

gwinnettcounty



Department of  
**Water Resources**

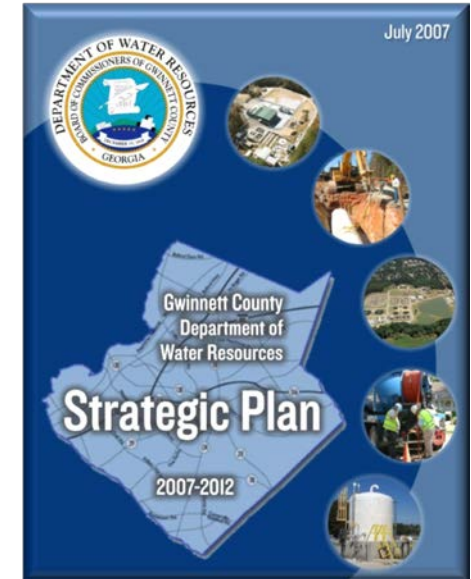
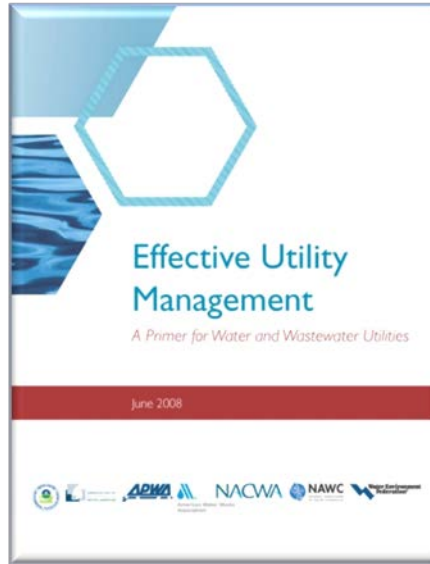


# 2013 Business Plan



September  
2012

# 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.

# Measurements



## Citizens / Customer Perspective

	Actual	Target	Status	Trend
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### Increase service reliability

wastewater treatment compliance rate	100	100	●	➡
safe drinking water compliance rate	100	100	●	➡
sewage overflows / 100 miles (SSOs)	0.8	1.5	●	➡

### Improve customer service

unplanned outages / 100 miles			●	➡
% SW service request resolution			●	➡

### Increase operational reliability

% category-one dam condition			●	➡
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## Financial Perspective

	Actual	Target	Status	Trend
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### Ensure financial viability

% stormwater pipe > useful life	28.1	27.9	●	➡
% inaccurate meter replacement	158	100	●	➡

### Optimize operations

production O&M cost/mgal treated	465	535	●	➡
			●	➡
			●	➡

Wastewater Treatment Compliance Rate	100	100	●	
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# of volunteers	36			
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### Ensure infrastructure sustainability

% stormwater structures inspected	14.5	17.0	●	➡
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### Sustain water resources

% water losses	7.36	7.00	●	➡
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Safe Drinking Water Compliance Rate	100	100	●	
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avg training hours / employee	13.25	12.0	●	➡
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### Improve Physical Fitness

% empl < 48 hrs non-FMLA sick-leave used	99.9%	92	●	➡
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### Increase departmental bench strength

% key management positions w/candidates	19	100	●	➡
key management positions vacant	1	0	●	➡

### Enhance available productive hours

lost hours YTD	16,099	23,355	●	➡
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# SWOT Analysis

- Strengths

- Triple AAA rating
- Credibility with regulatory agencies
- Business-focused organization
- Knowledgeable staff
- Capacity
- Implementation of asset management systems





# SWOT Analysis

- Weaknesses
  - Deteriorating stormwater infrastructure
  - Limited resources for employee retention and development
  - Debt service





# SWOT Analysis



- Opportunities

- Secure raw water supply
- Continue to optimize costs and improve performance and efficiencies
- Organizational/staff realignment
- Advance our return on investments with 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



# SWOT - Threat

## Water Wars – U.S. Supreme Court

On June 25, 2012, the U.S. Supreme Court denied petitions by Alabama, Florida and the Southeastern Federal Power Customers allowing the 11<sup>th</sup> Circuit Court of Appeals ruling to stand – Lake Lanier is authorized for water supply





# SWOT - Threat

Water Wars – Update

Water Control Manuals

Environmental Impact Statement

National Environmental Policy Act

Phase 2

Endangered species – COE and  
FWS released modified RIOP and  
new BiOP in June 2012; Briefs due  
October 2012

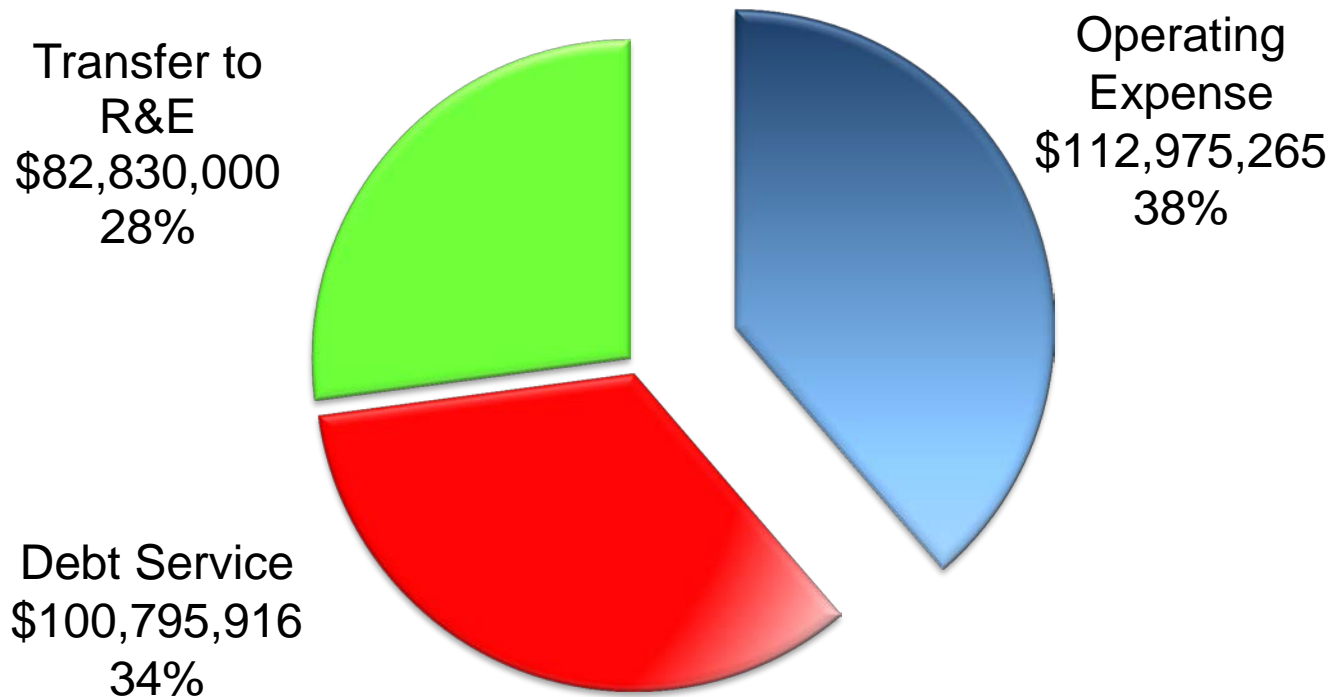


gwinnettcounty

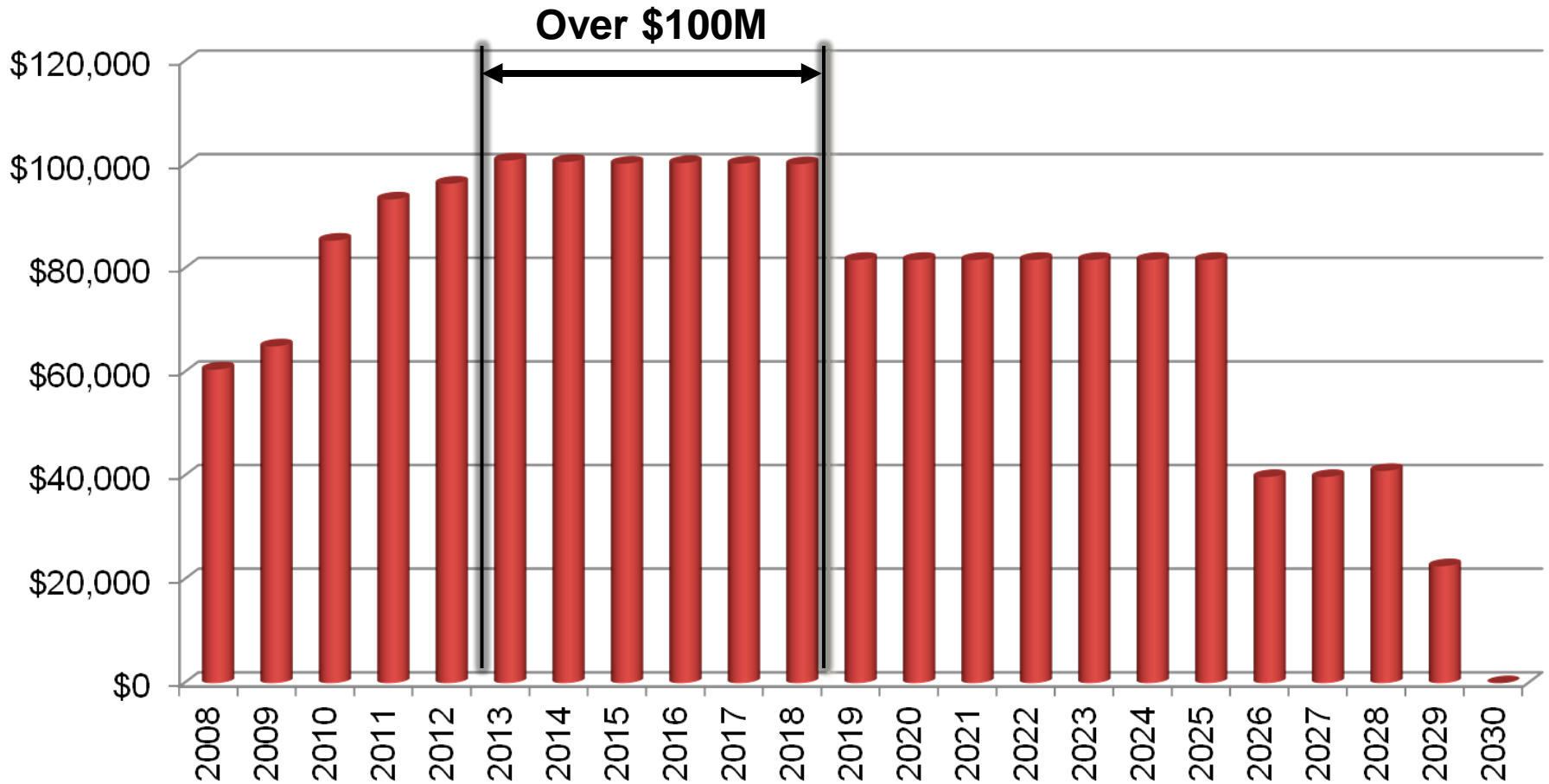
# 2013 Budget Summary

# Operating Budget – Water & Sewer

**2013 Expense \$296,601,181**

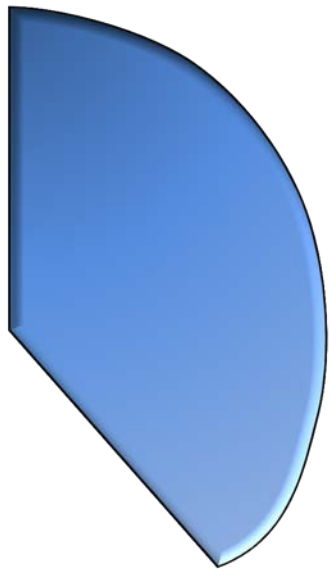


# Debt Service



\* In thousands

# Operating Budget – Water & Sewer



Operating  
Expense  
\$112,975,265

Category	\$	%
General Operating Expenses	\$50.2 M	16.9%
Personnel Services	\$37.2 M	12.5%
Utilities	\$16.0 M	5.4%
Chemicals	\$9.6 M	3.2%



# Operating Budget – Water & Sewer

	<u>2013 Budget</u>	<u>2012 Budget</u>
<b><u>Revenue</u></b>		
Water	160,244	155,909
Sewer	127,083	117,132
Other Fees/Charges	665	1,403
SDC's	7,022	5,590
Use of Net Assets	<u>1,587</u>	
Total Revenue	296,601	<u>280,034</u>
<b><u>Operating Expenses</u></b>		
Water Production	18,315	16,639
Water Reclamation	39,831	37,913
Field Operations	19,207	19,035
Engineering/Constr.	3,974	4,109
Asset Mgmt	2,073	1,923
Customer Service	13,449	13,764
Dept. Admin	14,927	13,562
P&D Appropriation	1,199	1,136
Working Cap Res		<u>3,718</u>
Total Operating Exp.	<u>112,975</u>	<u>111,799</u>
<b>Debt Service</b>	100,796	95,935
<b>Transfer to R&amp;E</b>	82,830	72,300
<b>Total Expenses</b>	296,601	280,034

\* In thousands

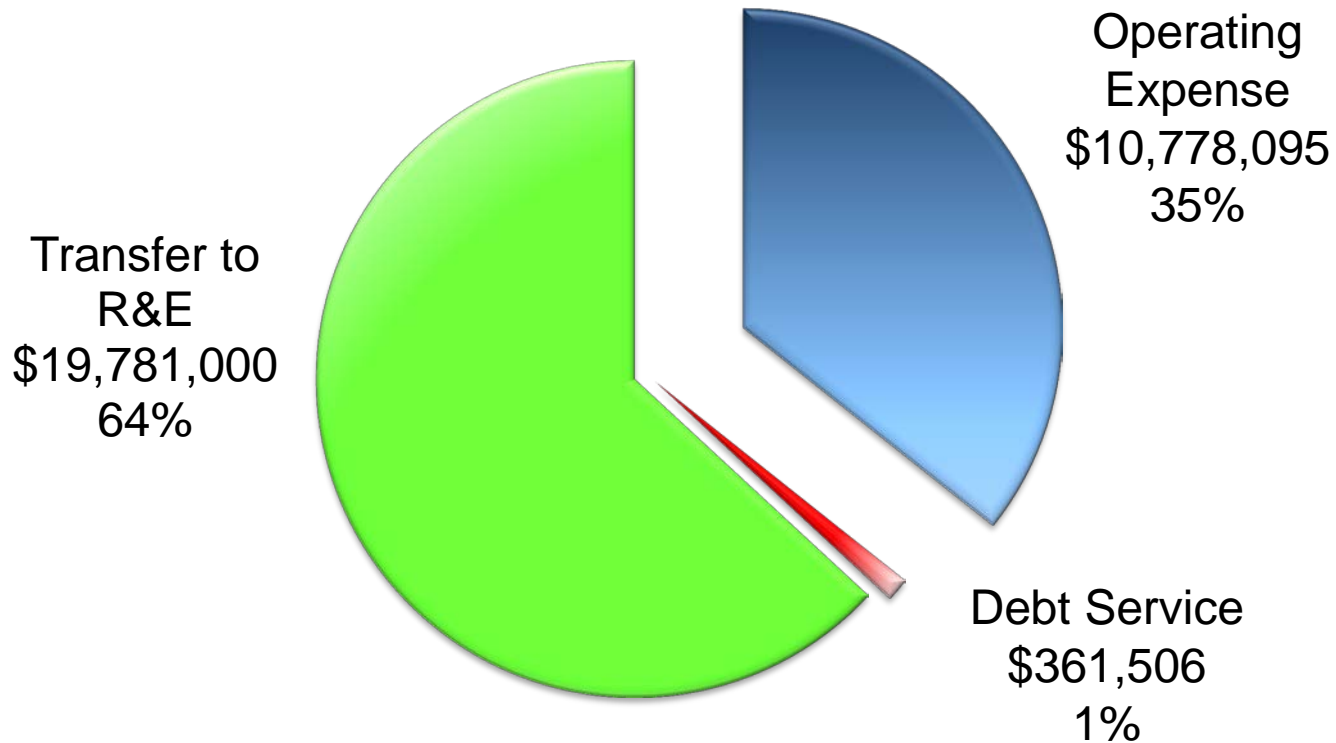
# Operating Budget – Water & Sewer

Account Name	2013 Amount	% of Total	2012 Amount	% of Total	Difference Inc/(Dec)
<b>Water &amp; Sewer:</b>					
Personnel Services	37,206,926	12.5%	36,411,815	13.0%	795,111
General Operating Expense:					
Utilities	16,020,454	5.4%	15,019,861	5.4%	1,000,593
Industrial R&M-Contracted	11,678,927	3.9%	9,933,384	3.5%	1,745,543
Professional Service	10,691,381	3.6%	10,672,238	3.8%	19,143
Chemicals	9,596,787	3.2%	8,338,834	3.0%	1,257,953
Bad Debt Expense	3,000,000	1.0%	4,000,000	1.4%	(1,000,000)
Other Services-WsWtr San	2,528,847	0.9%	2,363,679	0.8%	165,168
OPEB- Ins Transfer	2,186,471	0.7%	2,208,428	0.8%	(21,957)
Lic Support Agreements	1,722,046	0.6%	1,195,908	0.4%	526,138
Capacity and Use	1,500,000	0.5%	2,000,000	0.7%	(500,000)
Fuel	1,137,262	0.4%	1,158,380	0.4%	(21,118)
Postal Services	1,097,655	0.4%	1,087,176	0.4%	10,479
Conference/Training/Travel	270,945	0.1%	275,095	0.1%	(4,150)
Other General Oper Exp	5,037,222	1.7%	4,710,572	1.7%	326,650
Debt Service	100,795,916	34.0%	95,935,371	34.3%	4,860,545
Contributions	9,300,342	3.1%	8,705,542	3.1%	594,800
Transfer to R&E	82,830,000	27.9%	72,300,000	25.8%	10,530,000
Working Capital Reserve	0	0.0%	3,717,867	1.3%	(3,717,867)
<b>Total - Water &amp; Sewer:</b>	<b>296,601,181</b>	<b>100.0%</b>	<b>280,034,150</b>	<b>100.0%</b>	<b>16,567,031</b>

\* In thousands

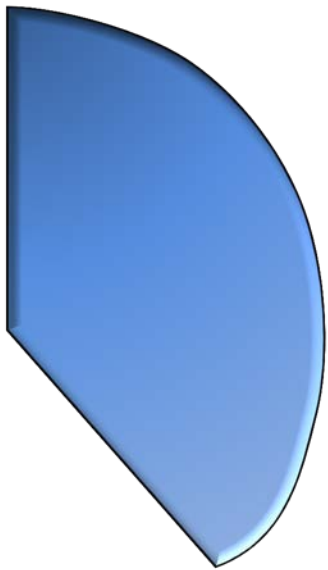
# Operating Budget – Stormwater

**2013 Expense \$30,920,601**



\* In thousands

# Operating Budget – Stormwater



Operating  
Expense  
\$10,778,095

Category	\$	%
General Operating Expenses	\$5.37 M	17.4%
Personnel Services	\$5.41 M	17.5%

# Operating Budget – Stormwater

	<u>2013 Budget</u>	<u>2012 Budget</u>
<b><u>Revenue</u></b>		
Storm Water Fees	30,214	30,348
Other Fees/Charges	134	27
Use of Net Assets	<u>573</u>	
Total Revenue	30,921	<u>30,375</u>
<b><u>Operating Expenses</u></b>		
Programs	7,884	6,442
Maintenance	2,474	3,413
P&D Appropriation	420	416
Working Cap Res		<u>225</u>
Total Operating Exp.	10,778	10,496
<b>Debt Service</b>	362	362
<b>Transfer to R&amp;E</b>	19,781	19,517
<b>Total Expenses</b>	30,921	30,375

\* In thousands

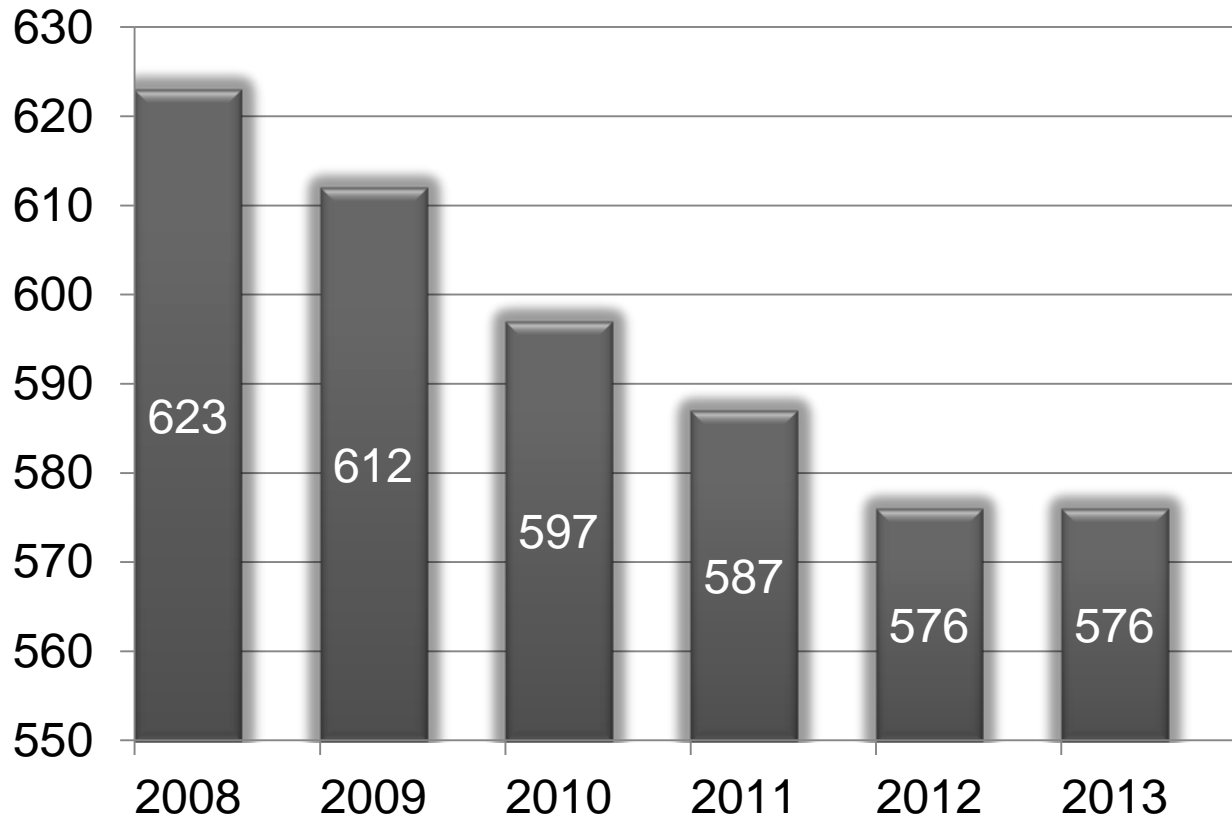


# Operating Budget – Stormwater

Account Name	2013 Amount	% of Total	2012 Amount	% of Total	Difference Inc/(Dec)
<b>Stormwater:</b>					
Personnel Services	5,408,792	17.5%	5,413,152	17.8%	(4,360)
General Operating Expense:					
Professional Service	1,679,354	5.4%	1,545,278	5.1%	134,076
Road Services	1,003,000	3.2%	1,003,000	3.3%	0
Misc Svcs & Charges	528,684	1.7%	444,646	1.5%	84,038
Lic Support Agreements	370,410	1.2%	50,148	0.2%	320,262
Fuel	156,705	0.5%	170,790	0.6%	(14,085)
R&M-Vehicles	108,938	0.4%	76,007	0.3%	32,931
OPEB- Ins Transfer	89,094	0.3%	89,862	0.3%	(768)
Parts	55,798	0.2%	58,299	0.2%	(2,501)
Conf/Training/Travel	27,225	0.1%	27,225	0.1%	0
Other General Oper Exp	312,383	1.0%	303,435	1.0%	8,948
Debt Service	361,506	1.2%	361,506	1.2%	0
Contributions	1,037,712	3.4%	1,090,470	3.6%	(52,758)
Transfer to R&E	19,781,000	64.0%	19,517,000	64.3%	264,000
Working Capital Reserve	0	0.0%	224,598	0.7%	(224,598)
<b>Total - Stormwater:</b>	<b>30,920,601</b>	<b>100.0%</b>	<b>30,375,416</b>	<b>100.0%</b>	<b>545,185</b>

\* In thousands

# Operating Budget – Staffing



DWR  
Total  
Authorized  
Positions

# Revenue Enhancements

## Current water and sewer rate resolution:

Water, effective January 1, 2013	\$ 5.1M
Sewer, effective January 1, 2013	<u>\$10.6M</u>
Total rate driven increase	\$15.8M
Other fees and charges	\$0.8M
2013 Total Water and Sewer revenue increase	\$16.6M

# Cost Savings

## ✂ Initiatives

- Gas-to-Energy capture methane gas, generate electricity, Hill Plant
- FOG and High Strength Waste receiving station, Hill Plant

## \$ Results

- Estimated annual electricity savings ~\$400k
- Additional gas generation tipping fees  
~\$285k 2012  
~\$375k 2013

# Cost Savings

## ✂ Initiatives

- Pump Station phase out program
- Water production tanks off-line/gravity
- Plant Maintenance, effectiveness program, implementation 2012

## \$ Results

- Estimated annual cost savings ~\$250k by 2015
- Annual savings ~\$300k
- Annual savings ~\$500k in 2012



# 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 major rain event

# Cost Savings

## ✂ Initiatives

- Non-revenue water reduction initiatives
- Central warehouse surplus sales, eBay

## \$ Results

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

# 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+

# 2013 Capital Budget

# Capital Budget – Water & Sewer

	2013 Budget	2014 Budget	2015 Budget	2016 Budget	2017 Budget	2018 Budget
<u>Sources of Funds</u>						
2008 Bonds						
2009 Bonds						
GEFA/Stimulus						
Internal Funding	101,287,359	99,683,761	116,044,000	115,704,000	117,339,000	119,900,000
<b>Total Source</b>	<b>101,287,359</b>	<b>99,683,761</b>	<b>116,044,000</b>	<b>115,704,000</b>	<b>117,339,000</b>	<b>119,900,000</b>
<u>Use of Funds</u>						
Water Treatment	12,400,000	2,500,000	7,500,000	9,500,000	10,500,000	12,500,000
Water Distribution	17,820,000	12,400,000	11,600,000	12,600,000	13,000,000	12,700,000
Wastewater Treatment	29,600,000	53,300,000	60,300,000	58,300,000	62,300,000	64,500,000
Wastewater Collection	20,525,000	12,250,000	14,150,000	16,100,000	13,200,000	11,700,000
Res Equip Tech & Sup	18,442,359	18,233,761	21,494,000	18,204,000	17,339,000	17,500,000
Utility Relocation	2,500,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
<b>Total Use</b>	<b>101,287,359</b>	<b>99,683,761</b>	<b>116,044,000</b>	<b>115,704,000</b>	<b>117,339,000</b>	<b>119,900,000</b>



# Capital Budget – Water & Sewer

## Project Description

- Demolition of the decommissioned facilities from Phase I: Headworks and influent pump station building, primary clarifiers and equalization basin
- Phase II: Construction of operations center and maintenance facility

2013 Budget	\$	4M
Total Project	\$	11.4M

## Crooked Creek WRF Improvements and Demolition Project Heavy Constructors, Inc.



# Capital Budget – Water & Sewer

## Project Description

- Phase III: Upgrade of the oldest water reclamation facility
- Underway with a Facilities Plan to define liquids, solids, and odor control processes
- Considers regulatory drivers for future effluent standards and discharge points

2013 Budget    \$    5M

Total Project    \$240M

## Crooked Creek WRF Improvements Phase III



# Capital Budget – Water & Sewer

## Project Description

- Includes rehabilitation at Crooked Creek of the aeration system
- Includes rehabilitation at FWHWRC for actuator replacement, cross-over pipes, and the planned replacement of the membranes
- Includes continued work on Arc Flash Assessment and the associated repairs

## WRF Rehabilitation Program F. Wayne Hill/Crooked Creek/General Plant



2013 Budget

\$ 9M

Total Project

\$38M



# Capital Budget – Water & Sewer

## Project Description

- Centralize solids handling and utilize anaerobic digestion as an energy recovery option
- Thickener improvements complete in 2012
- Primary clarifier and scum removal complete in early 2013
- Nutrient recovery to begin in 2012 through 2014
- Digestion capacity to be added in 2016 through 2018
- Potential projects for solar drying, co-generation of biogases



## Biosolids Program

F. Wayne Hill WRC



2013 Budget

\$11.5M

Total Project

\$103M

# Capital Budget – Water & Sewer

## Sanitary Sewer Collection Renewal/Replacement

### Project Description

- Replacement projects for over 2,600 miles of gravity sewer and 288 miles for force mains
- 5 projects in construction in 2012, 7 projects in design, 8 projects ready for 2013, 80 – 90 projects in the next 5 years

2013 Budget	\$ 3M
Total Project	\$3M/YR



# Capital Budget – Water & Sewer

## Project Description

- Maintain and rehabilitate 226 sewer pump stations
- Prevent sanitary sewer overflows
- Increase reliability
- Ensure pump station capacity
- Includes equipment replacement, operational upgrades, odor control, and assessments
- 17 projects underway

## Pump Station Rehabilitation Program



2013 Budget	\$	5.9M
Total Project		\$4 – 8M/YR



# Capital Budget – Water & Sewer



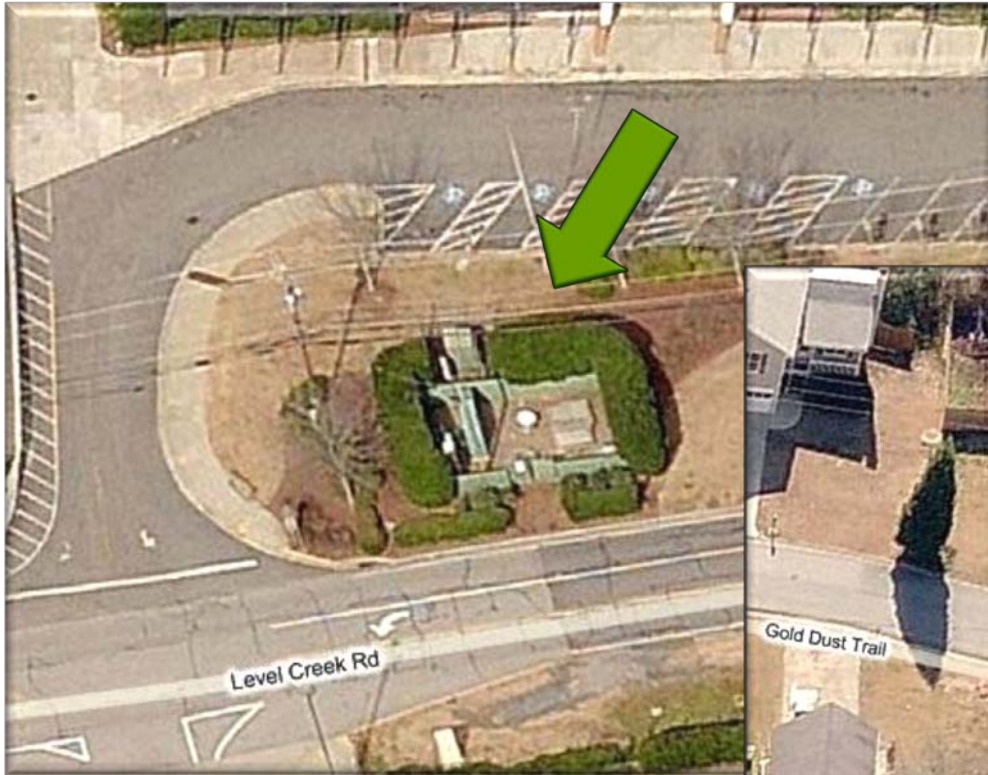
*Kenvilla PS*

*Lakefield PS*





# Capital Budget – Water & Sewer



*North Gwinnett High School PS*

*Parkview East PS*





# Capital Budget – Water & Sewer



*Garner Industrial PS*



*Little Mill PS*

# Capital Budget – Water & Sewer

## Project Description

- Mini business case evaluations on new candidates to determine payback period
- Currently, 13 of 226 pump stations earmarked for evaluation
- 1 project in construction
- 6 projects in easement acquisition
- Reduce risk of failure, increase reliability

## Pump Station Phase Out Program



2013 Budget \$ 2.2M

Total Project \$1M/YR

# Capital Budget – Water & Sewer

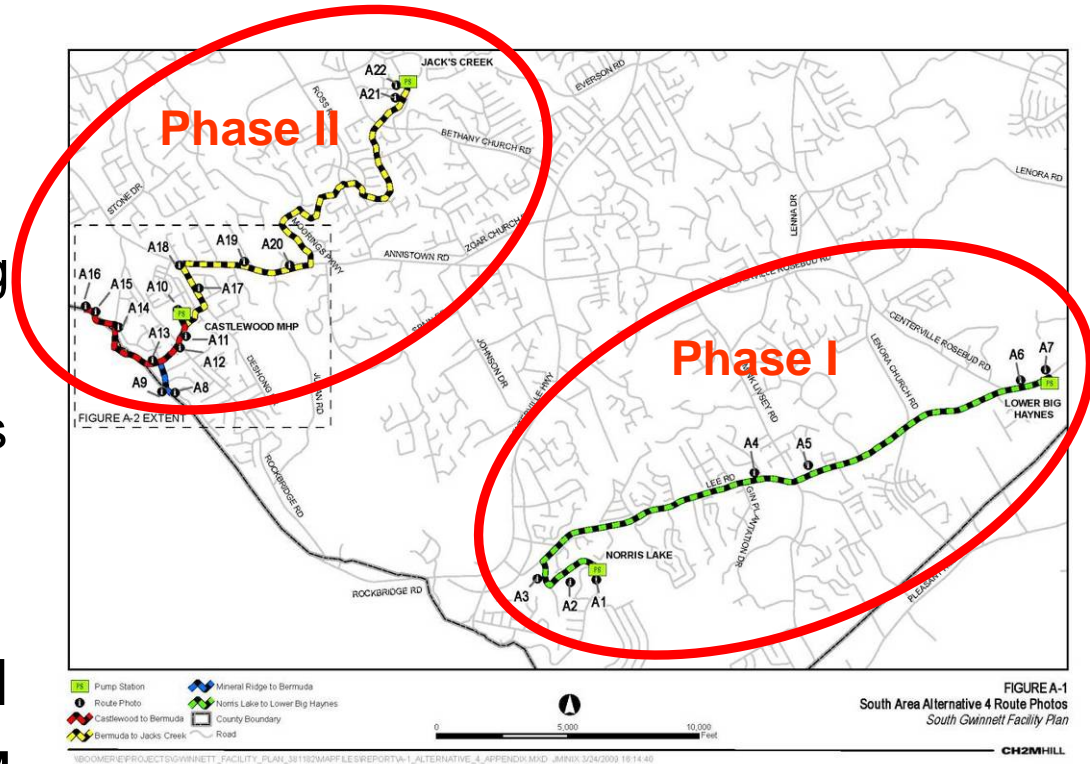
## Project Description

- 2 projects awarded in 2012 to return flows back to Gwinnett
- Avoid DeKalb capital costs +\$50M and monthly operating costs
- Take advantage of Gwinnett's available capacity

2013 Budget \$ 9.9M

Total Project \$18.7M

## South Gwinnett Project





# 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, 8 projects in construction, 8 projects in design, 3 projects bidding, 4 projects ready for 2013
- Prioritized based on break history, pipe material and consequence of failure

## Water Distribution Rehabilitation Program



2013 Budget	\$	12.6M
Total Project	\$9 –10M/YR	

# Capital Budget – Water & Sewer

## Project Description

- 48" Prestressed Concrete Cylinder Pipe (PCCP) installed in the late 1970s and early 1980s
- Pipe sold to thousands of purchasers with manufacturing deficiencies, resulted in bankruptcy with suits for damages in excess of \$300M
- Approximately 22 miles remain in transmission system

## Water Distribution Rehabilitation Program



# Capital Budget – Water & Sewer

## Project Description

- LFP – Filter Backwash Pump Replacement complete in 2013
- LFP – Central High Service Pump VFD Pump Replacement



## Water Facility Rehabilitation Program



2013 Budget

\$ 4.8M

Total Project

\$29.4M



# Capital Budget – Water & Sewer

## Project Description

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

2013 Budget                      \$ 7.6M

Total Project                    \$18.2M

## Water Production Standby Generators



# Capital Budget – Water & Sewer

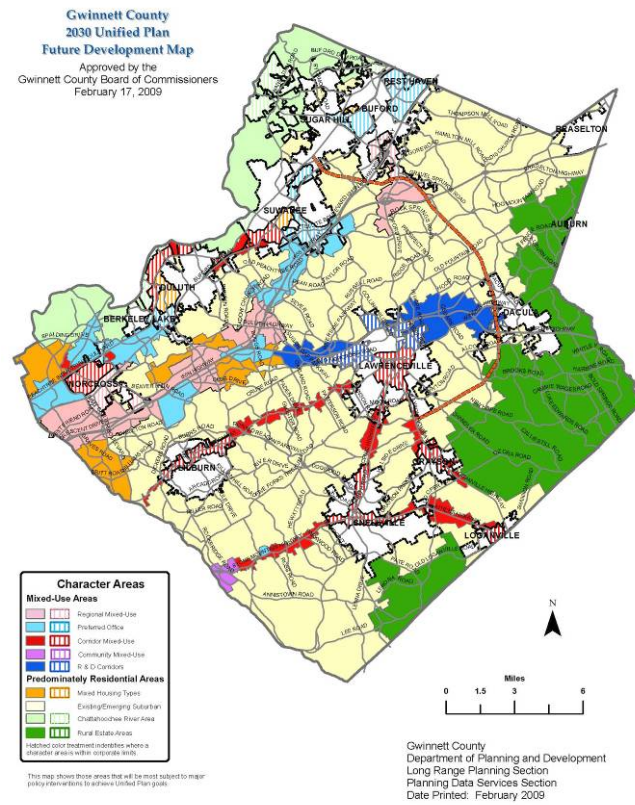
## Project Description

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

2013 Budget \$ 2.9M

Total Project \$31.1M

## Capital Needs Pending Business Case Evaluation





# Capital Budget – Stormwater

	2013 Budget	2014 Budget	2015 Budget	2016 Budget	2017 Budget	2018 Budget
<u>Sources of Funds</u>						
GEFA						
Grants						
Internal Funding	34,420,040	20,036,535	20,427,060	20,845,000	21,975,000	22,000,000
Total Source	34,420,040	20,036,535	20,427,060	20,845,000	21,975,000	22,000,000
<u>Use of Funds</u>						
Storm Drainage Improvements	18,853,887	19,289,297	19,629,822	20,097,762	21,177,762	21,252,762
Watershed Improvements	1,600,000	150,000	150,000	150,000	150,000	150,000
Dam Rehabilitation	250,000	250,000	250,000	250,000	250,000	250,000
Res Equip Tech & Sup	13,716,153	347,238	397,238	347,238	397,238	347,238
Total Use	34,420,040	20,036,535	20,427,060	20,845,000	21,975,000	22,000,000

# Capital Budget – Stormwater

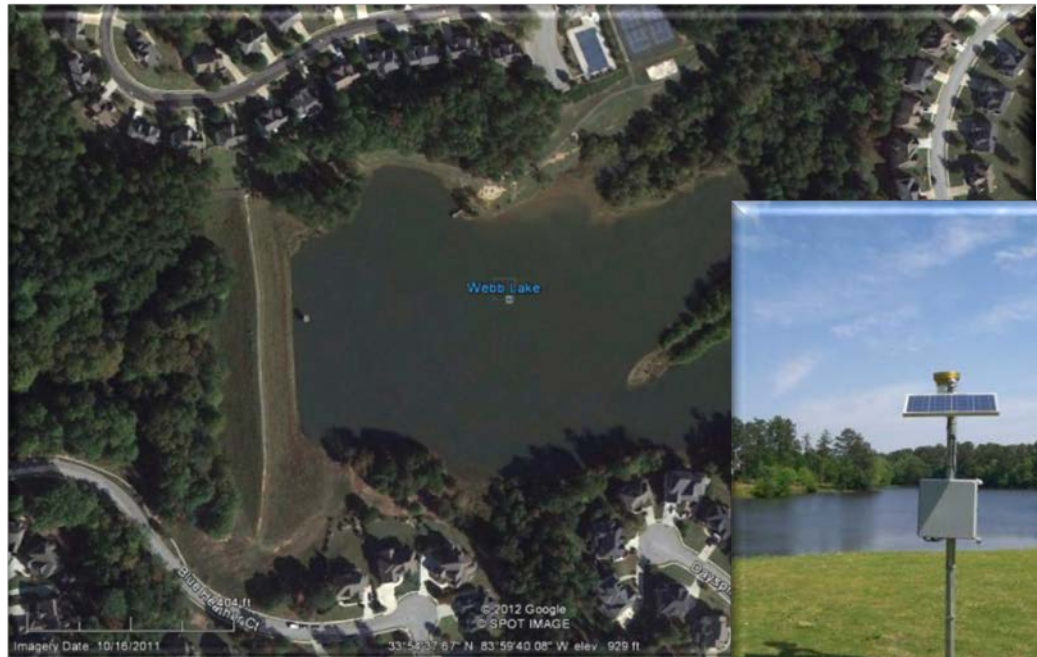
## Project Description

- 15 Major Category I Dams
- 12 completed
- 1 in land acquisition
- 2 in design
- Remote monitoring installation
- Dam breach modeling

2013 Budget \$250k

Total Project \$250k/yr

## Dam Upgrade and Rehabilitation



*Webb Lake*



# Capital Budget – Stormwater



*Scotts Mill Run  
Lining*

## Pipe Upgrade and Rehabilitation

### Project Description

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

*Dean Road  
Replacement*



2013 Budget \$19M  
Total Project \$19M/yr



# Capital Budget – Stormwater



*River Oak Loop*

*Cherokee Trail*

*Old Peachtree Rd*

# Capital Budget – Stormwater

## Watershed Improvement Program



### Program Description

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

2013 Budget \$ 1.6M

Total Program \$150k/yr

# Summary

- 2013 Budget Targets
  - Focus on maintenance and rehabilitation  
\$4B of asset inventory
  - Supports debt service
  - Support pay-as-you-go

# Department of Water Resources

## September 2012