

# City of Gainesville

**Public Utilities Department  
Annual Report**

# FY12 Annual Report

*Fiscal Period July 1, 2011 through June 30, 2012*

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**CITY OF GAINESVILLE**

•  
**PUBLIC UTILITIES  
DEPARTMENT**

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To Our Customers:

Fiscal Year 2012 was a good year for us. Not only did the department and individuals in the department win several prestigious awards, we (the state and water providers) also prevailed in a long-standing dispute with our neighboring states.

Both the Riverside and Lakeside Water Treatment Plants were awarded Platinum Awards by the Georgia Association of Water Professionals for the third straight year. This award recognizes a facility for meeting all water quality standards as set by the Georgia EPD for five consecutive years. The City of Gainesville's Environmental Services Division was recognized for its conservation efforts and commitment to public outreach and education in Fiscal Year 2012. Its awards in Fiscal Year 2012 include: The Georgia Rivers Alive 2011 Stream Cleanup Award, The Georgia Association of Water Professionals' Public Education Program of the Year Award, and The Georgia Adopt-A-Stream Best in Education Award and Best in Action Award for the Conservation Crusader.

Probably the most significant development affecting our ability to provide high quality drinking water at a low cost was the decision by the United States Supreme Court not to hear the states of Alabama and Florida's appeal of the 11<sup>th</sup> Circuit ruling that water supply was an original authorized purpose of Lake Lanier. Currently, the Army is developing a new water control plan for the Chattahoochee river system which should clarify how much water will actually be available for our customers and our neighbors to the south. This effort should take about two years.

In short, it is a pleasant outcome after many years of uncertainty. Our community should now be able to move forward and prepare for many years to come.

Kelly J. Randall  
Public Utilities Director



## **INTRODUCTION**

The City of Gainesville's System supplies water to a geographic area of approximately 400 square miles, including Braselton, Buford, Clermont, Flowery Branch, Gainesville, Gillsville, portions of the Lula and Oakwood areas, and unincorporated Hall County. The City maintains over **1,600** miles of underground water and sewer pipelines.

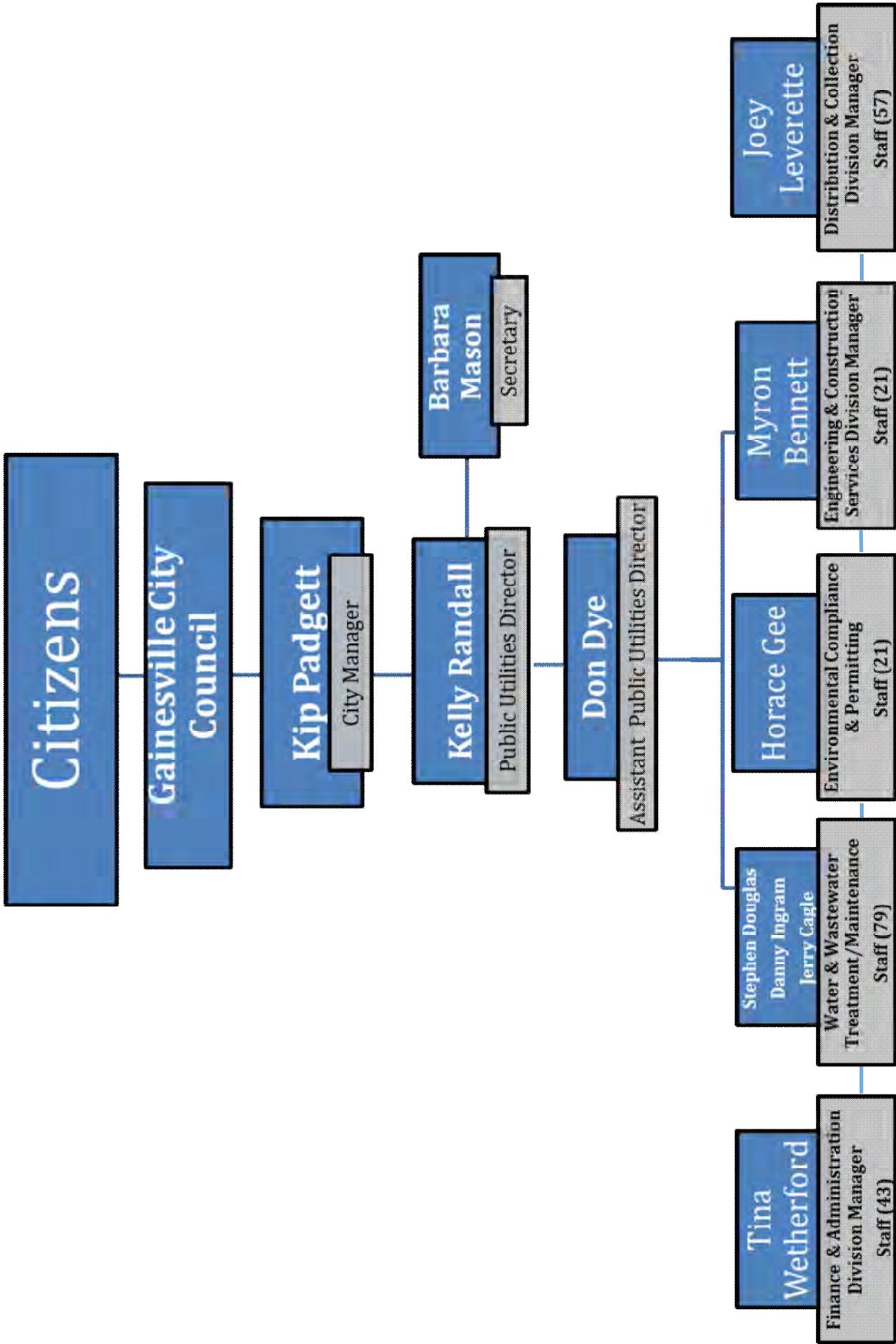
The source of supply of raw water for the System is Lake Lanier, an impoundment of the Chattahoochee River that is owned and operated by the U.S. Army Corps of Engineers. The Georgia Department of Natural Resources, Environmental Protection Division ("EPD") also governs water withdrawal from Lake Lanier through its water withdrawal permitting process. **It is the City of Gainesville Public Utilities Department's goal to provide the highest level of service to our customers and ensure that Gainesville and Hall County residents have a continuous supply of the best water in Georgia.**

It takes a dedicated and determined group of men and women to accomplish the tremendous task of managing the community's water resources. The City of Gainesville's Public Utilities Department is comprised of several different divisions that work together to manage the water and sewer systems. Each division contributes to the comprehensive management of these systems.

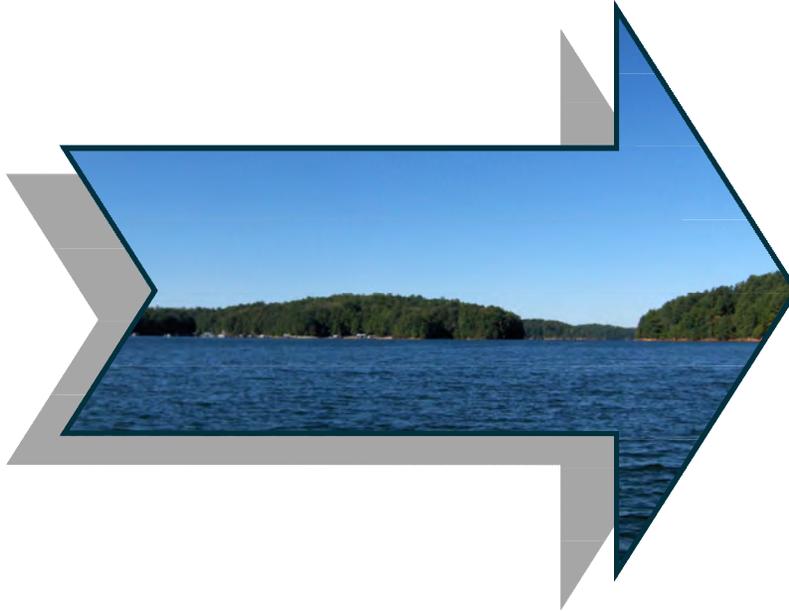
### **The Divisions are:**

- **Finance & Administration**
- **Environmental Compliance & Permitting**
- **Water & Wastewater Treatment Services / Maintenance**
- **Engineering & Construction Services**
- **Distribution & Collection Services**

*The Divisions and their functions are further detailed in the Departmental sections of this report.*



## Lake Lanier Facts



- Constructed in the 1950s by the US Army Corps of Engineers
- **692** miles of shoreline
- **39,000** acres of water
- Its deepest point is **160** feet deep
- Record high lake level = **1077.2** msl (6 feet above full level) in **1964**
- Record low lake level = **1050.79** msl (20 feet below full level) in **2007**

Source: [US Army Corps of Engineers](http://www.sam.usace.army.mil/lanier/) <http://www.sam.usace.army.mil/lanier/>

## FY12 at a Glance:

<b># of Authorized Positions</b>	<b>230</b>
<b>Miles of Water Mains</b>	<b>1,344</b>
<b>Miles of Sanitary Sewer</b>	<b>286</b>
<b>Meters Served</b>	<b>51,171</b>
<b># Active Water Accounts</b>	<b>47,018</b>
<b># Active Sewer Accounts</b>	<b>8,847</b>
<b># of Customers Served</b>	<b>126,948</b>
<b>New Water Connections (Water Meters Sold)</b>	<b>286</b>
<b>New Sewer Connections (Sewer Taps Sold)</b>	<b>13</b>
<b>Water Treatment Plants' Maximum Daily Capacity</b>	<b>35 MGD</b>
<b>Wastewater Treatment Plants' Maximum Daily Capacity</b>	<b>17 MGD</b>

# **Fiscal Year 2012:**

**(July 1, 2011 through June 30, 2012)**

This fiscal year has been another of significant events and achievements for the City of Gainesville's Public Utilities Department. We have welcomed a new Assistant Director of Public Utilities, Don Dye. Our Department has received several awards this year in recognition for its dedication and excellence in conservation efforts, education, and public outreach. In addition, many important projects were begun, continued and completed by the Utility in FY 2012. We also heard from the United States Supreme Court regarding the ongoing, Tri-state *Water Wars*.

### ***New Assistant Director, Public Utilities***



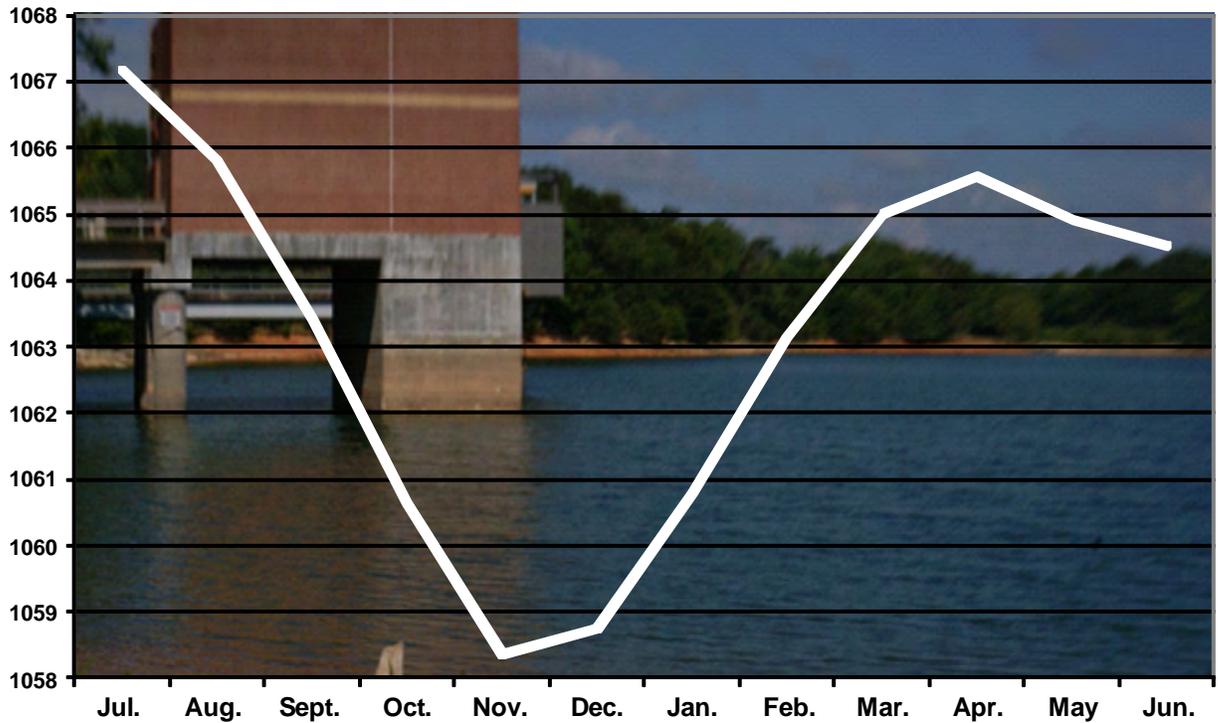
In FY 2012, The City of Gainesville welcomed its new Assistant Director of Public Utilities, Don Dye. Mr. Dye has over twenty years of experience in Public Administration and Utility Management.

Prior to Mr. Dye's career in municipal government, he served in the United States Navy from 1978 through 1987. He earned a Bachelor's Degree from Augusta College (now Augusta State University) in 1988 and a Master's Degree in Public Administration from the University of Georgia in 1990. His career in local government began in 1989 with an internship with the City of Toccoa.

Since then, he has served several municipal governments, in a variety of roles. After graduation, he served as the Town Manager of Woodland, Maine from 1990-1992. Next, he was named Public Works Director, Toccoa, where he served until 1996 and City Manager of Social Circle, Georgia from 1996 through 1999. Most recently, he served as the Interim City Manager and Utilities Director for the City of Toccoa.

# FY 2012 Highlights

## FY 12 Monthly Average Lake Levels (July 2011-June 2012)



Lake Lanier has been impacted by the creeping drought which has affected much of the country this past year. The lake level dropped nine feet in the Fall of 2011 before increasing and did not fully recover this past spring.



Riverside raw water intake structure

## AWARDS

The City of Gainesville's Environmental Services Division was recognized for its conservation efforts and commitment to public outreach and education in FY 2012. Its awards in

FY 2012 include: The Georgia Rivers Alive 2011 **Stream Cleanup Award**, The Georgia Association of Water Professionals' **Public Education Program of the Year Award**, and The Georgia Adopt-A-Stream **Best in Education Award** and **Best in Action Award** for the Conservation Crusader.



Tyler Sims (left) and Brian Wiley accept the 2011 Georgia Rivers Alive **Stream Cleanup Award** from GA Rivers Alive Chair, Bonny Putney

## Water War Ruling

On June 25, 2012, Georgia celebrated another victory as the United States Supreme Court ruled that it would not hear an appeal in the decades-long, tri-state "water wars" between Alabama, Florida and Georgia. In 2011, the 11th U.S. Circuit Court of Appeals overturned the 2009 ruling by Judge Paul Magnuson, thus declaring that water supply is an authorized purpose of Lake Lanier. The Supreme Court's refusal to hear the case, as Alabama and Florida requested, affirms that metro-Atlanta can continue to rely on Lake Lanier as its water supply for its growing population and future generations.



### *2012 Citizens' Government Academy*

The City of Gainesville held its 6th Annual Citizens' Government Academy in FY12. The 10-week program delved into the inner-workings of Gainesville's government. Different city departments were explored, including Public Utilities. In week 7, Public Utilities' Director Kelly Randall discussed the department's operations, achievements, and goals. Students were also given tours of both the Flat Creek Water Reclamation Facility and the Lakeside Water Treatment plant.



2012 Citizens' Government Academy Graduates



*"A rare and wonderful experience... It was refreshing to see the professionalism and enthusiasm that we were treated with by the staff."*

**-Chris Gaunt**

2012 Citizens' Government Academy Graduate  
and Gainesville Resident

### *Chamber Chase 2012*



Chicken City Chasers

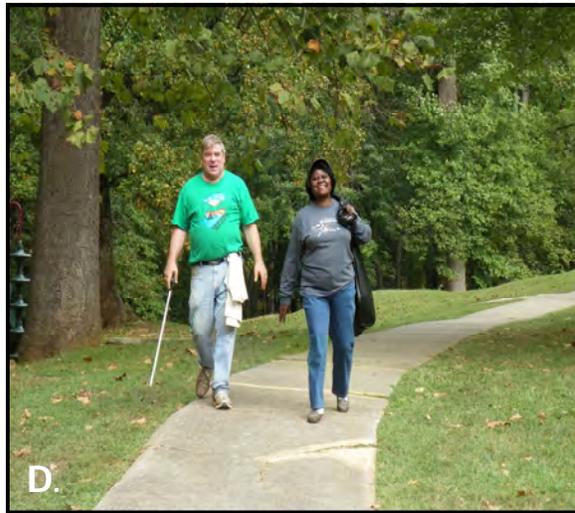
The Greater Hall Chamber of Commerce's 5th Annual Chamber Chase 5K was held at Riverside Military Academy.

The City of Gainesville's team, the Chicken City Chasers, received the Team Spirit Award.

# FY 12 Highlights

## *Annual Stream Cleanup*

Each year, The City of Gainesville hosts a stream cleanup, held at various locations throughout Hall County. Volunteers remove litter and other debris from our waterways. In FY12, **3,120** pounds of trash and debris was removed from Longwood Cove Park by **150** volunteers.



- A. FY 2012 Stream Cleanup volunteers
- B. City of Gainesville employees remove trash from Longwood Cove
- C. A volunteer removes a tire from the Longwood Cove area
- D. Council members, George Wangemann and Myrtle Figueras, assist in the stream cleanup



*The City of Gainesville was awarded the 2011 Stream Clean Up Award by Georgia Rivers Alive*

## *Midtown Greenway Opening*

April 28, 2012 marked the grand opening of Phase I of the Midtown Greenway Project. The project includes a paved, multi-use trail, which runs from Mule Camp Springs to Martin Luther King Jr. Boulevard, along an old CSX railroad corridor. The project also includes stream restoration and stormwater detention. Phase II of the project will extend the trail and expand watershed improvement.



**City of Gainesville Council Members cut a ceremonial vine, marking the official opening of Phase 1 of the Midtown Greenway trail.**

### Eloise Gilmer Celebrates 35 Years of Service with The City of Gainesville

In FY 2012, Ms. Eloise Gilmer celebrated her 35th year as a City of Gainesville employee. Eloise began her career with the City in 1977, where she worked in the Housing and Relocation Department. She has since served as Secretary, Operations Control Clerk, and Administrative Aide. She currently works in the Finance and Administration Division of the Public Utilities Department.

Before coming to the City of Gainesville to work, Eloise worked side by side with her late, beloved husband, Lee, for whom the Gainesville Airport is named. Both pilots, the pair inspected and surveyed power lines in North Georgia's mountainous areas by plane.

Throughout her years with the City of Gainesville, Eloise has been the recipient of numerous awards, including the City of Gainesville's "You're the Reason" Award in 2005. This award recognizes workplace excellence and dedication to serving the public. She also earned 14 consecutive years of perfect attendance recognition from 1995 to 2008. In 2005, Eloise was honored by the Georgia Department of Human Resources Division of Aging Services as she received the "Older Worker of the Year" award for the Georgia Mountains Area. The award recognized her contributions and commitment to the workplace.

Ms. Eloise is a treasured member of the PUD family and an asset to the City of Gainesville. Her knowledge, experience, and friendship are invaluable to us.

Thank you, Eloise.



Eloise at work



Eloise celebrates her 35 year anniversary with her co-workers



Eloise receives the "Older Worker of the Year" award in 2005

## **FINANCE AND ADMINISTRATION DIVISION**

The Finance & Administration Division is comprised of two sections: **Customer Account Services and Finance & Administration**. The Division consists of **46** authorized positions which may be broadly categorized as **customer service representatives, customer advocates, billing staff, meter services/sales staff, warehouse staff, administrative and support personnel, financial and divisional management, Assistant Director and the Director's office**.

### **CUSTOMER ACCOUNT SERVICES**

**MISSION STATEMENT: To provide our customers with professional, accurate and efficient services.**

### **SCOPE OF SERVICES**

The Customer Account Services (CAS) group is responsible for providing customer service to over 50,000 water and sewer customers. The group is comprised of **32** authorized positions. Some services provided include, but are not limited to, answering customer calls, processing service applications, posting utility payments, billing, meter reading, meter sales, submitting and completing service requests, preparing adjustments and maintaining the billing software database.

#### **FY12 Customer Account Services Statistical Indicators:**

**70,880** customer calls handled  
**7,354** applications for new service processed  
**279,428** transactions posted  
**42,083** payments made through our website  
**436,269** meters read (manual and drive-by radio read)  
**37,425** service orders completed

**In FY 2012, the Customer Service Department's hours changed from 7 AM-6 PM to 8AM-5PM. This change will result in significant cost savings through a reduction in labor and energy costs. Our customers can still access account information and make payments on their utility bills 24 hours -per -day by logging onto the City of Gainesville's website, [www.gainesville.org](http://www.gainesville.org), or by calling (770) 535-6878.**



Public Utilities' Customer Account Services employees

# Improving Cost Efficiency

We continuously review and evaluate our practices and policies to better serve our customers.

In FY12, several new cost and time saving tools were implemented in an effort to keep rates and fees as low as possible for our customers. First, our scanning software was upgraded, allowing multiple payments and money orders to be processed. This has decreased the number of payments manually processed, saving time and money while eliminating human error.



In addition, we switched vendors for electronic bank statements. This change has saved time and money and has increased the number of electronic payments by **15.76%**.

## Community Assistance: Help 2 Others

The City of Gainesville Public Utilities Department launched its **Help 2 Others** Round Up program in early FY 2012. We have partnered with the Salvation Army's **Project SHARE** in an effort to raise funds to assist those in need. City of Gainesville customers who choose to participate will have their utility bills rounded to the next whole dollar. These additional funds will be disbursed by the Salvation Army to fellow City of Gainesville utility customers facing financial hardship. The assistance will be used to help with water/sewer bills, costly plumbers' bills, and the purchase of new water meters to replace wells that have gone dry, etc. All contributions are tax deductible.

"What a great year for our H2O (Help To Others) Round Up Program. Thanks to our wonderful customers, \$4,083.80 was collected during our first year of the program. We want to thank you all for your generosity. A little can make a big difference in the lives of others."

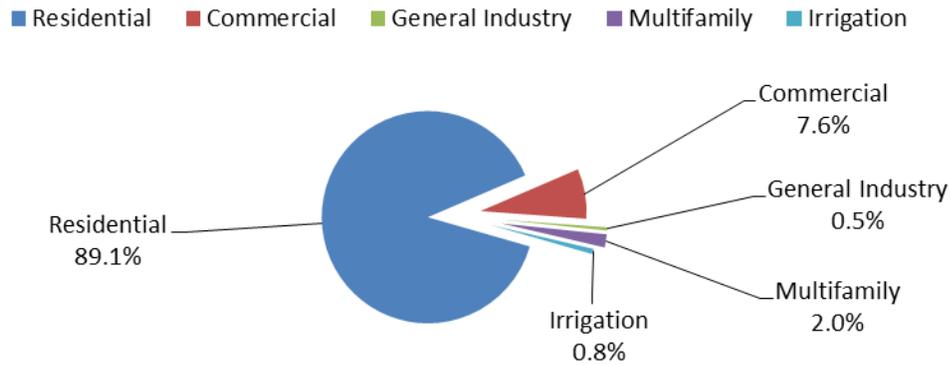
**-Tina Wetherford**  
Finance & Administration Division Manager



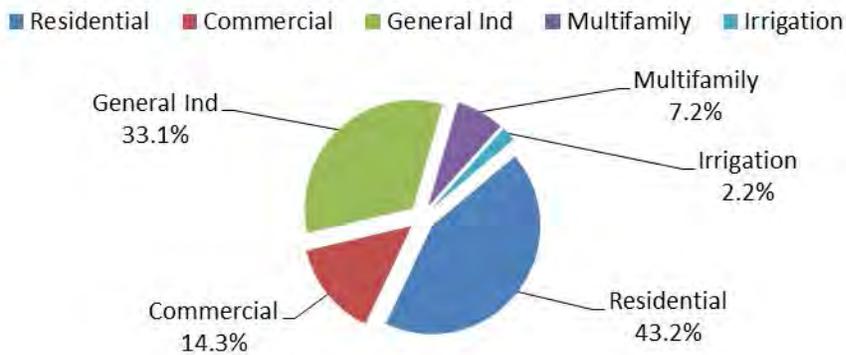
# Our Customers: Water

49.5% of our water revenue comes from our residential customers, who comprise 89.1% of our customer base. General Industry continues to comprise 27.8% of water revenue and 33.1% of water usage from a small customer percentage of 0.5%.

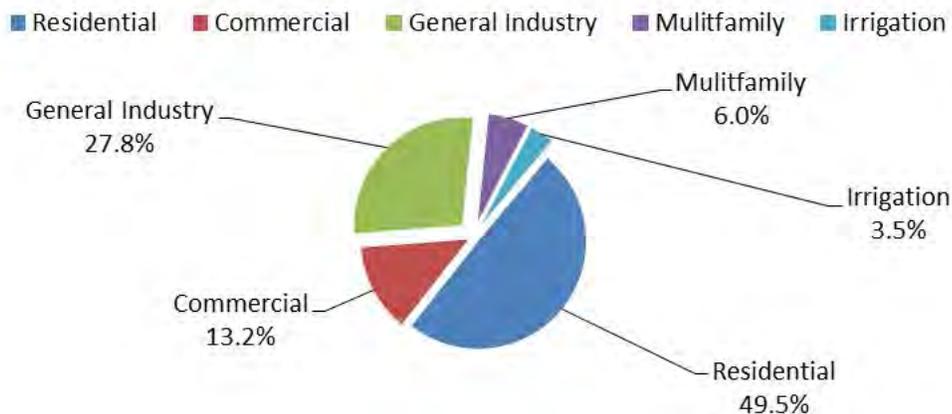
## Water Customers



## Water Use



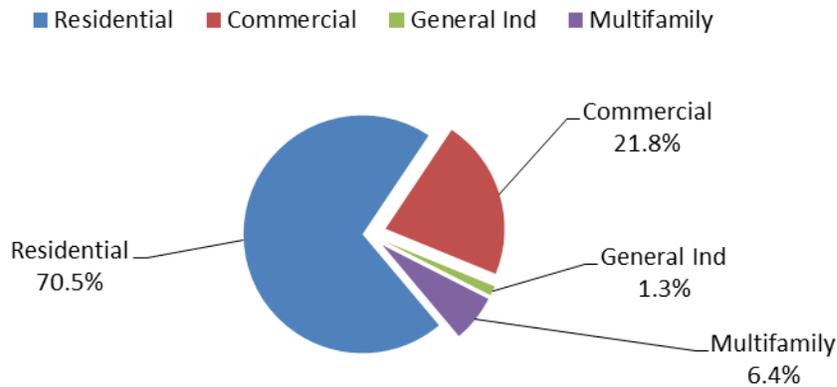
## Water Revenue



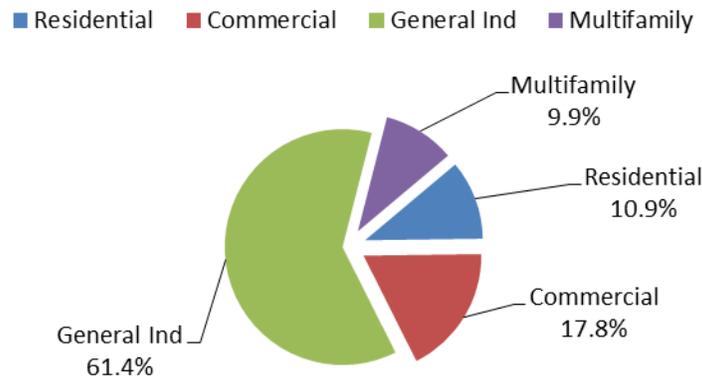
# Our Customers: Wastewater

General Industry continues to be the largest user of wastewater at **61.4%** of total wastewater usage and **61.6%** of total wastewater revenue. Commercial usage is the next highest with **17.7%** of usage and **17.8%** of wastewater revenue. **70.5%** of wastewater customers are residential, but their usage only accounts for **10.9%**. The revenue comparison is a slightly lower percentage at **9.8%** due to the fact that residential wastewater customers are billed at 85% of water readings for wastewater usage.

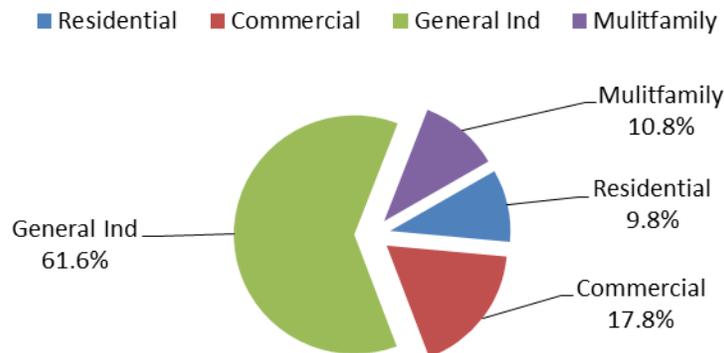
## Wastewater Customers



## Wastewater Use



## Wastewater Revenue



## **FINANCE & ADMINISTRATION**

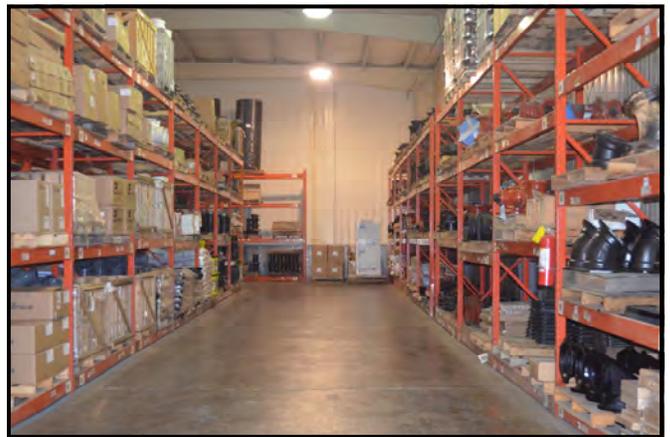
**MISSION STATEMENT:** To provide a stable financial position and administrative support for daily operations.

### **SCOPE OF SERVICES**

The Finance and Administration Division has fourteen (**14**) authorized positions which include the Director, Assistant Director, Finance & Administration Division Manager, Accounts Payable, Customer Advocates, Inventory Control, Payroll, Purchasing and Warehouse personnel.

The group is responsible for financial planning for the Five-Year Capital Improvements Projects, preparation and management of the operating and capital equipment budgets, performing cost-of-services analysis, evaluation of customer service “best practices,” payroll and personnel support, purchasing and inventory control, fleet and asset management, accounts payable, policy enforcement, utility debt collection, management of the 18,000 square foot administration building and the warehouse facility, and preparation of the annual report and other publications. This staff works closely with the Director in establishing long-term directions and goals for the Public Utilities Department, developing departmental policies and municipal codes, and providing essential support to all divisions.

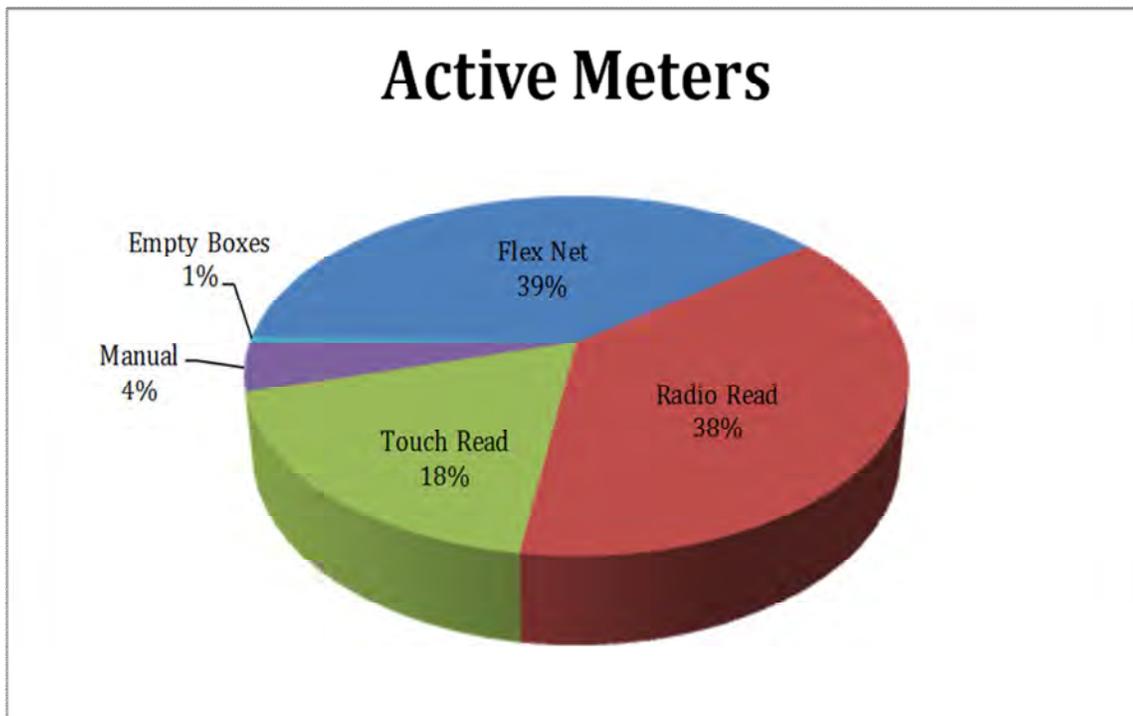
- Accounts Payable staff processed **5,868** invoices and **426** requisitions in FY 12.
- Purchasing staff processed **478** requests for bids and proposals in FY 12.
- The Warehouse staff reworked nearly **800** meters in FY12



Meters and Supplies in the PUD warehouse

## Automated Metering: The Smart Choice

The City of Gainesville currently has over 50,000 meters installed throughout our system. Over **75%** of these meters are now automated. Nearly 40% of meters are equipped with Flex Net technology, the result of the Automated Meter Reading Project, which will ultimately convert 32,000 meters to Flex Net technology. This technology allows the meters to be read remotely and readings transmitted through a database server to the utility. This enables staff to continuously view meter activity to monitor usage patterns and provide proactive leak detection. Customers are now notified of a suspected leak, saving them money and protecting our system from unnecessary water loss. The automated reading system also reduces the Utility's cost by decreasing amounts spent on fuel to manually read meters.



# FY 12 Financial Highlights

<b>CITY OF GAINESVILLE</b>			
<b>PUBLIC UTILITIES FUND</b>			
<b>SUMMARY FINANCIAL STATEMENT *</b>			
<b>For the twelve months ended June 30, 2012</b>			
<b>% of Year Remaining = 0.00%</b>			
	<b>Revised Budget</b>	<b>Jun-12 YTD Actual</b>	<b>Remaining Balance</b>
<b>Revenues</b>			
Intergovernmental	-	-	-
Charges for services	55,598,794	58,432,668	(2,833,874)
Investment income	26,000	27,591	(1,591)
Contributions		85,130	(85,130)
Miscellaneous	91,700	142,687	(50,987)
Other financing sources/transfers in	1,500	18,305	(16,805)
Transfers from E&R (Connection Fees)	535,884	897,995	(362,111)
Intergovernmental	-	-	-
<b>Total Revenues</b>	<b>56,253,878</b>	<b>59,604,376</b>	<b>(3,350,498)</b>
<b>Expenses</b>			
Riverside Water Treatment Facility	2,937,883	2,396,481	541,402
Lakeside Water Treatment Facility	2,052,925	1,763,563	289,362
Water Distribution	3,757,412	3,126,863	630,549
Flat Creek Water Reclamation Facility	3,874,572	3,104,019	770,553
Linwood Water Reclamation Facility	2,679,778	2,166,152	513,626
Maintenance Services	2,648,505	2,176,643	471,862
Sanitary Sewer	1,984,053	1,672,745	311,308
Environmental Compliance and Permitting	1,939,477	1,595,480	343,997
Engineering and Construction Services	1,760,823	1,429,336	331,487
Meter Services	-	-	-
Customer Account Services	2,873,021	2,227,567	645,454
Finance and Administration	2,077,154	1,385,062	692,092
<b>Subtotal - Expenses</b>	<b>28,585,603</b>	<b>23,043,911</b>	<b>5,541,692</b>
Bad Debt Expense	-	36,022	(36,022)
Amortization	-	-	-
Debt service	21,596,336	20,751,905	844,431
Other financing uses/transfers out	6,459,982	3,408,792	3,051,190
<b>Total Expenses</b>	<b>56,641,921</b>	<b>47,240,630</b>	<b>9,401,291</b>
<b>Excess (Deficiency) Revenues over Expenses</b>			
	(388,043)	12,363,746	
<b>Budgeted Fund Balance 6/30/12</b>	<b>388,043</b>		
<b>*These are unaudited year end numbers</b>			

# WATER AND WASTEWATER TREATMENT SERVICES DIVISION

The Water and Wastewater Treatment Services Division is comprised of three (3) sectional groups, categorized as: **Water Treatment** (Riverside and Lakeside), **Water Reclamation** (Flat Creek and Linwood), and **Maintenance Services**.

The **Water Treatment** group is responsible for collecting raw water from Lake Lanier, the treatment of that water to national drinking water standards at the Riverside and Lakeside Water Treatment Plants (WTP), and the distribution of the finished treated water into the system's water storage facilities.

The **Water Reclamation** group treats all of the collected wastewater to environmentally safe discharge standards in utilizing the treatment made available at the Flat Creek and Linwood Water Reclamation Facilities (WRF).

The **Maintenance Services** group is responsible for maintaining all equipment located within the treatment plants, operation and maintenance of sewer pump stations and potable water booster pump stations while also providing grounds keeping to miscellaneous areas of the Public Utilities Department, along with sewer right-of-way maintenance and inspections.



- A. Chris Dickerson inspects a drinking water sample for air bubbles
- B. James Garner keeps the Riverside Water Plant's grounds and buildings looking great
- C. Brian McGonigle inspects an alum sludge press sample for clarity
- D. Hervey Pearson keeps the grounds of the Lakeside Treatment Plant maintained and in order

# **WATER TREATMENT**

**MISSION STATEMENT:** To provide the highest quality drinking water in the most resourceful and economical way.

## **SCOPE OF SERVICES**

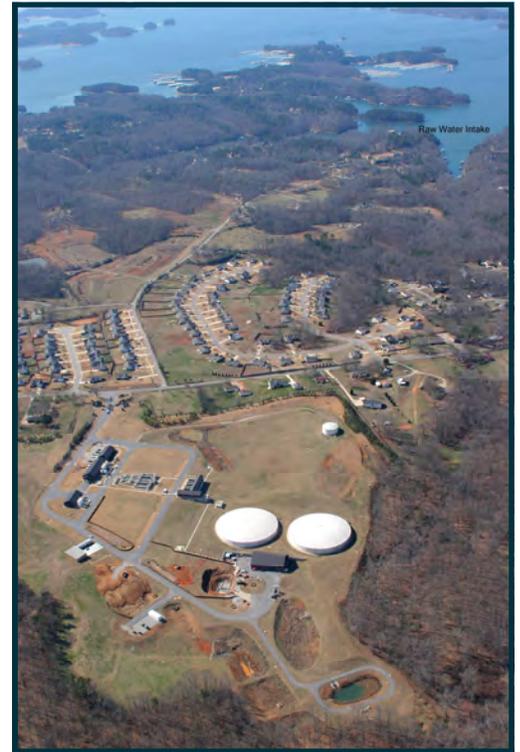
The **Water Treatment** group consists of two (2) Plant Managers, and twenty-eight (28) other staff members. This group is primarily responsible for the daily operations of the Riverside and Lakeside Water Treatment Plants (WTP) and “finished” (i.e., treated) water storage facilities.

## **FACILITIES**

The Riverside WTP has the capacity to produce and is permitted to process 25 Million Gallons per Day (MGD). The Lakeside WTP provides another 10 MGD of potable water for the community. Water is pumped from Lake Lanier to both treatment facilities and treated to be safe for residential, commercial, and industrial use. A high quality, uninterrupted supply of potable water free of objectionable turbidity, color, taste, and odor is produced.



**Riverside Water Treatment Plant**



**Lakeside Water Treatment Plant**

Treated water is stored in three clear wells at the Riverside WTP with a total combined on-site storage capacity of 12 MG. At the Lakeside WTP, there are two 5 MG clear wells for a total combined on-site storage capacity of 10 MG.

In the distribution system, there is a 5 MG ground level storage reservoir (known as the High Street Tank). Six (6) elevated storage tanks provide additional storage capacity of 3.75 MG of finished water.

The City has a total combined system storage capacity of 30.75 MG. This is enough stored water to serve customers for approximately two days at current usage levels.

## Riverside and Lakeside Statistical Indicators

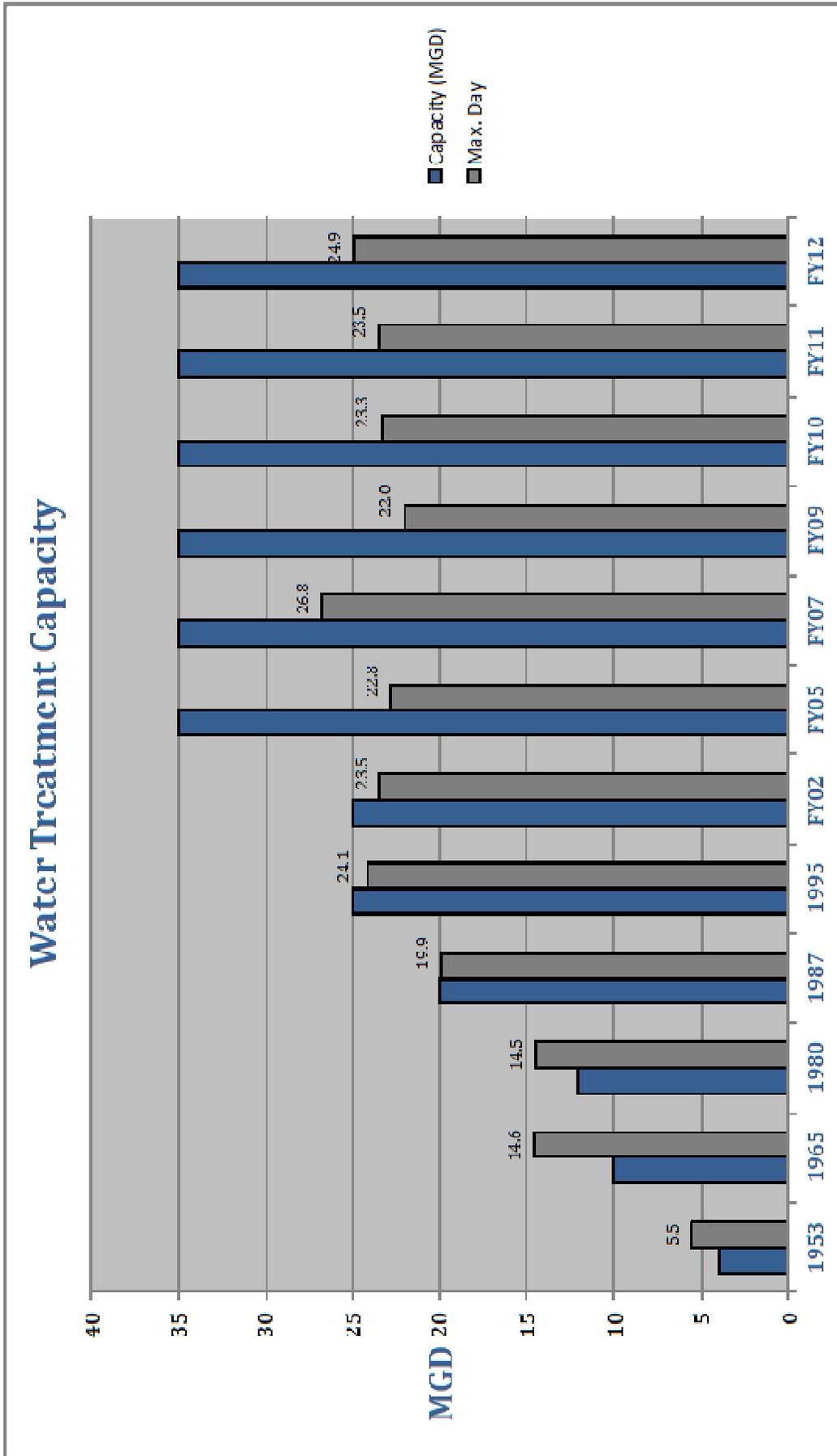
	FY09	FY10	FY11	FY12
<b>Filtering Capacity (MGD)</b>	35	35	35	35
<b>Filtering Permitted Capacity (MGD)</b>	35	35	35	35
<b>PERMITTED—Raw Water Withdrawal</b>				
<b>-Maximum 24 Hour (MGD)</b>	35	35	35	35
<b>-Monthly Average not to Exceed (MGD)</b>	30	30	30	30
<b>ACTUAL—Raw Water Withdrawal</b>				
<b>-Maximum 24 Hour (MGD)</b>				
• Riverside	13.9	19.2	17.2	18.8
• Lakeside	10.3	9.8	10.3	10.3
<b>-Monthly Average (MGD)</b>	17.0	19.2	18.9	18.2
<b>Total—Raw Water Withdrawal (MG)</b>	6,222.0	7,002.0	6,906.0	6,629.0
<b>Pumped To System</b>				
<b>-Max Day (MG)</b>	21.99	23.3	23.5	24.9
<b>-Average Day (MG)</b>	16.6	17.1	17.6	17.7
<b>-TOTAL (MG)</b>	6,047.0	6,242.0	6,437.0	6,461.0
<b>Sludge Disposal (Tons)</b>	782	844	801	953



**Both the Riverside and Lakeside WTP's were awarded Platinum Awards by the Georgia Association of Water Professionals for the 3rd straight year. This award recognizes a facility for meeting all water quality standards as set by the Georgia EPD for five consecutive years.**

MGD = Million Gallons Per Day MG = Million Gallons

The following is a chart indicating the treatment capacities of the facilities and the maximum water treated during any one day during each period.



# **WATER RECLAMATION**

**MISSION STATEMENT: To protect water quality by treating wastewater safely and effectively.**

## **SCOPE OF SERVICES**

The Water Reclamation group is committed to treating wastewater to meet or exceed state discharge standards and protecting the water quality of Flat Creek and Lake Lanier while disposing of its biosolids in an environmentally responsible manner. The group's facilities include the Flat Creek and Linwood Water Reclamation Facilities (WRF). The group is also responsible for the monitoring and polling of sixty (60) wastewater pump stations and responds to all after-hour emergency calls regarding water and wastewater.

### **FACILITIES:**

The Flat Creek WRF, with the capacity 12.0 MGD, is the larger of two (2) WRF's in the system. Treatment at Flat Creek includes grit removal, primary treatment with dissolved air floatation, activated sludge biological treatment, clarification, and disinfection by ultraviolet radiation. Residual solids from the treatment process are thickened in settling tanks and de-watered using plate and frame type presses. The dewatered residuals are transported to EARTH Products, LLC, a privately owned composting facility in Plains, Georgia. At the EARTH facility, environmentally friendly composting of these residual solids and peanut hulls takes place. This compost is later sold as a soil conditioner.

The Linwood WRF is a new Advanced Tertiary Treatment facility, which includes membrane filtration. This 5.0 MGD treatment facility provides the additional treatment necessary to comply with new Lake Lanier discharge standards through the use of activated sludge biological treatment and disinfection by ultraviolet radiation. Residual solids from the treatment process are thickened and de-watered using a belt press. The de-watered residuals are transported to EARTH Products, where it is composted and sold as a soil conditioner.



**Flat Creek WRF**



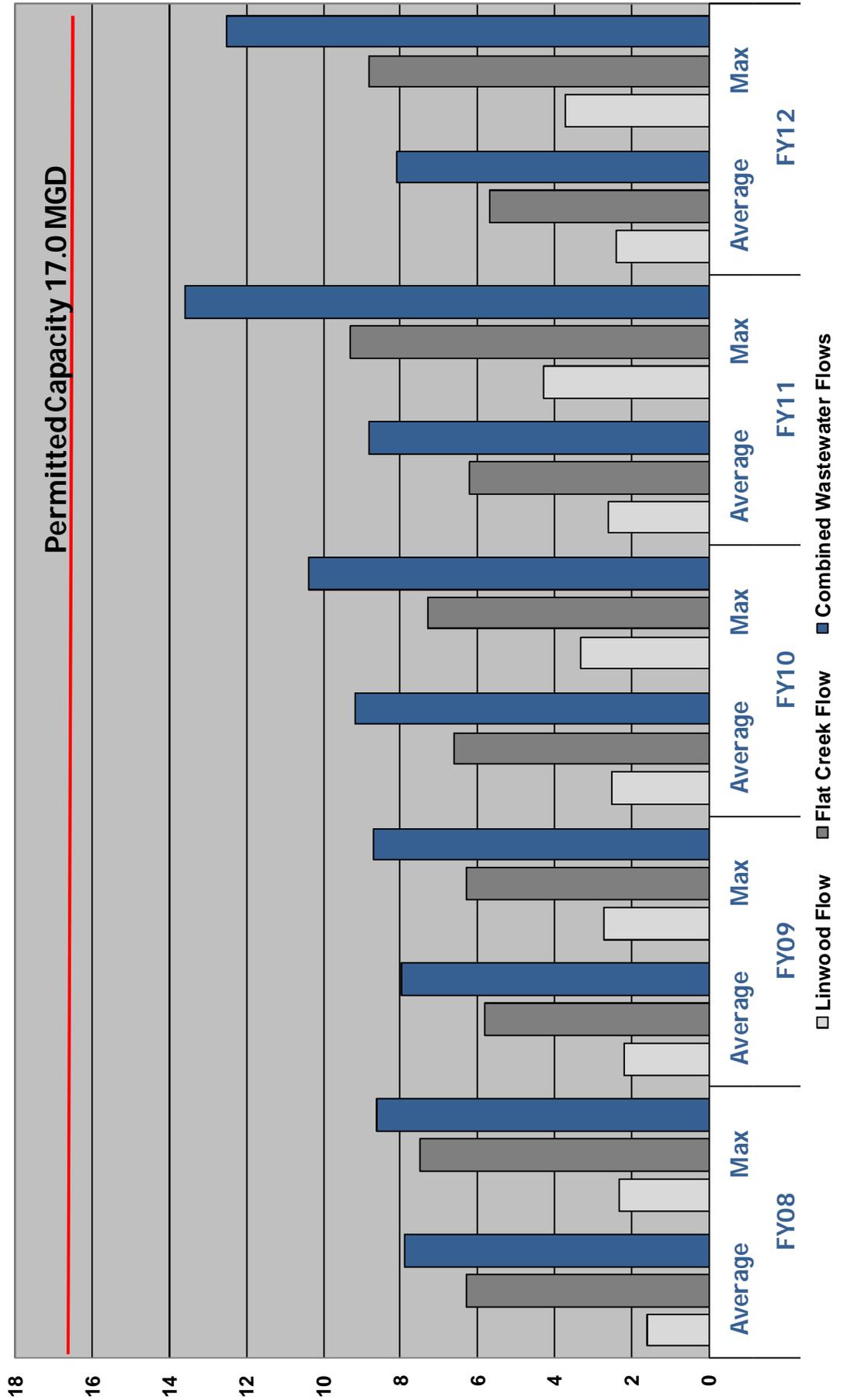
**Linwood WRF**

<b><u>Flat Creek Permitted Discharge Limits</u></b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>
<b>Flat Creek Weekly Avg. not to exceed (MGD)</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>
<b>Flat Creek Monthly Avg. not to exceed (MGD)</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>Flat Creek – Max. Day Flow (MG)</b>	<b>10.1</b>	<b>11.0</b>	<b>9.3</b>	<b>8.8</b>
<b>Flat Creek – Avg. Day Flow (MG)</b>	<b>5.85</b>	<b>6.7</b>	<b>6.2</b>	<b>5.7</b>
<b>Flat Creek – Total Treated (MG)</b>	<b>2,154</b>	<b>2,456</b>	<b>2,263</b>	<b>2,080</b>
<b>Flat Creek – Biosolids Disposal (Tons)</b>	<b>2,791</b>	<b>2,380</b>	<b>2,457</b>	<b>2,451</b>
<b><u>Linwood Permitted Discharge Limits</u></b>				
<b>Linwood Weekly Avg. not to exceed (MGD)</b>	<b>6.25</b>	<b>6.25</b>	<b>6.25</b>	<b>6.25</b>
<b>Linwood Monthly Avg. not to exceed (MGD)</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Linwood – Max. Day Flow (MG)</b>	<b>3.85</b>	<b>5.5</b>	<b>4.3</b>	<b>3.7</b>
<b>Linwood – Avg. Day Flow (MG)</b>	<b>2.20</b>	<b>2.5</b>	<b>2.6</b>	<b>2.4</b>
<b>Linwood – Total Treated (MG)</b>	<b>803</b>	<b>910</b>	<b>949</b>	<b>876</b>
<b>Linwood – Biosolids Disposal (Tons)</b>	<b>206</b>	<b>467</b>	<b>359</b>	<b>391</b>
<b>Combined Facility Total Treated (MG) -----</b>	<b>2,957</b>	<b>3,366</b>	<b>3,212</b>	<b>2,956</b>
<b>Combined Total Biosolids Removal (Tons) -----</b>	<b>2,997</b>	<b>2,847</b>	<b>2,816</b>	<b>2,842</b>



Lake Lanier

## Fiscal Year Wastewater Flows (2008-2012)



# Improving Operational Efficiency

The City of Gainesville's Public Utilities Department continually seeks ways to enhance operational and cost efficiency. The following are improvements implemented by the water reclamation group in FY 2012:

## Flat Creek

Chemical usage was decreased by **15.8%** compared to FY12's projected use by several different methods. The largest was the continuation of trials at the aeration basin to increase biological phosphorus removal. This resulted in a 22% usage decrease of aluminium sulphates and **savings** of over **\$61,000.00**. The strategy of producing the best quality of water at the most economical price was emphasized by management and carried out by our team of professional operators.

Power consumption increased by 2.5% compared to FY11, and though the cost per kWh increased by 5%, managers still stayed under projected budget with a 2.1% decrease from 2011. This was accomplished by using the Tertiary Sand Filters only 25% of the time and adhering to the use of GA Power's Energy Direct Online Energy Management to get "Real Time Pricing." When energy prices climb above \$0.10 per kWh, plant flow was dropped to 4 MGD. This allowed a reduction in cost of energy during peak hours of the day.

## Linwood

Power consumption decreased by 4.2% compared to FY11, and though the cost per peak kWh increased by 1.7%, managers still stayed under projected budget with a decrease in cost of 0.2% below FY11's cost. This was accomplished by cutting back on use of any equipment possible during peak hours such as blowers for the equalization tank and air circulation fans in dewatering when not occupied by staff. Also, by adhering to the use of GA Power's Energy Direct Online Energy Management to get "Real Time Pricing," when energy prices climb above \$0.10 per kWh, the plant ran any increased flows during non-peak hours. This allowed a reduction in cost of energy during peak hours of the day.

Though there was a 5% increase in the kilowatt per hour cost of power to our facilities during this fiscal year, with enormous effort from management and staff, both facilities were still within budget. Often, plant flows were decreased during peak energy cost hours and increased during non-peak energy cost hours to compensate. This, along with computer programming changes to allow more efficient use of high horse-power blowers and constant polling of situations by staff, resulted in this success.

# **MAINTENANCE SERVICES**

**MISSION STATEMENT: To efficiently maintain all Public Utilities plants, pump stations, and buildings.**

## **SCOPE OF SERVICES**

The Maintenance Services Division consists of three (3) sections: **Maintenance, Pump Stations, and Grounds Maintenance** - a total of twenty - three (23) positions.

In the **Maintenance** section, there are twelve (12) maintenance staff positions. Maintenance crews are responsible for preventive, routine and emergency repairs of fixed operating equipment at all PUD facilities. Pump mechanics and electricians are on standby duty at all times to handle after-hour situations.

The **Pump Station** monitoring section has four (4) authorized positions in FY12. A Pump Station Supervisor within this group manages three (3) employees that are assigned to continually check and maintain the 60+ water and sewer pump stations throughout the City of Gainesville and Hall County. This process has helped to promptly react to equipment and operational problems before they become major environmental events.

There are seven (7) positions in the **Grounds Crew** section. They are responsible for grounds maintenance at the Public Utilities treatment plants, water tanks, pump stations, and water and sewer line right-of-ways. In addition, the grounds crew is responsible for general maintenance, which includes painting, cleaning, and other duties as needed at all PUD facilities.

### **FY 12 Statistical Indicators:**

- **Total Repair Work Orders = 924**
- **Total PM Work Orders = 2,006**
- **After Hours Emergency Calls = 69**



Maintenance workers Tim Burce (left) and Willie Mayfield repair a slide gate



The Maintenance Grounds Crew (from left: Robert Brookshire, John Whirlow, Matt Brown, Ricky Smith and Josh Cole



Pump Station Technician Gary Ford records run time for the pumps

# ENVIRONMENTAL COMPLIANCE AND PERMITTING DIVISION

The Environmental Compliance and Permitting Division is comprised of two groups: the **Environmental Compliance** group and the **Permitting** group. The **Environmental Compliance group** is responsible for the city's water quality laboratory, the industrial pretreatment program, commercial wastewater management, environmental monitoring program, forestry management, public education program, water conservation program and various other projects and programs as assigned. The **Permitting Services group** is responsible for review and permitting of all developments proposing connection to the City's distribution and collection system from inception to completion and enforcement of the backflow prevention program.

**MISSION STATEMENT:** Provide first rate quality assurance through permitting and management of water resources.

## SCOPE OF SERVICES

The **Environmental Compliance and Permitting** staff consists of a total of **20** authorized positions working in **six** major areas of quality control and quality assurance. These programs support the successful operation of the department's water and wastewater treatment plants, help to ensure the quality of drinking water to the customers, provide for the protection and improvement of the community's water resources, and the review and permitting of all private developments and the administering of the City's backflow prevention program. The staff also endeavors to efficiently assist and educate residential and commercial customers, as well as the general public.



The **Environmental Compliance** group manages the City's Water Quality Laboratory, Industrial Pretreatment Program, Environmental Monitoring Program, Water Conservation Program, and various other projects and programs as necessary to provide support for the PUD.

**Following is a summary of responsibilities for the Environmental Compliance Group:**

- The **Laboratory** staff provides quality and legally defensible analytical services to the Environmental Compliance section, PUD, and other departments of the City of Gainesville. All tests are conducted in accordance with the United States Environmental Protection Agency (US EPA) and Georgia Environmental Protection Division (GA EPD) regulations by following Standard Methods for the Examination of Water and Wastewater and American Society for Testing Methods. Laboratory services help to ensure the high quality of Gainesville's drinking water and that wastewater operations are in compliance with all state and federal regulations. The laboratory staff also provides water testing services to the City of Gainesville, Hall County, and surrounding county residents.
- The **Industrial Pretreatment** section administers the Industrial Pretreatment Program as mandated by the Federal Clean Water Act. Local businesses and industries are regulated and educated concerning wastewater discharges and changing federal, state, and local wastewater discharge requirements. This group also inspects and monitors these discharges in order to protect the wastewater treatment plants, workers, sewer system, and receiving streams. Gainesville's Fats, Oils, and Grease (FOG) program also resides under the umbrella of the Industrial Pretreatment section. This program manages the maintenance of facilities and disposal of commercial waste from commercial users of the collection system. This program also coordinates with designers during the preconstruction process of commercial and industrial facilities.

## Working Together to Protect Our Natural Resources



Chestatee Academy "Going Blue"  
Students mark storm drains with "No  
Dumping" signs

- The **Environmental Monitoring** group conducts visual site inspections on various creeks, chemical and microbiological sampling of area waters, quarterly stream walks, biological monitoring, and public awareness, education and participation to help protect local water resources and the surrounding environment. Environmental Monitoring provides a quality assurance function for the wastewater facilities and collection system and conducts environmental monitoring and public outreach activities as prescribed in the City's Watershed Management Plan and Municipal Separate Storm Sewer to detect and eliminate local water quality problems.
- The **Water Conservation Program** actively provides literature, programs, education and workshops within the Gainesville/Hall County community on ways residents can conserve their drinking water supply. This section communicates the current regulations of the State of Georgia's outdoor water use plan within the community and ensures Gainesville is following the Metropolitan North Georgia Water Planning District's water conservation plan. The program has continued offering Gainesville's Plumbing Retrofit Program, informative programming on the local TV-18 network and water efficiency workshops.

**Additionally, Environmental Compliance is actively involved in watershed protection through participation in the Community Watershed Assessment Project, the Metropolitan North Georgia Water Planning District (MNGWPD), the Upper Chattahoochee Basin Group, and the Georgia Adopt-A-Stream program.**

## Environmental Monitoring



- A. Environmental Specialist Tyler Sims collects quarterly water quality data on Limestone Creek.
- B. Water Conservation Specialist Jennifer Flowers and CH2M HILL staff look for macro-invertebrates during a Bi-annual study.

<b>Environmental Compliance FY12 Statistical Indicators</b>	
<b># of Lab Samples Analyzed</b>	<b>8,680</b>
<b>Total Analyses Conducted by Lab Services</b>	<b>32,889</b>
<b>Drinking Water/New Line Samples</b>	<b>1,927</b>
<b>Pretreatment Program Compliance Inspections</b>	<b>2,098</b>
<b>Environmental Site Inspections</b>	<b>3,024</b>
<b>Environmental Samples</b>	<b>886</b>
<b>Public Presentations</b>	<b>420</b>

- \* In addition to the formal annual inspections, an additional **2,870** visits were made to industrial and commercial facilities to inspect and sample for compliance with the pretreatment program. The total number of visits has decreased due to a change in our SOP to reduce our cost, while maintaining the same level of performance.
- \* The Fats Oils and Grease (FOG) program tracks 280 facilities, primarily restaurants, which use grease traps as their only pretreatment of wastewater prior to discharge to the City's collection system. Additional FOG accomplishments for FY12 included the inspection and permitting of 51 commercial waste transportation vehicles.
- \* The Environmental Monitoring Program centers on the requirements to support water resource protection as specified in the Watershed Assessment Project (with specific emphasis on the directives of the Watershed Management Plan). Other regulatory drivers for this program now include Gainesville's Municipal Separate Storm Sewer (MS4) and the requirements for pollution prevention at municipal facilities involved in industrial activity, such as transportation shops and the airport. The result has been more time involved in public outreach (such as employee pollution prevention education, the Adopt-A-Stream program and water conservation education). During FY12, staff inspected **3,024** sites for environmental issues and collected **886** samples.
- \* Public presentations are done as part of the division's public outreach program as recommended by the Watershed Management Plan, Phase II MS4 requirements, Phase II Municipal Facilities Permit coverage, and as part of the city's water conservation efforts. These are done to educate the community about protection of local water resources. In FY12, **420** presentations were conducted.

**"Don't forget to become a Conservation Crusader and do your part in water savings for the future!"**



**Conservation Crusader**

## Water Efficiency

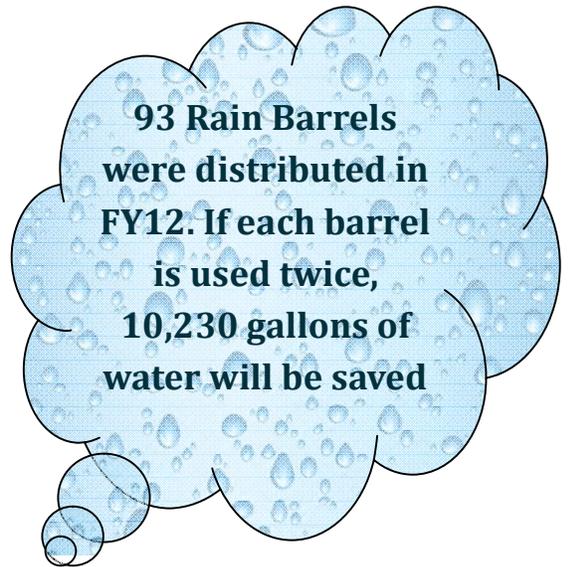
Gainesville continues to promote water efficiency throughout the community through public participation and involvement. Customers continue to take advantage of the plumbing retrofit program by removing inefficient fixtures and replacing them with a 1.28gpf (gallon per flush) toilet. **172** Retrofit Rebates were issued in FY12. Residents also utilized the **Find-a-Leak Workshop** to check their home for leaks and attended the **Rain Collection Workshops** to construct water-saving rain barrels. Several City of Gainesville residents also participated in the free residential water assessments to help locate leaks and possible money and water saving opportunities in their homes.



Classroom presentations for all ages are still the “backbone” for spreading the water efficiency message. School participation in the rain barrel decorating contest is still popular.

This year’s annual rain barrel decorating contest theme was **Protecting Our Waters**. The 10 participating middle schools and high schools created the most unique barrels seen in the competition thus far. The barrels were on display at the Frances Meadows Aquatic Center for one month where visitors to the center voted for their favorite. This year, the two first place winners were: **East Hall Middle School** and **Gainesville High School**.

**Middle School and Gainesville High School.**



- A. First Place Rain Barrel created by East Hall Middle School
- B. Gainesville High School’s First Place Barrel
- C. All Rain Barrels on display at the Frances Meadows Aquatic Center

# Community Education and Involvement

Community education and involvement are an integral part of raising awareness and ensuring sustainability of our natural resources. In FY12, the City of Gainesville conducted **420** public presentations. These included classroom teachings, appearances by Conservation Crusader, and Summer SEARCH

Summer SEARCH is offered through the Hall County School System. The Summer SEARCH program is a one-week enrichment program that is offered at the end of the school year. Rising 4<sup>th</sup> and 5<sup>th</sup> grade students can sign up to be a part of the Water Week course and become certified in Adopt-A-Stream and learn all about the principals of water. Environmental Services helps throughout the week to train the students and take them out to monitor a local waterway.



- A. Summer SEARCH student Kayla adds drops to test the level of oxygen in a stream
- B. Students Haley and Rachel show off an aquatic worm they found during Summer SEARCH
- C. A Da Vinci Academy student finds a crayfish during the weekly testing of their adopted stream
- D. Environmental Specialist Brian Wiley shows students how to identify bugs
- E. Adopt-A-Stream volunteers Rachel and Ansley collect water for testing
- F. Conservation Crusader and a new friend

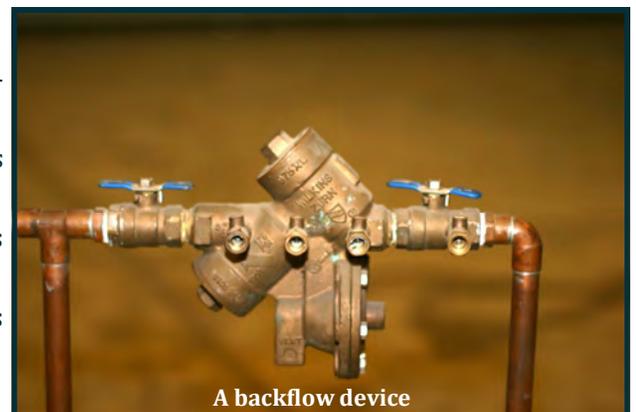
The **Permitting** group provides management of private development permitting and the **Backflow Prevention Program**. The Permitting group also provides assistance to the Engineering and Construction Services Division with in-house design and project management of sanitary sewer system replacement and extension projects. The following is a summary of responsibilities for this group:

### **Permitting:**

- Review and permitting of all commercial, industrial, and residential developments which propose to connect to the City's water or wastewater systems to insure compliance with the department's standards and specifications.
- Coordination activities with the Georgia Environmental Protection Division (GA EPD) associated with delegation of review compliance.
- Coordination activities with the Gainesville and Hall County Planning Departments for issuance of development permits through the City and the County plan review committees.
- Coordination activities associated with Gainesville and Hall County Building Inspections Departments and their issuance of Certificates of Occupancy (CO's) for projects that require PUD's inspections.
- Coordination activities with the Gainesville and Hall County Planning Departments concerning annexation requests for sanitary sewerage services, as well as rezoning and variance request activities.
- Preliminary investigation to determine water and/or wastewater systems connection feasibility for future private developments.
- Preparation of water and sanitary sewer availability letters.
- Easement acquisition associated with water and wastewater systems located within private development projects.
- Coordination of activities with the Engineering and Construction Services Division for inspection of approved private development projects.
- Review and approval of as-built drawings for newly constructed public water and wastewater systems.
- Review and approval of fire sprinkler system drawings and subsequent coordination with the billing office for applicable sprinkler system fees.
- Production and updating of development guidelines and associated plan review checklists.

### **Back low:**

- Inspection of new and existing backflow prevention device installations.
- Tracking of required annual backflow test reports.
- Tracking of City approved backflow testers.
- Conduct monthly mail-out notifications to customers for outstanding backflow prevention requirements.
- Production and updating of backflow prevention specifications and installation guidelines.
- Conduct inspections of private wells and reclaimed water systems for illegal cross-connection with City's water distribution system.
- Testing, maintaining and repairing existing backflow preventers on City facilities.
- Fire hydrant flow testing.



## **Permitting FY 12 Statistical Indicators:**

The following is the statistical indicator information for the **Permitting Group**:

- Reviewed **105** development plans and issued **81** development permits through City of Gainesville/Hall County Planning & Zoning Department.
- Reviewed **115** architectural drawings and **33** fire sprinkler system drawings.
- Reviewed and approved **114** proposed water service connections through the plan review and permitting process.
- Reviewed and approved **4** City of Oakwood, **2** Town of Braselton, and **1** City of Buford developments through direct permitting coordination with these jurisdictions.
- Reviewed **801** commercial building permits (769 in Hall County and Gainesville and 32 in Oakwood).
- Reviewed **22** applications for rezoning, variances, or annexations through the City of Gainesville's Planning and Appeals Board.
- Reviewed **58** applications for variances, conditional use, proposed amendments or rezonings through the Hall County Planning Commission.
- Forwarded **21** new construction projects to the Engineering and Construction Services Division. These projects required water and/or sanitary sewer construction inspections.
- Collected a total of **\$26,925.77** for water and sanitary sewer inspection fees that were performed by the Construction Management Division personnel and for fire hydrant flow testing.
- Conducted **44** backflow preventer inspections, of which **36** were approved through the Certificate of Occupancy (CO) issuance program.
- Received and logged **6,122** backflow preventer test reports.
- Issued **3** variances for backflow preventer installation locations.
- Issued **5,205** first, second, and third notices to existing customers with overdue or failed annual backflow prevention device test reports, and issued **318** notices to device testers to provide up-to-date calibration and certifications.
- Conducted **10** fire hydrant flow tests for proposed private developments.
- **147** City backflow devices were tested, **4** new backflow devices were installed, and **8** existing devices were repaired.

# ENGINEERING AND CONSTRUCTION SERVICES DIVISION

The Engineering and Construction Services Division began the fiscal year with 20 full-time and 1 part-time authorized positions. These positions may be broadly categorized as engineers, technicians, inspectors, and support staff.

**MISSION STATEMENT:** *To effectively execute assigned projects to meet the defined needs of our community.*

## **SCOPE OF SERVICES**

**The Engineering and Construction Services Division not only represents the Public Utilities Department but also the City as a whole on all Capital Improvements Projects (CIP) throughout design and construction. The services provided by the group may be summarized as follows:**

- In-house design, bidding, and construction services associated with water mains and sanitary sewer system improvements
- Project management functions related to services provided by various consulting engineers
- Computerized water and wastewater systems mapping, graphical presentation, and geographic information system (GIS) management
- Archival functions associated with technical plans and documents for the PUD
- Hydraulic analysis and overall planning activities associated with water and wastewater systems
- Construction management and inspection on all private developments that propose to connect to the City's water and/or wastewater systems
- Project concept and design, contract administration, construction management services of CIP for Public Utilities, Public Works, Parks and Recreation, and other City departments as directed by the City Management from inception to completion of project. Project and construction management services are also provided on Hall County sanitary sewer projects
- Payment and reimbursement processing for all projects related to the CIP
- Maintenance of all financial records related to the CIP as well as construction contracts and records from project inception to completion.
- **Other miscellaneous functions consist of the following:**
  - ◇ Periodic updating and maintaining water main and sanitary sewer extension and/or replacement
  - ◇ Field surveying
  - ◇ Five year CIP development and tracking
  - ◇ Preparation of the Department's presentation at the annual workshop with the City Council
  - ◇ Evaluation of new water and wastewater products to determine if they meet PUD standards
  - ◇ Coordination and preparation of annual updates of the Department's Standard Specifications
  - ◇ Negotiation and purchasing of land and easements required to construct projects; processing and maintaining associated documents, databases and files.

## Statistical Indicators:

The following statistical indicators have been compiled to provide a more clear and quantifiable picture of the Engineering and Construction Services Division's accomplishments during FY12:

- Provided project management and construction management / resident engineering services on **15** capital improvement projects that were completed in FY12 and **19** on-going capital improvement projects for the Gainesville's Public Utilities Department, Public Works Department, Georgia Mountain Center, Fire Department, Police Department, Parks and Recreation Agency, and Hall County Public Works and Utility Sanitary Sewer projects.
- Provided construction inspection and management for the following connections to the Public Utilities' water and wastewater system:
  1. Approximately **7.61** miles of water main and **73** fire hydrants. These figures include private fire mains and private fire hydrants.
  2. Approximately **1.49** miles of gravity sanitary sewer, **1.01** miles of sanitary sewer force main, **2** new pumping stations, **2** replacement pumping stations and **49** new manholes.
- Collected GPS coordinates for approximately **508 water meters**, **48 sanitary sewer manholes**, **349 fire hydrants**, and **87 valves**.
- Completed Scanning, drawing and linking **895** easements.
- Completed scanning of approximately **2,025 plan sheets** and **15 valve cards**.
- Created approximately **42** graphical exhibits including the PUD's presentation for the annual **Citizen's Government Academy** and the **Workshop with the City Council**.



Pressure reducing valve at Hog Mountain Road elevated storage tank

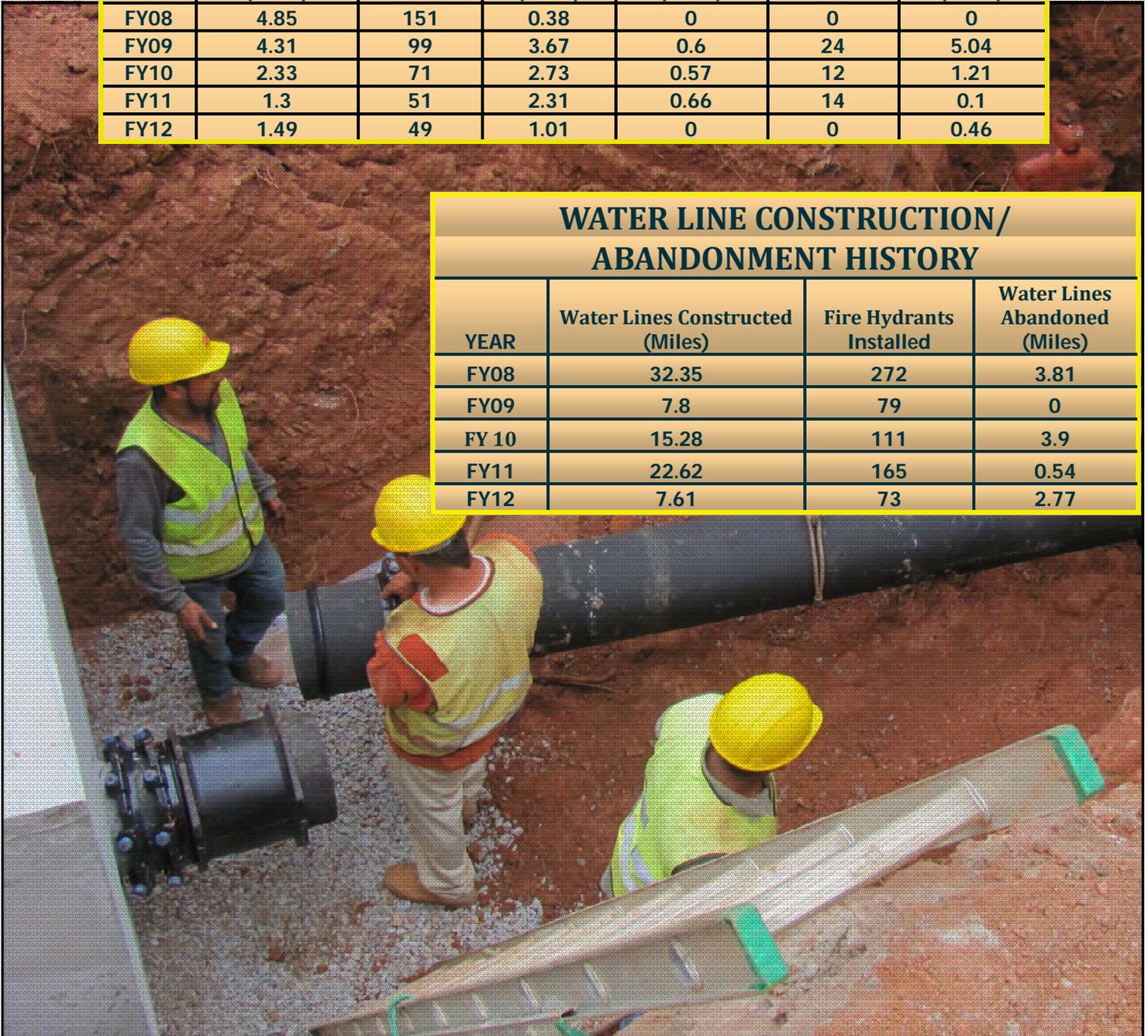
# FY 2012 Water Main and Sanitary Sewer Construction and Abandonment History

## SANITARY SEWER CONSTRUCTION/ABANDONMENT HISTORY

YEAR	Gravity Sewers Constructed (Miles)	Manholes Constructed	Force Main Constructed (Miles)	Gravity Sewers Abandoned (Miles)	Manholes Abandoned	Force Main Abandoned (Miles)
FY08	4.85	151	0.38	0	0	0
FY09	4.31	99	3.67	0.6	24	5.04
FY10	2.33	71	2.73	0.57	12	1.21
FY11	1.3	51	2.31	0.66	14	0.1
FY12	1.49	49	1.01	0	0	0.46

## WATER LINE CONSTRUCTION/ABANDONMENT HISTORY

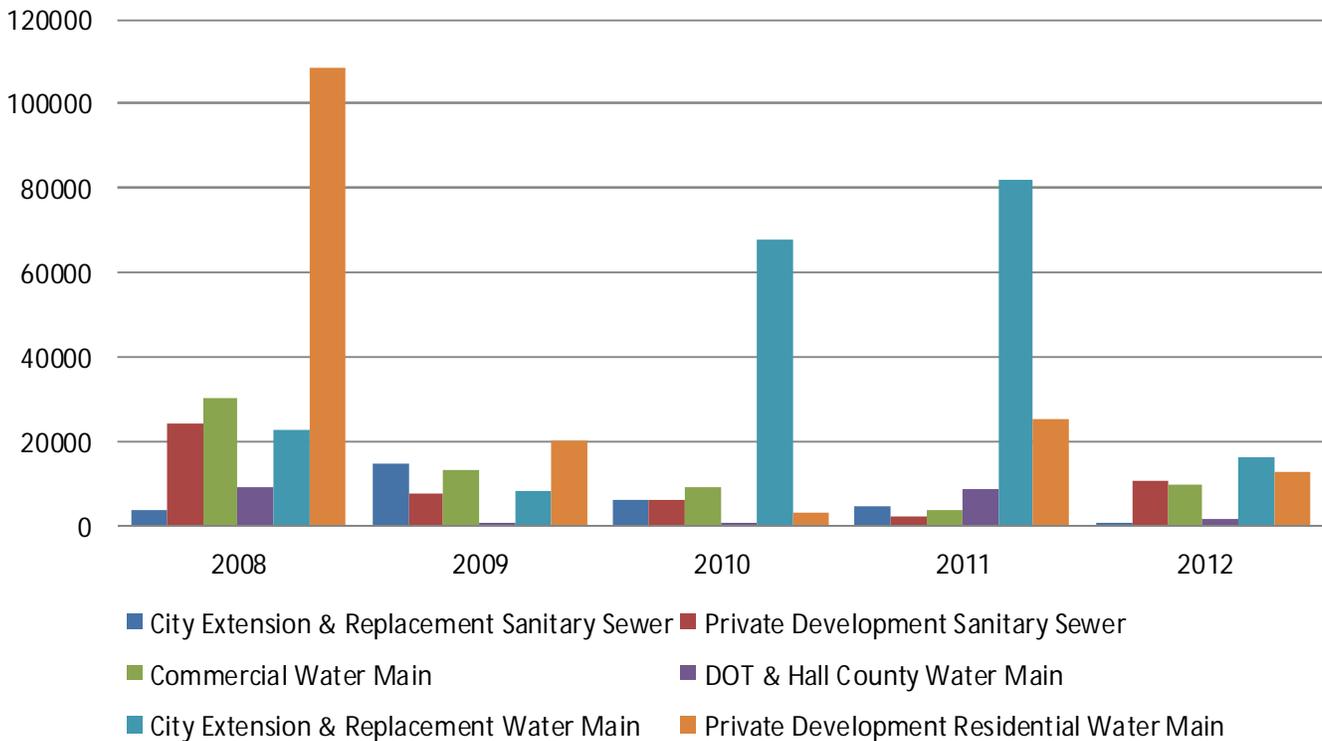
YEAR	Water Lines Constructed (Miles)	Fire Hydrants Installed	Water Lines Abandoned (Miles)
FY08	32.35	272	3.81
FY09	7.8	79	0
FY 10	15.28	111	3.9
FY11	22.62	165	0.54
FY12	7.61	73	2.77



FY12 Transmission Main Improvements

TYPE OF INSTALLATION	FY 2008		FY 2009		FY 2010		FY 2011		FY 2012	
	TOTAL FT.	% CHANGE								
PRIVATE DEV. COMMERCIAL WATER MAIN	30,157	59.11%	13,021	-56.82%	9,017	-30.75%	3,590	-60.19%	9,741	271.34%
PRIVATE DEV. SANITARY SEWER	24,064	-53.63%	7,857	-67.35%	6,335	-19.37%	2,323	-63.33%	10,725	461.69%
PRIVATE DEV. RESIDENTIAL WATER MAIN	108,752	-53.30%	19,959	-81.65%	3,165	-84.14%	25,405	802.69%	12,720	-49.93%
D.O.T. & HALL CO. WATER MAIN	9,174	-87.63%	200	-97.82%	862	331.00%	8,615	999.42%	1,415	-83.58
CITY EXT. & REPLACEMENT WATER MAIN	22,728	-67.21%	8,016	-64.73%	67,650	742.84%	81,828	120.96%	16,289	-80.09%
CITY EXT. & REPLACEMENT SANITARY SEWER	3,552	-89.07%	14,869	318.61%	5,980	-59.78%	4,540	-24.08%	530	-88.33%

## Installed Water and Sewer Mains by Year



## Projects **COMPLETED** during FY 12 are as follows:

1. Evaluation and design of raw water metering at Riverside and Lakeside Water Treatment Plants
2. Design activities associated with the Cedar Creek Water Treatment Plant.
3. Purchase of Wetland Mitigation Credits required by USACE as part of Athens Highway Regional sewage facilities
4. GEFA Year 23 Contract 1 Water Main Replacements
5. FY12 Automated Meter Reading Project
6. FY12 Water Meter Replacement Project
7. Organized, managed and completed all activities associated with the Department's Annual Workshop presentation for the City Council
8. Flat Creek Stream Restoration Upper North Fork/Mid-Town Greenway
9. FY11 Water Treatment and Water Reclamation Facilities Maintenance
10. FY12 New Water Service Connections
11. Lakeside Water Treatment Plant Sodium Hypochlorite Generation System Repair
12. PUD Administration building improvements
13. A Quiet Place in the Woods Pump Station Improvements
14. Stringer Avenue elevated water storage tank rehabilitation
15. Georgia Mountain Center Parking Deck Reconstruction



Pump Station Improvements

## ACTIVE projects managed during FY 12 but carried forward are as follows:

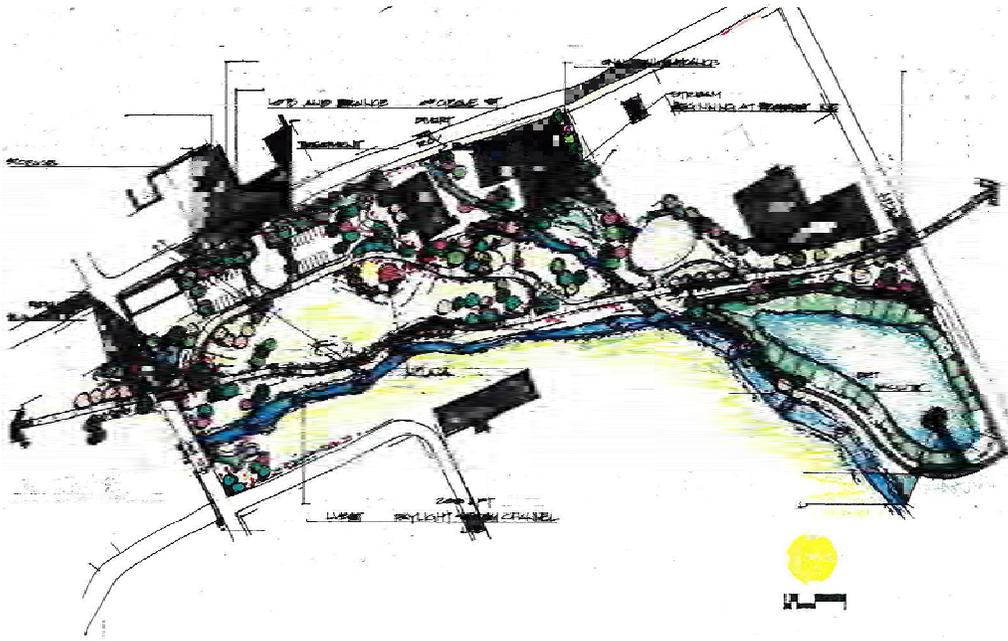
1. Utility relocation at SR52 and Candler Creek (in-house design and construction)
2. Cedar Creek Reservoir
3. Design of Cargill Sanitary Sewer Improvements Project - Phases I, II, III
4. Riverside Drive's WTP's Clearwell repairs project
5. FY12 Transmission Main Improvements (in-house design and construction)
6. Water tanks maintenance project
7. Preliminary design activities associated with Athens Highway utilities relocation
8. In-house design associated with the Cedar Creek WTP Transmission Main improvements
9. GEFA Year 23-Contract II—Sanitary sewer replacements/rehab
10. Pump Station No. 23 Improvements
11. Continued to work with USACE to obtain an easement in Lake Lanier for Linwood WTP's future discharge pipe
12. Riverside Drive WTP chemical systems evaluation project
13. SR 347/ Friendship and Thompsons Mill Road Utilities Relocation and design
14. SR 284 Clarks Bridge Replacement Utilities Relocation
15. Telemetry Systems Improvement
16. FY12 & FY13 Water Treatment and Reclamation Facilities Maintenance
17. Lee Gilmer Memorial Airport Hangar Renovation
18. City View Center Elevated Pedestrian Walkway
19. Mulberry Creek Regional Sewerage Facilities



Transmission Main Improvements



# MIDTOWN GREENWAY



## Gainesville is going GREEN

Phase 1 of the Flat Creek Stream Restoration and Regional Storm water Detention was completed in FY 2012. Ultimately, the project will promote urban renewal and watershed improvement and includes a paved, multi-use trail, stream restoration, and stormwater detention. The pedestrian/bicycle trail extends from Mule Camp Springs to Martin Luther King Jr. Boulevard, in the Midtown area of Gainesville. Future phases of the project will extend the trail.

The project also includes the addition of a stormwater detention pond and Flat Creek stream restoration. This storage and restoration will improve the waterway's stability and water quality which will improve the overall ecosystem for its inhabitants.



# Tank Restoration

In FY12, The City of Gainesville began an overall tank maintenance and repair project that will provide continual inspections, maintenance and repairs for the City's seven water distribution storage tanks. The project is an annual program, funded through the Utility's Capital Projects Fund. The proactive approach will save the City an estimated \$250,000 in the first five years.



## Storage Tanks:

- High Street Tank
- King Street Tank
- Bark Camp Road
- Stringer Avenue
- Athens Highway
- Hog Mountain Rd.
- Highway 52 Tank



High Street Tank painting



High Street Tank maintenance

# DISTRIBUTION AND COLLECTION DIVISION

The Distribution and Collection Division is comprised of two sections: **Water Distribution** and **Wastewater Collection**. The major functions and tasks of these two groups are: the operation and maintenance of the water distribution and wastewater collection system, providing a safe environment to the public, and ensuring that quality and reliable water and sewer service are provided to our customers. These tasks include: repairing minor water leaks, inspection and maintenance of fire hydrants, flushing water to improve water quality, locating or marking water and sewer lines, cleaning and inspecting sewer lines, and clearing easements to insure ready access.

## WATER DISTRIBUTION

**MISSION STATEMENT:** *To ensure the distribution of safe drinking water by maintaining the City's water system.*



## SCOPE OF SERVICES



The Water Distribution staff, which includes the Division Manager, performs the following functions: provides utility locates, assists with water and sanitary sewer repairs, performs right-of-way maintenance, repairs and services fire hydrants, performs vehicle and equipment maintenance, performs water valve maintenance, and carries out all welding activities and tool fabrication. The Administrative and Managerial team of this Division provides administrative and management support. The Division's Manager and Superintendents represent the City of Gainesville on various committees and state professional organizations as well as provide input on future system expansion planning.

## STATISTICAL INDICATORS:

The Division maintains approximately **8,855** fire hydrants in the water distribution system. Each fire hydrant is inspected annually with the assistance of the local fire departments. In FY12, **361** fire hydrants were repaired, serviced, or replaced in order to ensure fire protection for our community. **1,782** water valves were inspected in FY12 and **1,597** were repaired, raised, or serviced.

Determining the location of utilities is another function the Division performs related to water distribution. In FY12, a total of **10,108** locates were performed by the Division. All utility providers are required by state law to mark their utility locations prior to beginning work. This requirement prevents costly damages, reduces outages to customers, and provides for the general safety of those performing utility work.

# Water Loss Prevention

Dry conditions and population growth place a strain on our water resources, creating the urgent need for water efficiency and conservation. Each year, utilities lose large volumes of treated water through inefficiencies in the supply process. Water loss control is vital in order to reduce the burden on existing water resources, increase the reliability of our water supply, and keep water rates low for customers. The City of Gainesville uses a hands-on, proactive approach to combat water loss in our system.

The City's proactive leak detection efforts save the Utility thousands of dollars annually (see chart below). Since its implementation 2 years ago, a data logging system allows the City to locate hard-to-find leaks. The system uses sophisticated software to record and download sounds into files for analysis. The software evaluates the sounds and produces graphical and tabular results, informing us where the leak is, if one exists.

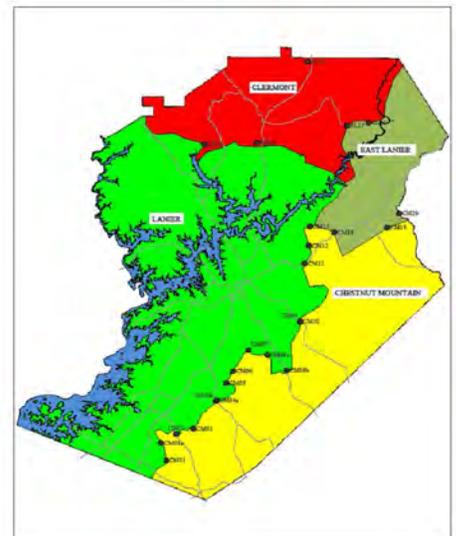
Leaks are repaired quickly (most within 24 hours of notification) and proficiently (with use of standard repair methods and materials). The utility also continuously replaces pipes to improve the integrity of the distribution system and reduce leaks.



Public Utilities employee Chris Gravitt prepares to perform a leak detection survey with data logger equipment.

	2010	2011
<b>Leaks Found</b>	7	27
<b>Gallons Saved</b>	1,260,160	16,910,000
<b>Miles Surveyed</b>	16.5	28.0
<b>Cost Savings</b>	\$2,696	\$36,187

Pressure management is another important tool in water loss control. The City of Gainesville's Water System has 4 pressure zones and over 20 Pressure Control Valves that help maintain desired pressures for fire protection while easing strain on water mains and reducing water loss from leaks.



The City of Gainesville's 4 Pressure Zones

Water theft is a source of water loss that also impacts our water supply. To combat unauthorized use, the City of Gainesville has over 500 fire hydrant locks in place to prevent theft. Weekly reports and investigations are also conducted to locate unauthorized consumption via water meters at locations in which no one is currently signed up to receive service. In addition, the City has developed policies to deter and handle meter tampering.



A locked fire hydrant

# Water Loss Audit

In 2010, the *Georgia Water Stewardship Act* was established to encourage and improve water conservation to enhance Georgia's water supply. The Act requires that all Georgia public water systems serving 10,000 or more people complete an annual water loss audit, beginning in 2012. The City of Gainesville Public Utilities Department submitted its first Water Loss Audit to the GAEPD in FY 2012. The Distribution Division spearheaded the audit, with the assistance of a team of staff members from various divisions. The audit is an examination of records and financial accounts to check accuracy and provide accountability. The assessment's purpose is to identify areas and causes of water loss, to improve water efficiency within the state's public water systems, and to serve as a catalyst for creating a culture of water conservation among water managers.

Gainesville Public Utilities scored a **77** out of **100** on the audit, which is considered a slightly above average score in the State of Georgia. The Utilities Infrastructure Leakage Index (ILI) is a very important benchmark for water system planning and can be used as a target-setting mechanism. It was established in FY12 at **1.95**. The ILI is unique to each water system, but is a very important leak reduction target number when considering water resource availability, financial goals, and other operational considerations of Gainesville's water system.

WATER AUDIT DATA VALIDITY SCORE:

**\*\*\* YOUR SCORE IS: 77 out of 100 \*\*\***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

- 1: Master meter error adjustment
- 2: Volume from own sources
- 3: Unauthorized consumption

[For more information, click here to see the Grading Matrix worksheet](#)

A copy of this year's Water Audit is available upon request.

# Water Audit: How Gainesville Compares Nationally

Performance Indicator	Average	Range	City of Gainesville
Validity Score	79.08	61.9-89.7	77
Infrastructure Leak Index (ILI)	3.62	1.15-9.89	1.95
Apparent Losses	19.11	6.45-65.89	4.37
Real Losses	66.24	17.0-124.3	50.28
Non-revenue Water as % by Volume	21.4%	6.8%-39.6%	16.0%
Non-revenue Water as % by Cost	10.6%	1.7%-23.0%	5.0%
Customer Retail Unit Cost (\$1,000 gal)	\$5.09	\$4.09-\$7.89	\$4.34

- With the exception of Validity Score and Customer Retail Unit Cost, the lower the score or percentage, the better the score or percentage reflects on the utility.
- Data collected from AWWA Water Loss Control Committee’s Data Collection Initiative—2011
- In Georgia, the Validity Score for Dalton was 70 and Cobb County was 62.



## **WASTEWATER COLLECTION**

**MISSION STATEMENT:** *To ensure the environmentally safe collection and transportation of sanitary sewage by maintaining the City's sewer system.*

### **SCOPE OF SERVICES**

The Wastewater Collection staff is responsible for ensuring that the collection system is operating properly. One major preventative maintenance function of the Utility is cleaning sanitary sewer collection pipelines. These efforts greatly reduced the possibility of environmentally-damaging sewer overflows and prevent isolated sewer problems for our customers.

The Inflow and Infiltration (I&I) Team, which is a technical group responsible for eliminating and reducing groundwater and rainwater flows into the sanitary sewer collection system, is also part of the Collection Division. This team conducts flow monitoring, manhole inspections, CCTV inspections, and smoke testing within the sewer system.

### **FY12 Statistical Indicators:**

- **Collection Crews cleaned over 832,000 feet of sewer pipeline and manholes**
- **106 sewer main defects were repaired**
- **Nearly 42,000 linear feet of sewer mains were TV inspected**
- **Over 355,000 gallons of infiltration and Inflow were identified and eliminated in the sanitary sewer system**
- **Over 255,000 linear feet of sewer line was smoke tested and 331 smoke test problems were located**
- **109 manholes were flex sealed**
- **28 “cured in place” spot repairs were completed, a cost savings of \$20,750.00 compared with that of conventional repair methods**





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