

gwinnettcounty



Department of  
**Water Resources**



# 2012 Business Plan



September  
2011



# Mission

The mission of the Gwinnett County Department of Water Resources is to enhance quality of life by providing excellent water, wastewater, and stormwater services at the best possible value to our customers while preserving natural water resources



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# SWOT Analysis

- Strengths

- Triple AAA rating
- Credibility with regulatory agencies
- Business-focused organization
- Industry leader
- Knowledgeable staff
- Capacity
- Development of advanced information systems



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# SWOT Analysis



- Weaknesses

- Deteriorating stormwater infrastructure
- Debt service
- Limited resources for training and skill development – bench strength



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# SWOT Analysis

- Opportunities
  - Permanent storage contract for net water withdrawals
  - Continue to optimize costs and improve performance and efficiencies
  - Organizational / staff realignment
  - Environmental initiatives: gas-to-energy, FOG, mitigation banking



# SWOT Analysis



- Threats

- Water wars
- Stormwater funding
- Overall economic environment
- Increasing cost of operations / maintenance
- Weather extremes



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# SWOT - Threat

Water Wars - What was the ruling ?

On June 28, 2011, a panel of the 11<sup>th</sup> Circuit Court of Appeals ruled that Lake Lanier was authorized for water supply equal to other project purposes.



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# SWOT - Threat

Water Wars - What was the ruling ?

The decision directed the Corps to quantify the amount of storage in the lake that can be used for water supply under the combined authority of three different acts of Congress.



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# SWOT - Threat

## Water Wars – Update

### Phase 1 – Authorization

Alabama et al has appealed the panel's decision to the full 11<sup>th</sup> Circuit Court's bench.

### Phase 2 – Endangered Species

Florida's appeal of the District Court decision is awaiting further reports from the Fish and Wildlife Service





# 2012 Budget Summary

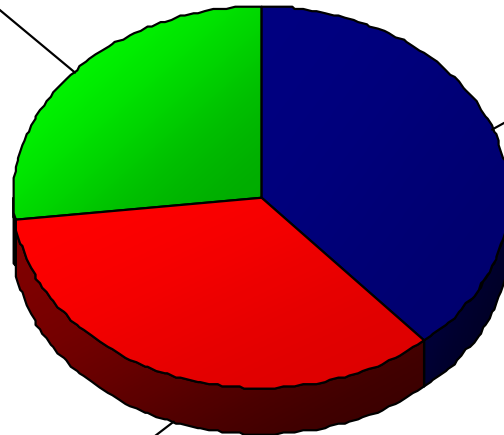
# Operating Budget – Water & Sewer

2012 Expense \$278,677,805

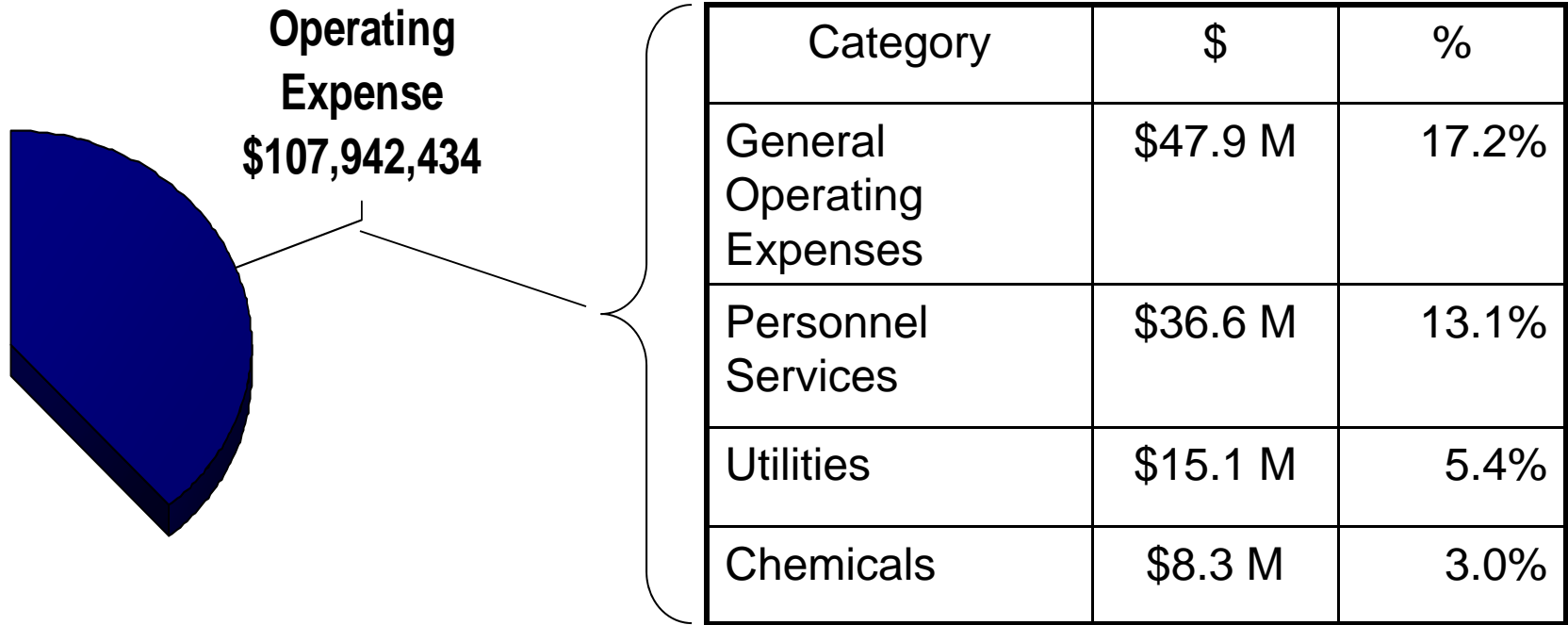
Transfer to  
R&E  
\$74,800,000  
27%

Operating  
Expense  
\$107,942,434  
39%

Debt Service  
\$95,935,371  
34%

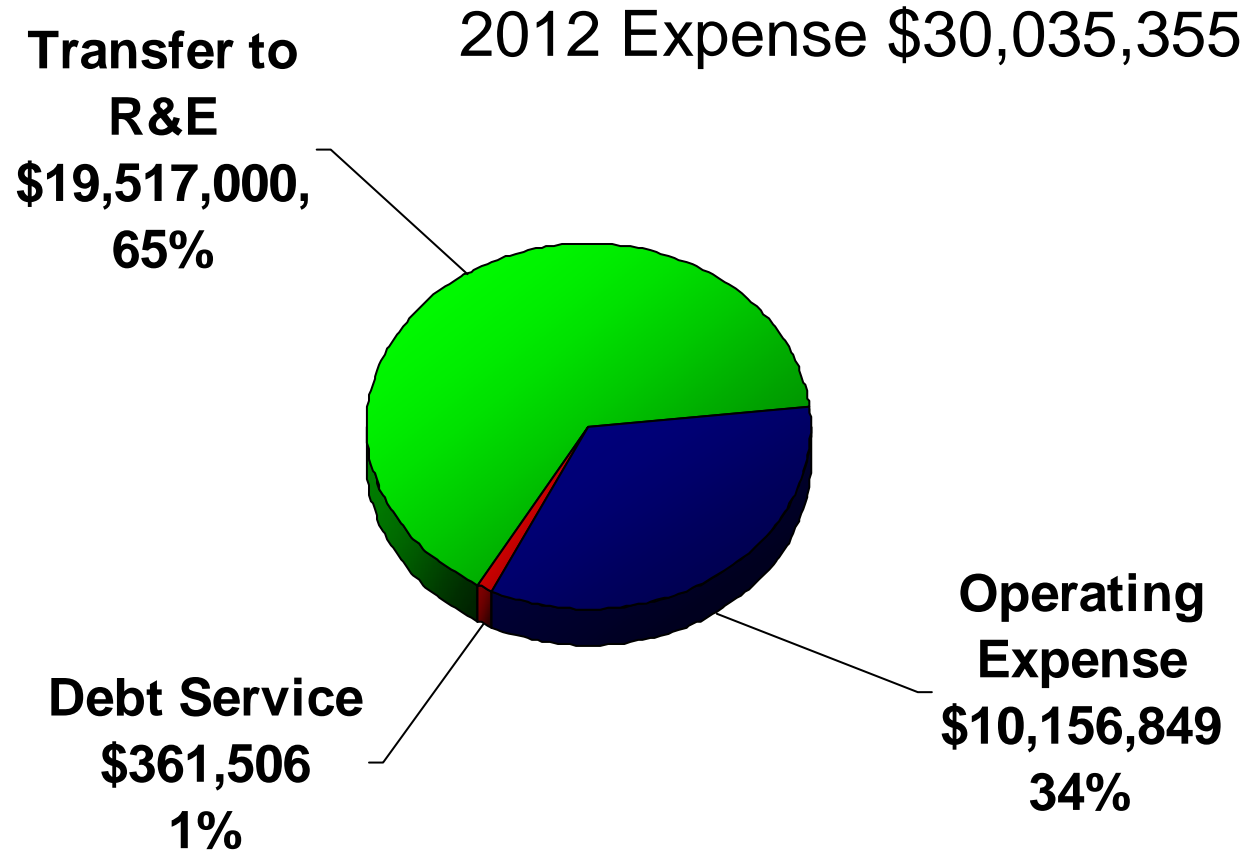


# Operating Budget – Water & Sewer



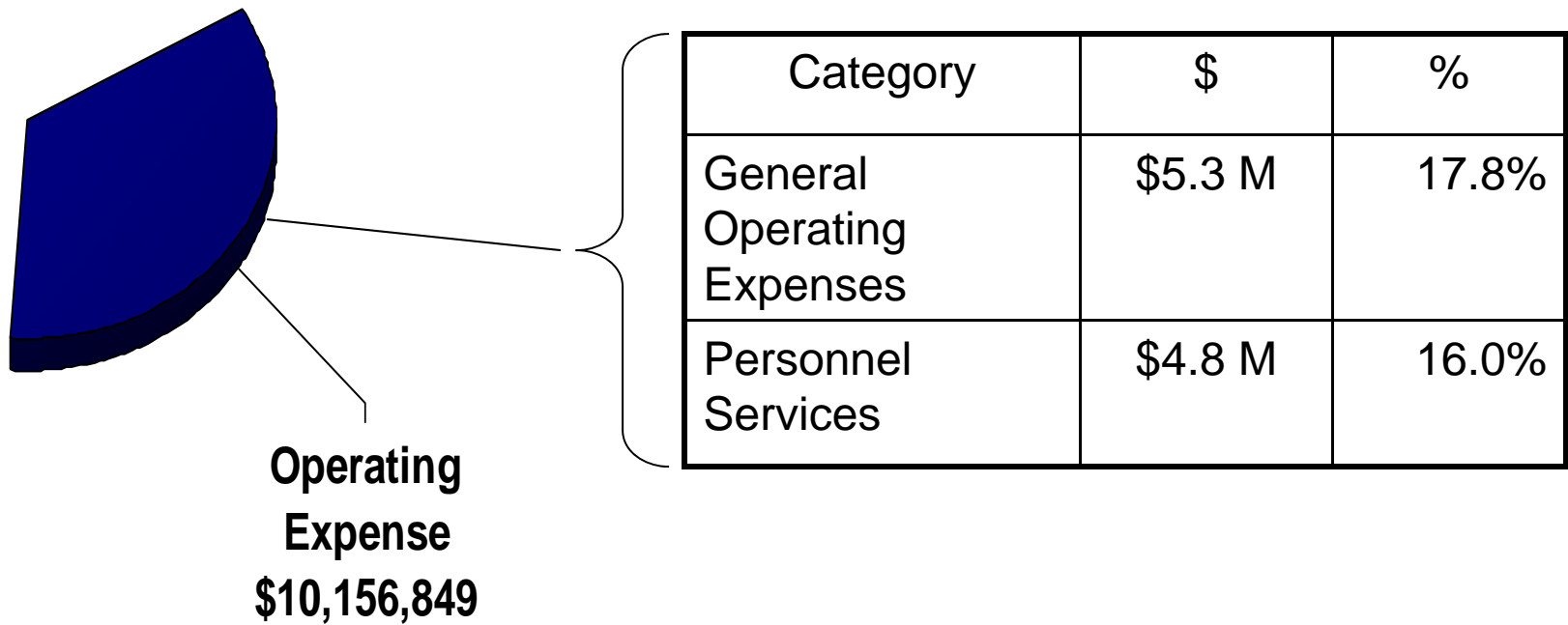


# Operating Budget – Stormwater

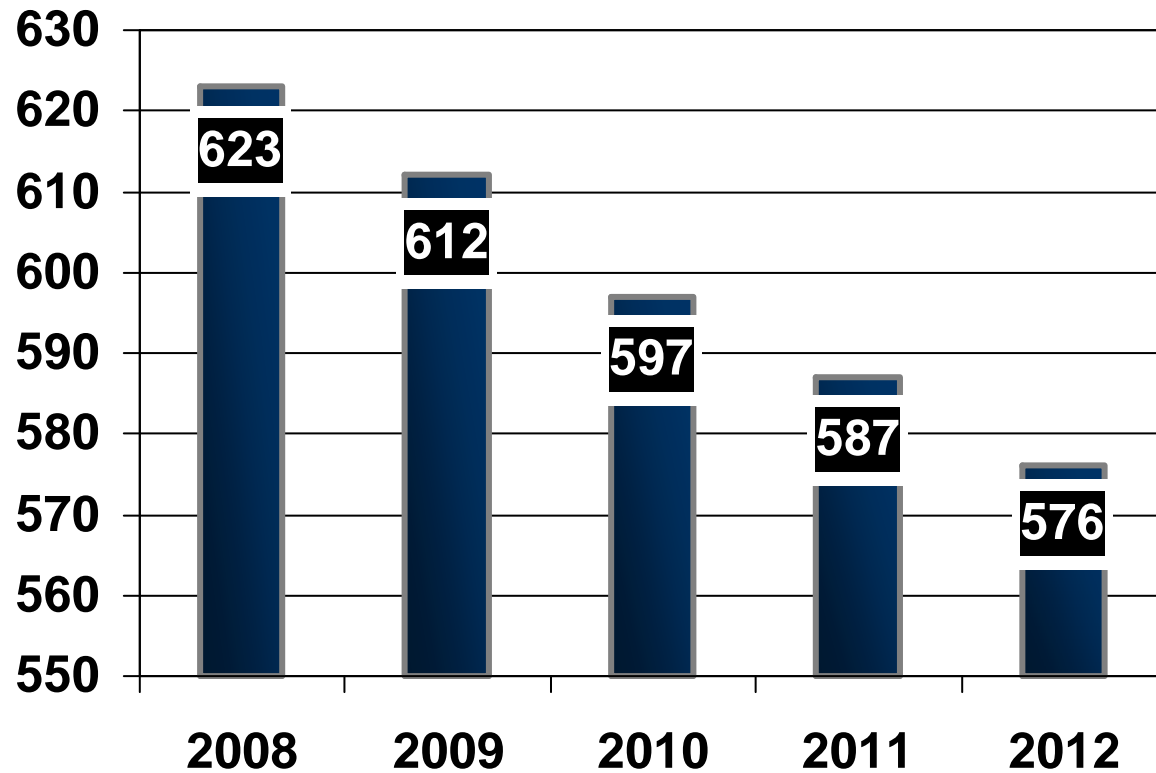


\* In thousands

# Operating Budget – Stormwater



# Operating Budget - Staffing



**DWR  
Total  
Authorized  
Positions**

# Engage Gwinnett

➤ The Department should engage a collection agency to improve its water and sewer fee collections

✓ Penn Credit collection agency was hired in 2009 to collect past due water and sewer receivables

✓ \$1.7M collected to date



# Engage Gwinnett

➤ We fully support the Department's plan of avoiding future bond funding by financing all future capital projects on a "pay as you go" basis

- ✓ Gwinnett County completed a refunding 2003B Water & Sewer Revenue Bonds in July 2011
- ✓ Resulted in present value debt savings of \$9.4M

# Engage Gwinnett

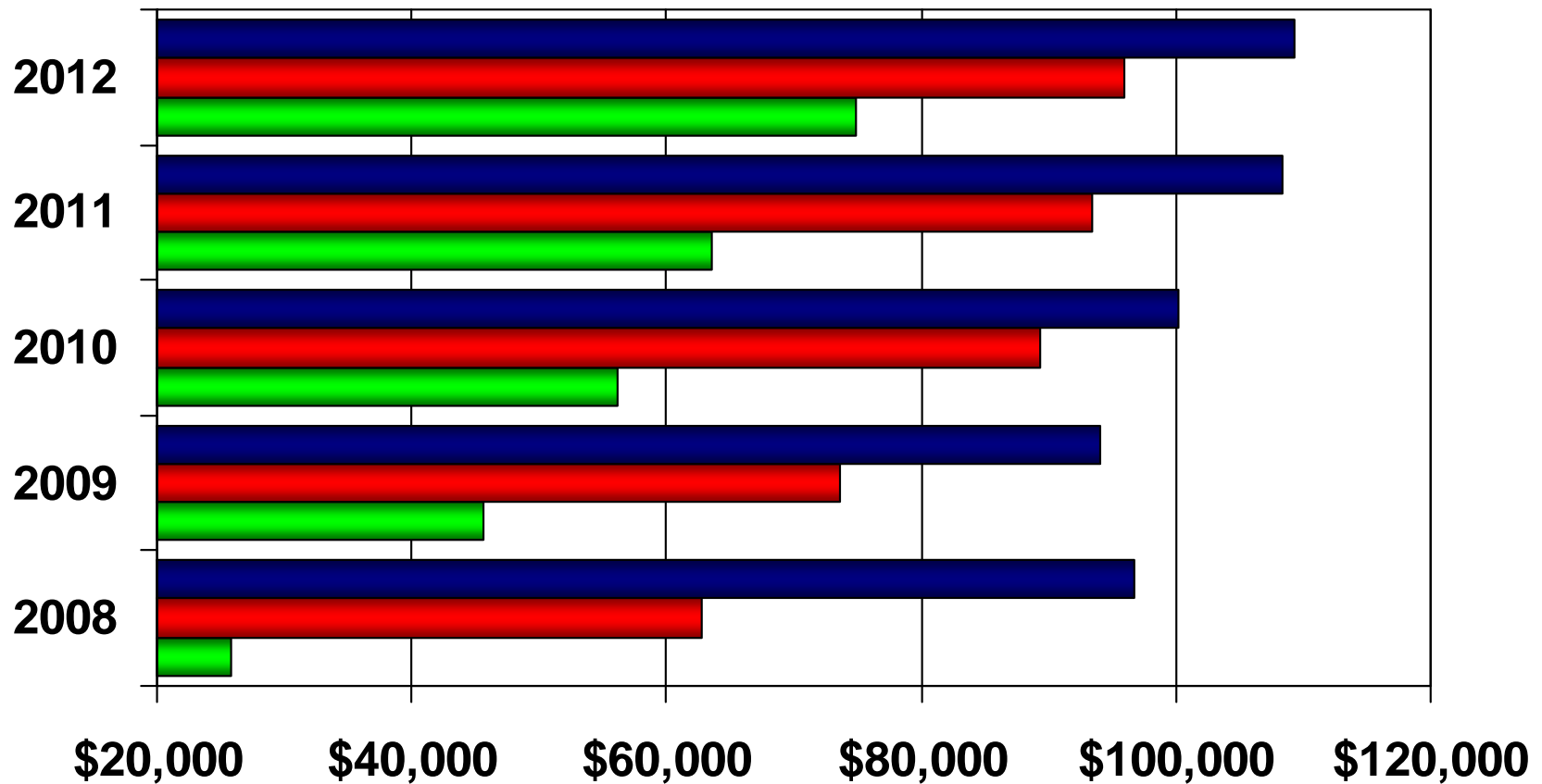
- The Department needs to develop a plan for funding the cost of repairing and replacing portions of the stormwater infrastructure that are expected to fail within the next 10 years.
- The Work Group recognizes this means incurring additional costs.
- ✓ A financial proforma has been developed and funding levels have been identified to support required service levels for the next 7 years
- ✓ Funding alternatives are being explored

# Revenue Enhancements

## Current water and sewer rate resolution:

Water, effective January 1, 2012	\$ 5.1M
Sewer, effective January 1, 2012	<u>\$10.6M</u>
Total rate driven increase	\$15.7M
Other fees and charges	(\$0.8M)
2012 Total Water and Sewer revenue increase	\$14.9M

# Revenue Enhancements



■ Oper Expenses

■ Debt Service

■ Transfer to R & E



# Cost Savings

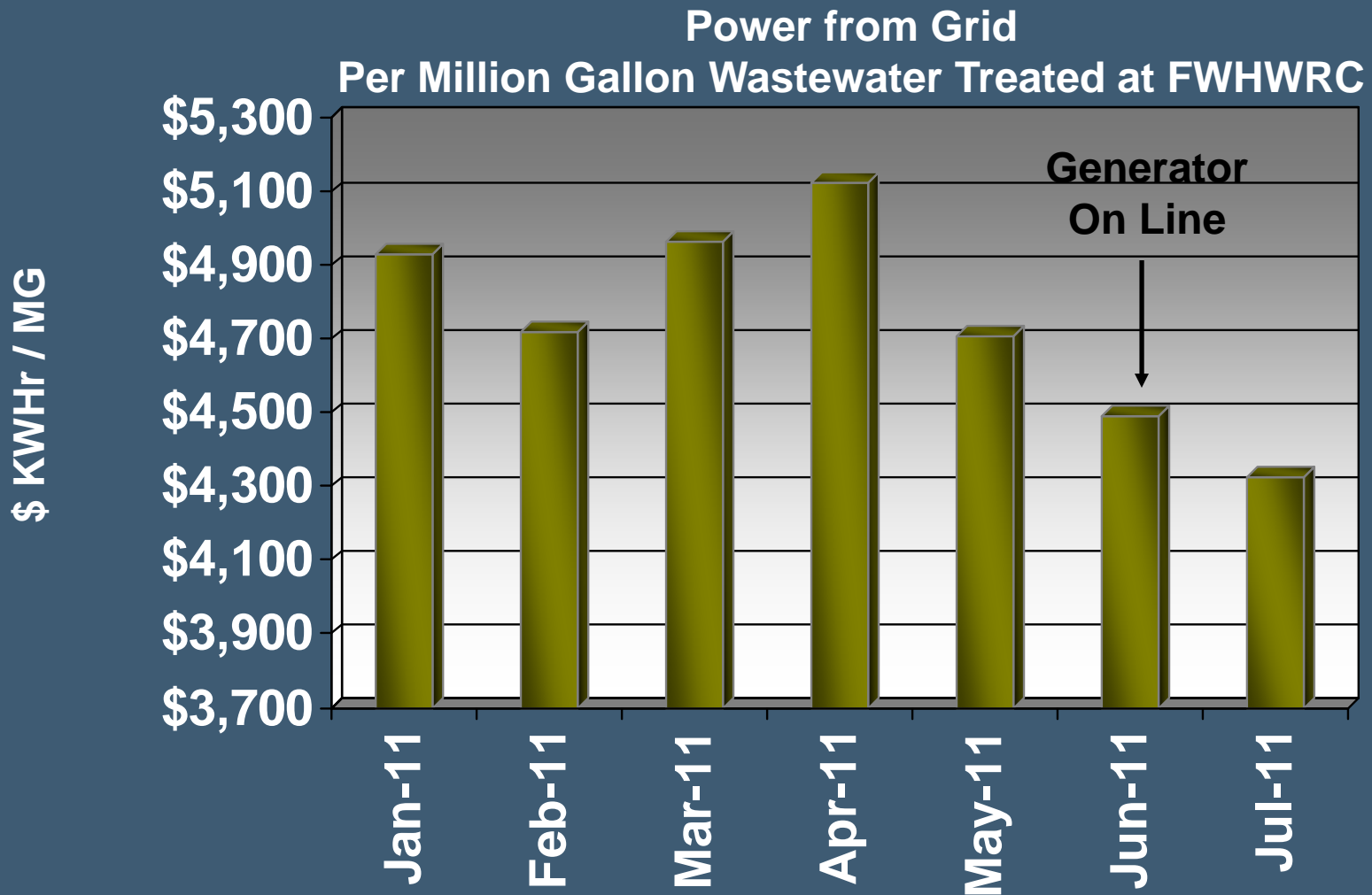
## ✂ Initiatives

- Closure of Jackson Creek WRF
- Gas-to-Energy capture methane gas, generate electricity, Hill Plant
- FOG and High Strength Waste receiving station, Hill Plant

## \$ Results

- Annual cost savings ~\$500k
- Estimated annual electricity savings ~\$400k
- Additional gas generation tipping fees ~\$450k/yr

# Cost Savings



# Cost Savings

## ✂ Initiatives

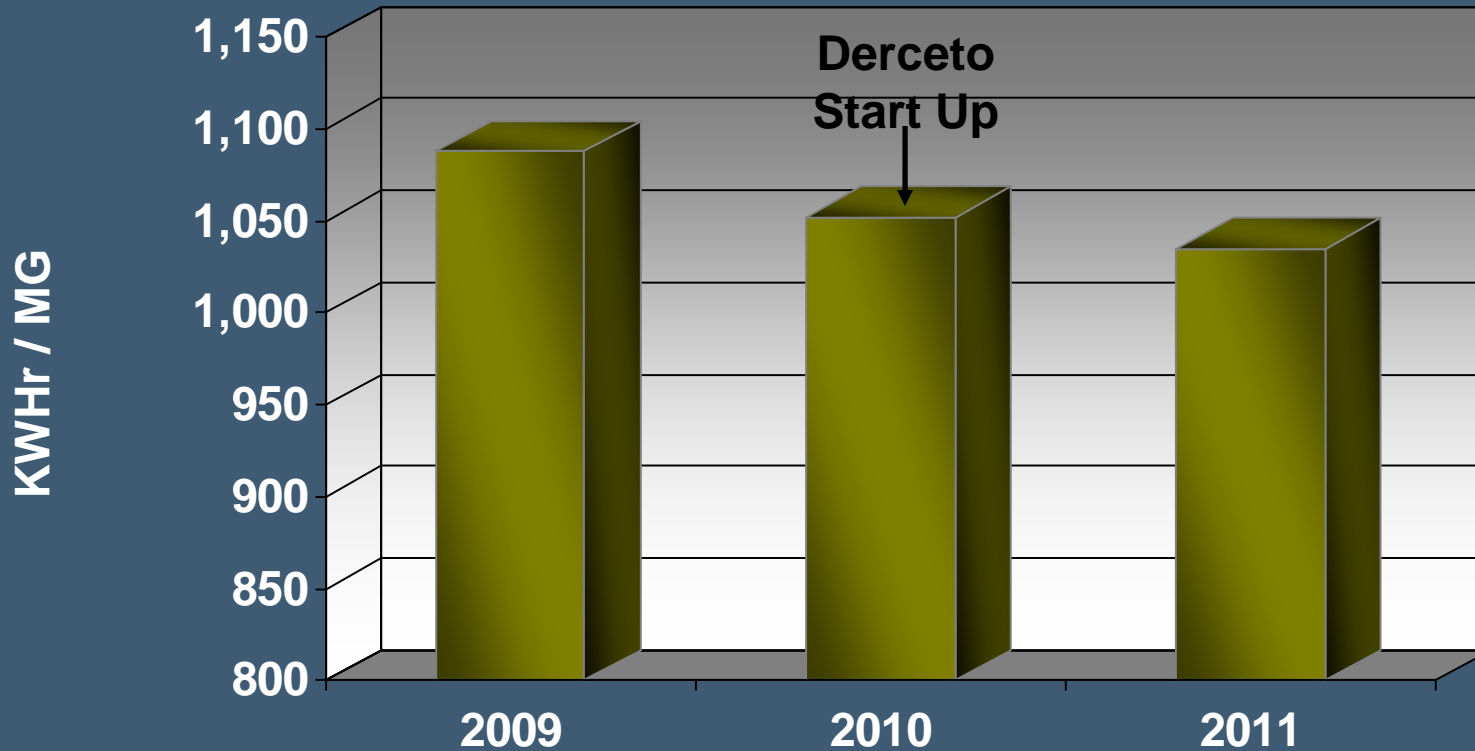
- Water Production, Derceto management system
- Pump Station phase out program
- Plant Maintenance, effectiveness program, implementation 2012

## \$ Results

- Estimated annual electricity savings ~\$325k
- Estimated annual cost savings ~\$250k by 2015
- Annual savings ~\$500k in 2012

# Cost Savings

Power Use  
Per Million Gallon Water Produced



# Cost Savings

## ✂ Initiatives

- Large meter testing, repair and replacement
- Small meter replacement schedule, from 10 to 15 years
- Sewer manhole, flood plain inspection and repair, reduction of inflow

## \$ Results

- Annual increased revenue ~\$1M
- Annual cost savings ~\$400k
- Reduced treatment costs ~\$300k per rain event

# Cost Savings

## ✂ Initiatives

- Non-revenue water reduction initiatives
- Central warehouse surplus sales, eBay
- Customer service process automation, eBill notification and online forms

## \$ Results

- Estimated cost savings ~\$50k, increased revenue TBD
- Estimated cost savings ~\$150k
- Annual cost savings ~\$100k

# Cost Savings

## ✂ Initiatives

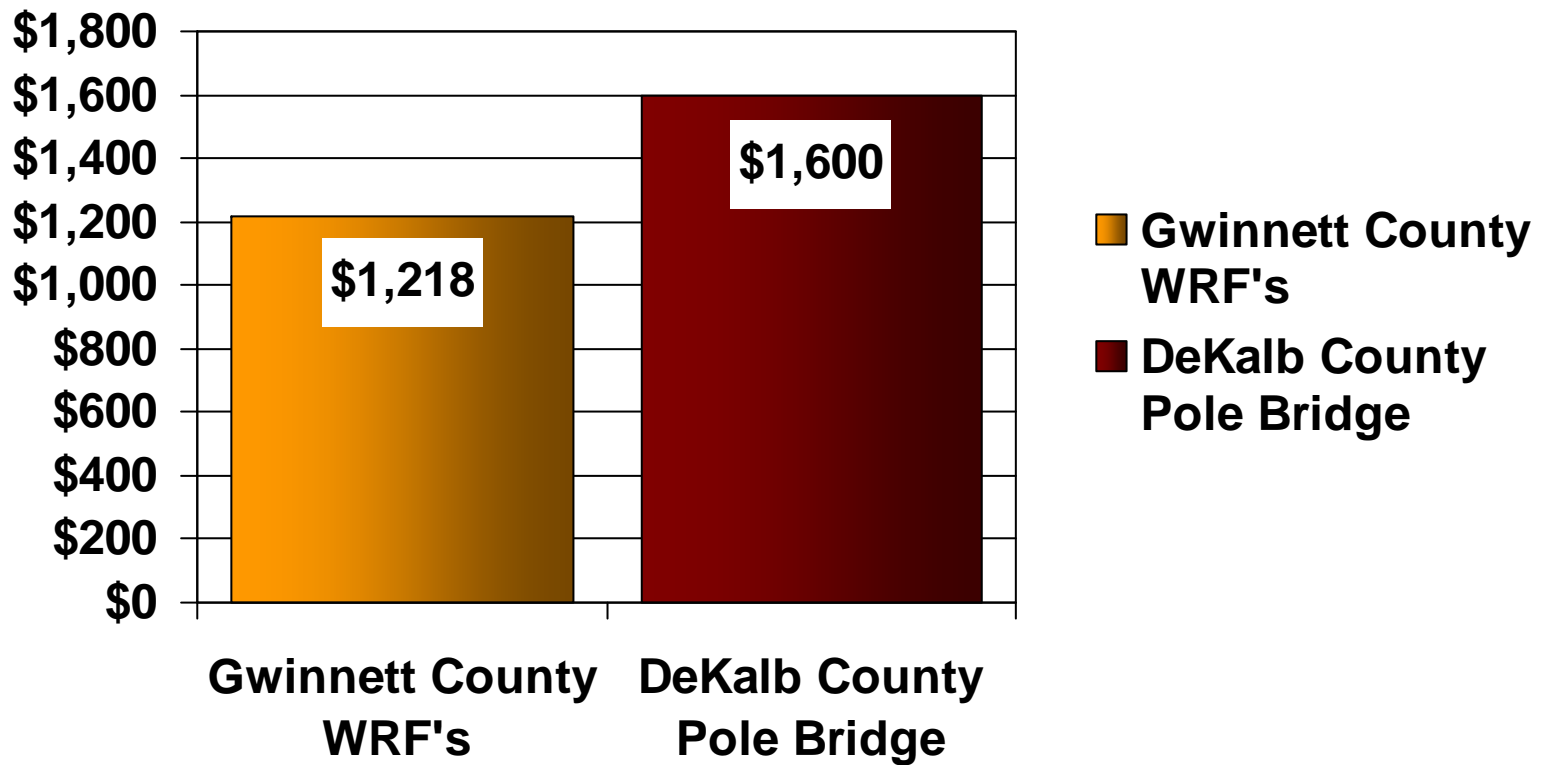
- Nutrient recovery  
Hill plant, 2013 / 2014
  
- South Gwinnett  
wastewater exit  
DeKalb, 2013 / 2014

## \$ Results

- Annual cost savings  
~\$350k
- Annual revenue  
~\$250k
  
- Annual cost savings  
~\$750k
- Avoid capital costs of  
\$50M+

# Cost Savings

O&M Cost Wastewater Treated in 2010  
\$/ MG





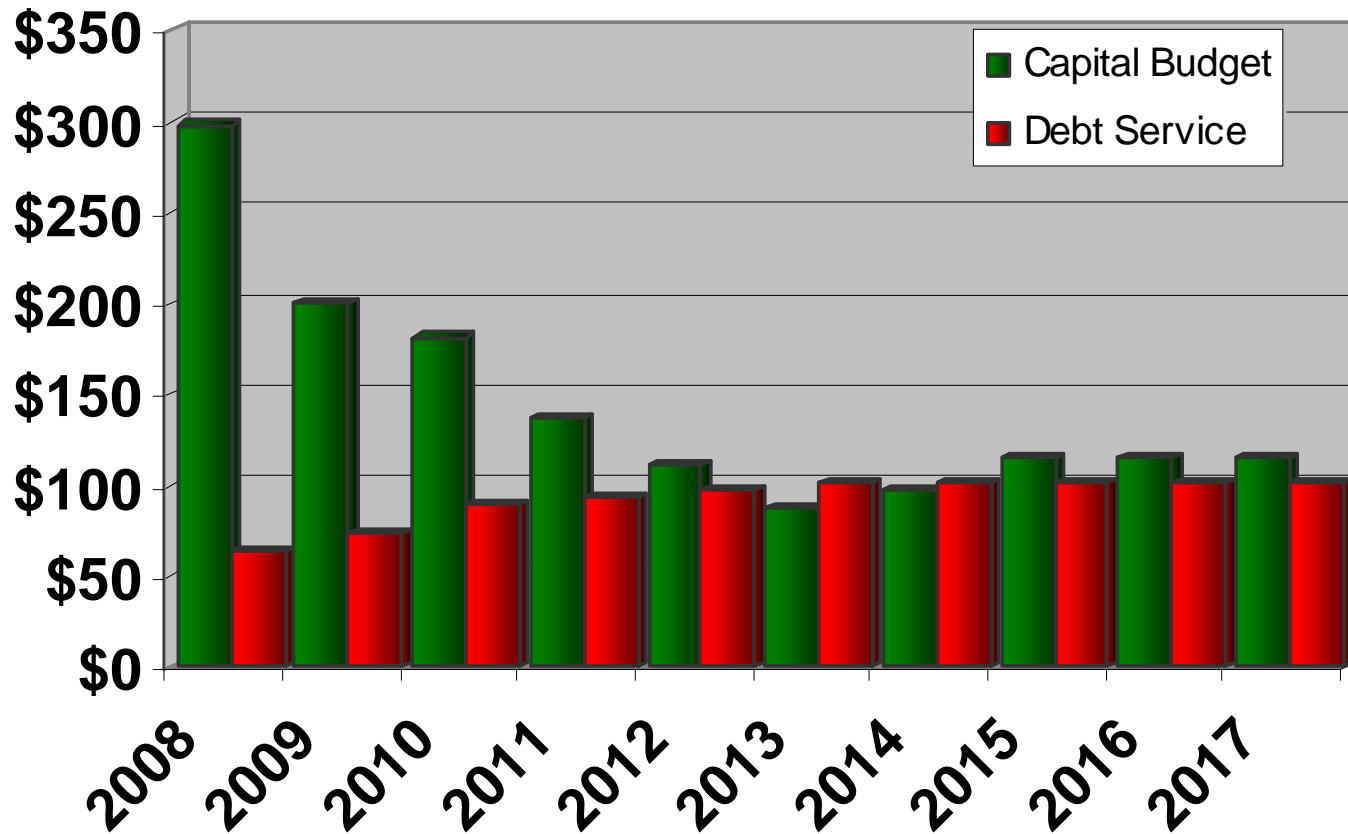


# 2012 Capital Budget

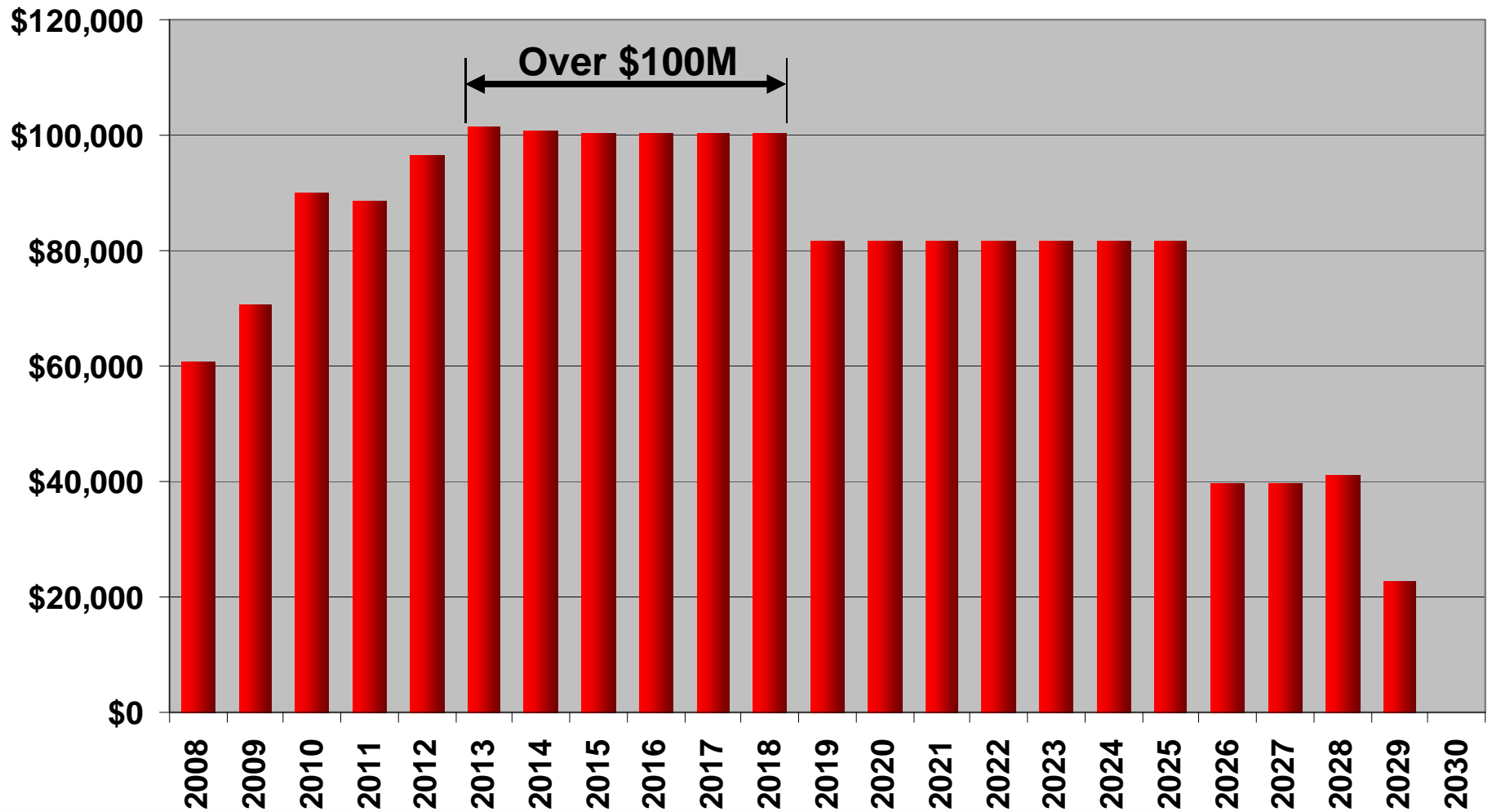
# Capital Budget – Water & Sewer

	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget	2017 Budget
<u>Sources of Funds</u>						
2008 Bonds						
2009 Bonds						
GEFA/Stimulus						
Internal Funding	108,297,881	91,645,065	107,283,761	125,144,000	127,804,000	126,889,000
<b>Total Source</b>	<b>108,297,881</b>	<b>91,645,065</b>	<b>107,283,761</b>	<b>125,144,000</b>	<b>127,804,000</b>	<b>126,889,000</b>
<u>Use of Funds</u>						
Water Treatment	9,250,000	10,100,000	2,500,000	2,500,000	4,500,000	4,500,000
Water Distribution	9,870,000	9,985,000	13,550,000	10,000,000	11,000,000	12,500,000
Wastewater Treatment	48,918,615	16,850,000	28,900,000	39,700,000	26,700,000	24,700,000
Wastewater Collection	16,000,000	20,950,000	22,300,000	16,025,000	16,800,000	14,850,000
General Plant	19,542,155	32,760,065	39,033,761	55,919,000	67,804,000	69,339,000
Utility Relocation	4,717,111	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
<b>Total Use</b>	<b>108,297,881</b>	<b>91,645,065</b>	<b>107,283,761</b>	<b>125,144,000</b>	<b>127,804,000</b>	<b>126,889,000</b>

# Trends – Capital Budget



# Trends – Debt Service



\* In thousands

# Capital Budget – Water & Sewer

## Project Description

- Consolidate multiple smaller WRF's with high unit costs and replace their capacity at Yellow River for economy of scale
- BNR/MBR treatment process is the latest technology in water reclamation
- On-line in 2011, final completion and warranty period in 2012

2012 Budget    \$22.5M

Total Project    \$277.3M

## Yellow River WRF Improvements Construction Manager at Risk



# Capital Budget – Water & Sewer

## Project Description

- Current work includes new headworks and influent pump station, 2011
- Upcoming maintenance facility and operations center, 2012
- Future plant improvements, 2016 and beyond

2012 Budget                      \$10.0M

Total Project                    \$69.5M

## Crooked Creek WRF Improvements

Pizzagalli Construction Company





# Capital Budget – Water & Sewer

## Project Description

- Centralize solids handling and utilize anaerobic digestion as an energy recovery option
- Thickener improvements, 2012
- Primary clarifier and scum removal, 2012
- Digestion capacity to be added by 2016
- Studying nutrient recovery, solar drying, co-generation of biogases

## Biosolids Program

F. Wayne Hill WRC



2012 Budget

\$8.0M

Total Project

\$101.5M

# Capital Budget – Water & Sewer

## Project Description

- Replacement projects for over 3400 miles of water distribution pipe maintained
- Ensure reliability of water system
- Reduce unscheduled water outages
- Currently, 40 sub-projects in program
- Range from 6” PVC to 48” PCCP
- Prioritized based on break history, pipe material and consequence of failure

## Water Distribution Rehabilitation Program



2012 Budget	\$7.0M
Total Project	\$47.2M



# Capital Budget – Water & Sewer

## Project Description

- Maintain and rehabilitate 230 sewer pump stations
- Prevent sanitary sewer overflows
- Increase reliability
- Ensure pump station capacity
- Currently, 22 sub-projects in program
- Includes equipment replacement, operational upgrades, odor control and assessments

## Pump Station Rehabilitation Program



2012 Budget

\$6.3M

Total Project

\$37.0M

# Capital Budget – Water & Sewer

## Project Description

- Replacement projects for over 2600 miles of gravity sewer and 288 miles for force mains maintained
- Currently, 14 sub-projects in program
- Prioritized based on condition, remaining useful life, cost, and capacity

2012 Budget                      \$3.0M

Total Project                    \$18.5M

## Sanitary Sewer Collection Renewal / Replacement





# Capital Budget – Water & Sewer





# Capital Budget – Water & Sewer



# Capital Budget – Water & Sewer





# Capital Budget – Water & Sewer

## Project Description

- Mini business case evaluations done on new candidates to determine payback period
- Currently, 13 of 234 pump stations earmarked for evaluation
- 1 project in construction
- 6 projects in easement acquisition
- Reduce operational costs
  - Target 2015
  - \$250k annual savings
- Reduce risk of failure, increase reliability

## Pump Station Phase Out Program

Cambridge Downs Pump Station Decommissioning



2012 Budget \$0.75M

Total Project \$9.25M

# Capital Budget – Water & Sewer

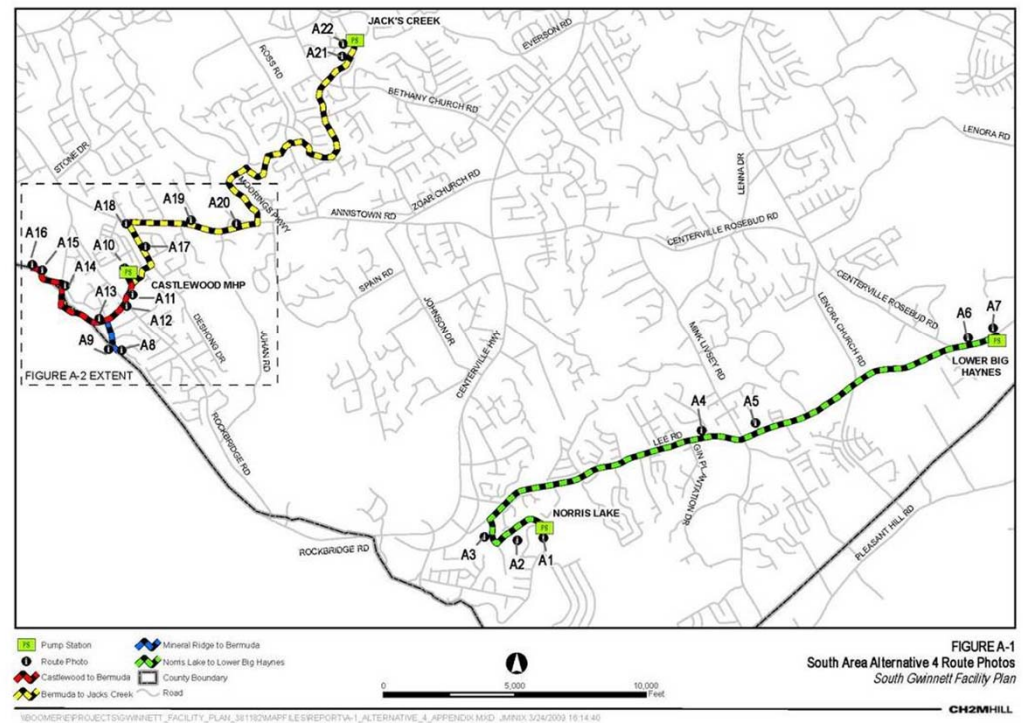
## Project Description

- Old contract with DeKalb for conveyance and treatment
- 2 projects will bid in 2012 to return flows back to Gwinnett
- Avoid DeKalb capital costs +\$50M and monthly operating costs
- Take advantage of Gwinnett's available capacity

2012 Budget \$2.7M

Total Project \$25.7M

## South Gwinnett Project



# Capital Budget – Water & Sewer

## Project Description

- On-site permanent standby generators
- Lanier Filter Plant and Shoal Creek Raw Water Intake
- Address power and grid failure
- Level of service commensurate with neighboring utilities

2012 Budget	\$6.0M
Total Project	\$15.8M

## Water Production Standby Generators





# Capital Budget – Water & Sewer

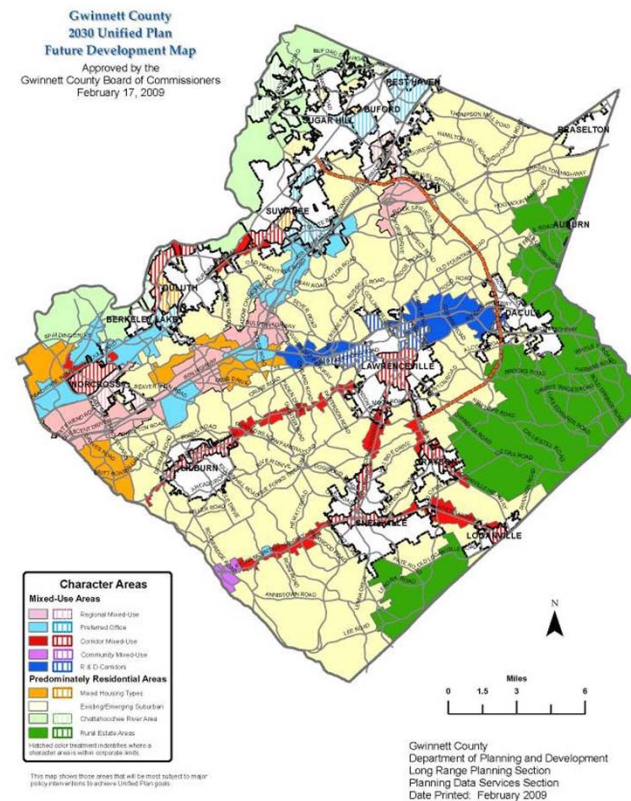
## Project Description

- Funding source for future assets
- Results from master planning, operational necessity, specific needs
- Major Activity Center Upgrades, in support of the Unified Plan, \$11.6M
- Infrastructure pending water wars litigation outcome, \$40.5M

2012 Budget \$2.5M

Total Project \$104.1M

## Capital Needs Pending Business Case Evaluation



# Capital Budget – Stormwater

	2012 Budget	2013 Budget	2014 Budget	2015 Budget	2016 Budget	2017 Budget
<u>Sources of Funds</u>						
GEFA						
Grants						
Internal Funding	30,126,467	19,246,737	20,036,535	20,427,060	20,845,000	21,975,000
Total Source	30,126,467	19,246,737	20,036,535	20,427,060	20,845,000	21,975,000
<u>Use of Funds</u>						
Storm Drainage Improvements	16,568,787	15,341,334	18,594,465	18,824,108	19,077,762	20,977,762
Watershed Improvements	100,000	150,000	150,000	150,000	150,000	150,000
Dam Rehabilitation	250,000	250,000	250,000	250,000	250,000	250,000
General Plant	13,207,680	3,505,403	1,042,070	1,202,952	1,367,238	597,238
Total Use	30,126,467	19,246,737	20,036,535	20,427,060	20,845,000	21,975,000

# Capital Budget – Stormwater

## Project Description

- 15 Major Category I Dams
- 12 completed
- 1 in permitting
- 2 in design
- Remote monitoring installation

2012 Budget \$250k

Total Project \$250k/yr

## Dam Upgrade and Rehabilitation



Lake Waterton Dam 2011

# Capital Budget – Stormwater



Cloister  
Place  
Lining

## Pipe Upgrade and Rehabilitation

### Project Description

- Pipe replacement
- Pipe lining
  - Exploring new methods and new products

Lake Ridge  
Terrace  
Replacement

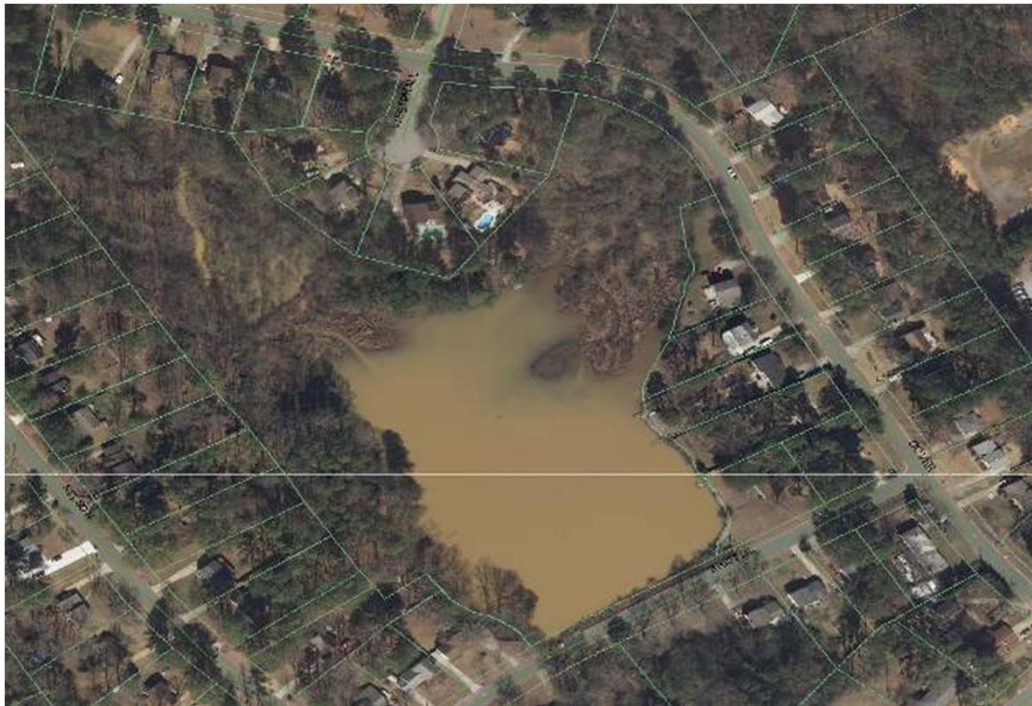


2012 Budget \$19M  
Total Project \$19M/yr



# Capital Budget – Stormwater

## Watershed Improvement Program



Lake Claiborne  
Stream Restoration and Stormwater BMP

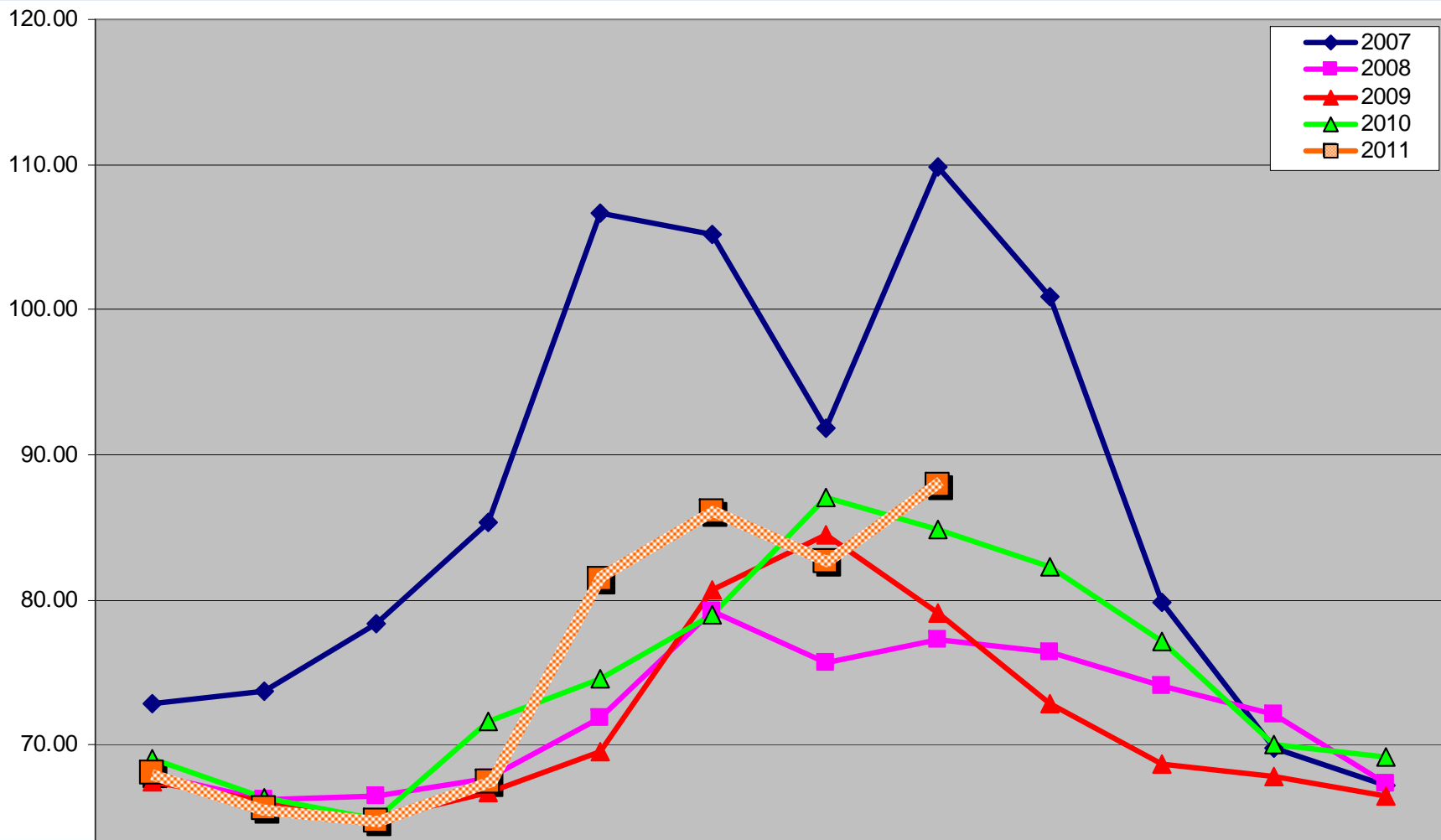
### Program Description

- Meet Ga Water Quality Standards
- Maintain compliance with wastewater permits
- Restore damaged streams to reduce bank erosion
- Restore habitat, fish and aquatic communities

2012 Budget \$6 M

Total Program \$6 M/yr

# Trends – Water Production



MGD, through August 29, 2011

# Summary

- Reduced CIP from \$1.124B to \$641M
  - Focus on maintaining infrastructure
- Cost reduction initiatives
  - \$3.6M in 2011
  - \$2M for 2012 and beyond





# Summary

- 2012 Budget Targets
  - Supports debt service
  - Support pay-as-you-go
  - Supports operating expense levels



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# Department of Water Resources September 2011

