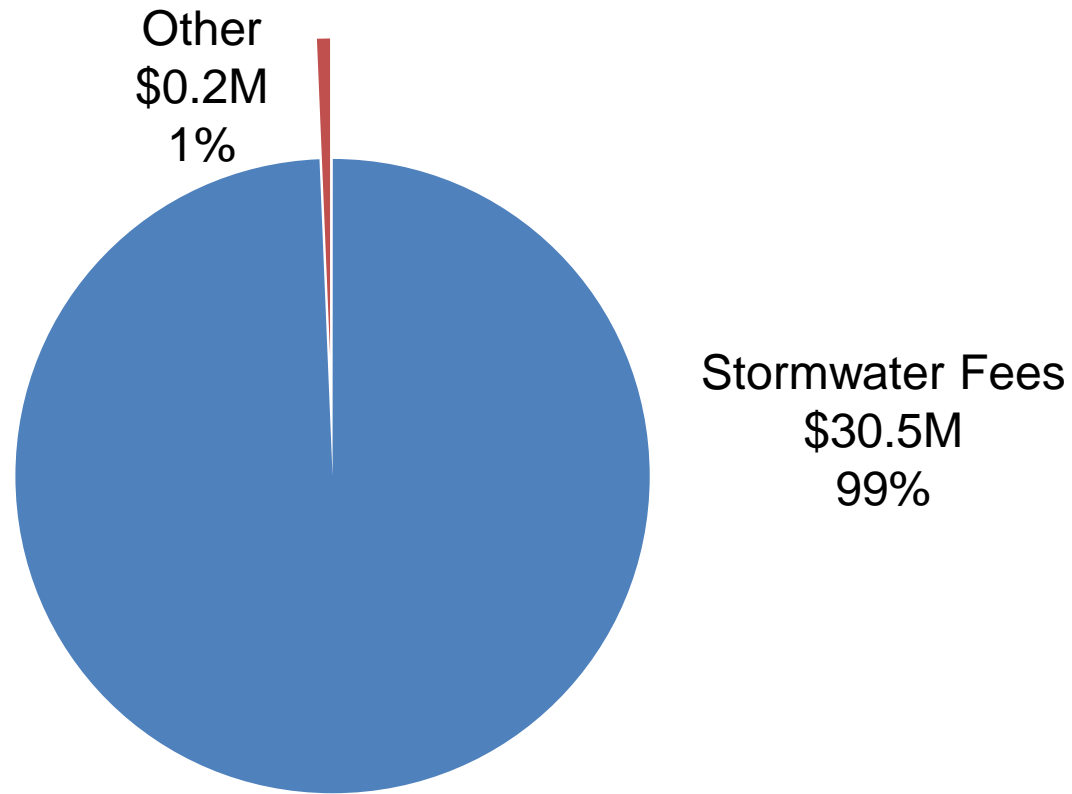
At the Right Time ...

With the Right Materials!

2014 Stormwater Budget Summary

Stormwater Revenue

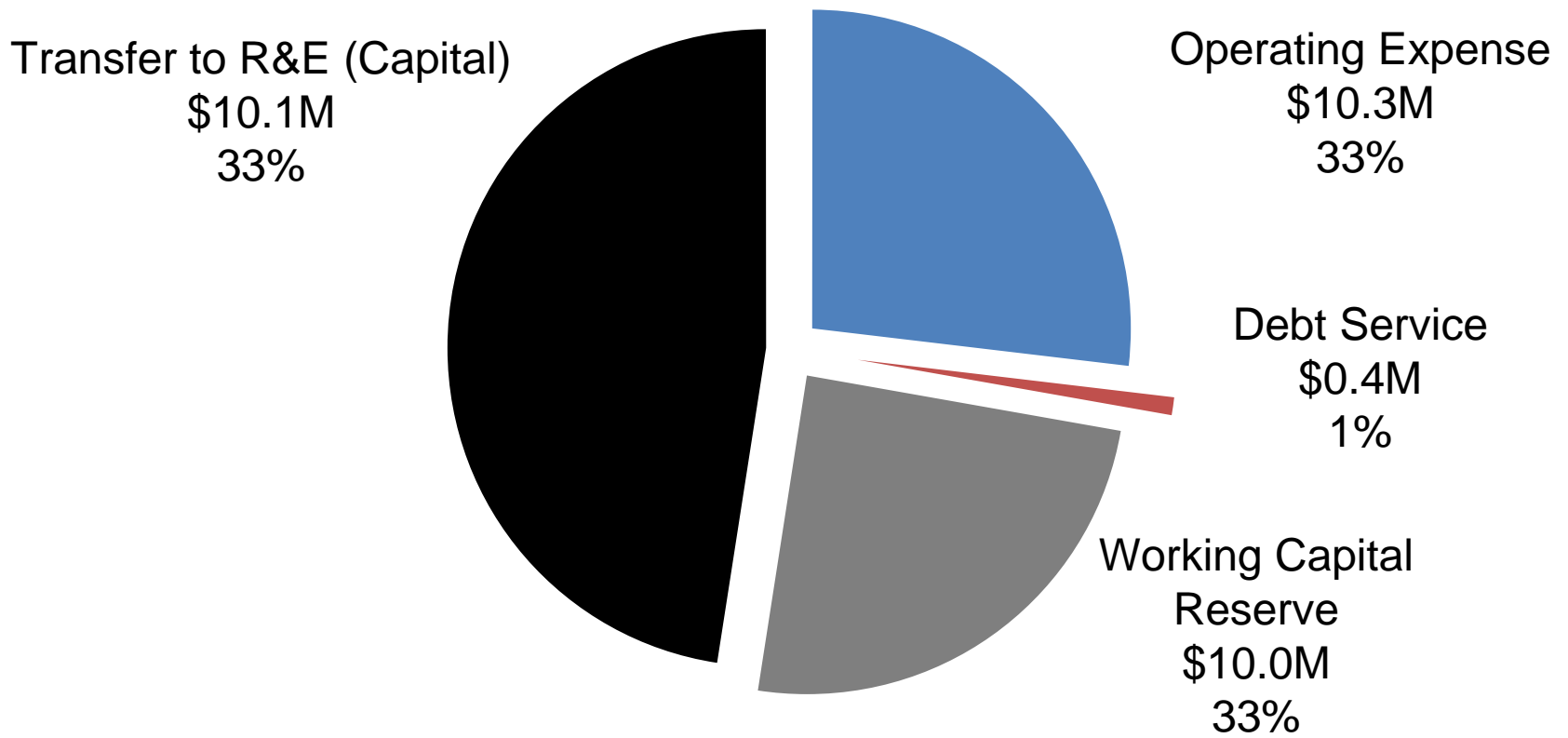
2014 Revenue Budget \$30.7M



* In thousands

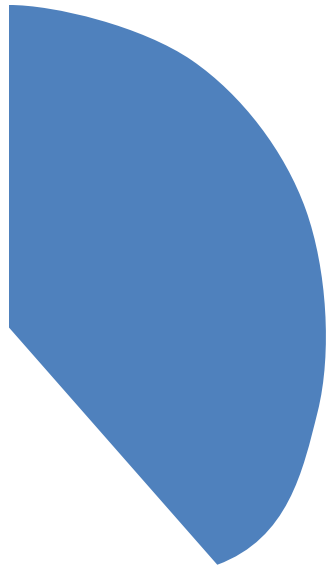
Stormwater Budget

2014 Budget \$30.7M



* In thousands

Stormwater Operating Budget Major Expense Category



Operating
Expense
\$10.3M

| Category | \$ | % Operating Budget | % Total Budget |
|-----------------------|--------|--------------------|----------------|
| Personnel Services | \$5.6M | 54.0% | 15.4% |
| Professional Services | \$1.7M | 16.7% | 5.5% |
| Other | \$3.0M | 29.3% | 9.8% |

Stormwater Capital Budget

| (\$ Thousands) | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>Total</u> |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Storm Drainage Improvements | 19,289 | 19,630 | 20,098 | 21,178 | 21,253 | 21,000 | 122,448 |
| Dam Rehabilitation | 250 | 250 | 250 | 250 | 250 | 250 | 1,500 |
| Watershed Improvements | 2,488 | 150 | 150 | 150 | 150 | 150 | 3,238 |
| Other | <u>348</u> | <u>397</u> | <u>347</u> | <u>397</u> | <u>347</u> | <u>347</u> | <u>2,183</u> |
| Subtotal | 22,375 | 20,427 | 20,845 | 21,975 | 22,000 | 21,747 | 129,369 |
| Capital Reserves | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Total | 22,375 | 20,427 | 20,845 | 21,975 | 22,000 | 21,747 | 129,369 |





Summary Supporting our Mission

Provide Excellent water, wastewater and stormwater services at the best possible value to our customers



- Effective Management of our Assets
- Optimization of Operations
- Financially Sound

Department of Water Resources
September 2013