Wastewater

• Five treatment plants
  – Permitted treatment capacity: 66.6 MGD daily
  – Equalization Basin
  – Sewer use rules regulate influent loading to treatment facilities and set industrial customers’ pretreatment limits

• Land Application System: 9,800+ acre forested system
  – 4 pump stations, 12 pumps, 2.9 miles of effluent canal, 320 miles of piping and over 19,000 sprayheads
  – Reservoir capacity - 2.7 billion gallons

• Biosolids Handling
  – 1998: Discontinued land application, rehabilitated sprayfields & constructed temporary dewatering facility
  – 2000: Completed dewatering facility in 2000
  – 2002: Began composting operation
    • Outside entity markets finished product
    • 100 tons of dewatered solids produced per day – 100% composted
  – 2005: Permanent composting facility constructed
Abutment WWTP

- Our oldest wastewater plant.
  - Refurbished in 1993
  - Went to tapered diffused air system
  - Rebuilt pump stations
  - Placed 2 trickling filters in service that had previously been down
- Can treat between 10 to 12 MGD
Loopers WWTP

- Plant completed October 1999
- Diffused air facility
  - 32,400 diffusers
- Designed to treat 20 MGD
  - Removal Efficiency of plant:
    - BOD – 97% COD – 89%
- Extremely high quality effluent
- 2006 & 2009 winner of the GAWP Wastewater Treatment Plant of the Year Award
Loopers Control Room
Riverbend WWTP

- Riverbend is a 20 MGD “sister” plant to the Loopers facility
  - Fine Screens Building screens all influent for both “sister” plants
  - Equalization Basin (completed April 2004) provides for peak loading and overflow protection for “sister” plants
- 2005 & 2008 winner of GAWP’s Wastewater Treatment Plant of the Year Award
Riverbend Equalization Basin

- Employs 3,960 diffusers.
  - 10.25 million gallon capacity
- Completed February 2004
Mill Creek Wastewater Plant

- Completed 2008
- Capacity: 0.15 mgd
- Uses biological treatment process with a two-channel Orbal
- Membrane Operating System (MOS) is used for filtration
- Final Treatment consists of Ultra Violet (UV) disinfection.
- TSS removal efficiency 99.88%
- BOD removal efficiency 99.20%
Loopers Bend Wastewater Digester

2008
Biosolids

- Discontinued land application of biosolids in 1998

- Constructed temporary biosolids dewatering facility June 1998

- Rehabilitated existing biosolids sprayfields

- Completed construction of permanent state-of-the-art dewatering facility April 2000
  - Equipped with two CA-755 Westfalia centrifuges
  - Covered storage area
  - Polymer optimization program

- Composting
  - Per OCGA § 12-5-30.3(a)(1): “Sludge” means the solid or semisolid residue generated at a wastewater treatment or pretreatment plant. Such term specifically excludes treated effluent, septage, and sludge treated to further reduce pathogens by such processes as composting, heat drying, or heat treating.
**Composting Operation**

- 100 tons of dewatered solids produced per day - 100% composted
- Composting operation began in January 2002
- Permanent composting facility constructed in February 2005
- Outside entity markets finished product
Biosolids Field Rehabilitation

Removal of 39,316 tons of applied biosolids – including removal from the 100-year floodplain
Land Application System (LAS)

- 9,877 acre facility. (approximately 6,900 acres in use, 4,605 wetted acres)
- Land application of up to 30 MGD of treated effluent (annual average)
Land Application System - Old

• The Old Sprayfield System:
  - Above-ground aluminum piping
  - Mechanical joints (every 30 ft)
  - Unsupported 10’ risers
  - Deflector Sprayheads
  • 30’ spray diameter
Land Application System - Old
Land Application System - Interim
LAS Sprayfield Configuration - BEFORE
LAS Sprayfield Configuration - AFTER
LAS Canal System
Pump Station Upgrades

BEFORE

AFTER
LAS

• System Reconstruction
  – Hydraulic Optimization

• Chlorination of Effluent
  – Distinguishes treated effluent from natural influences
  – Chlorination stations at all three pump stations

• Canal Dredging
  – Removed 4500 tons of sludge

• SCADA upgrades
  – Work stations at pump stations and LAS control building
  – Security cameras (color)
  – Report Generator
Additional Wastewater Operations & Projects

- Timber Harvesting & Renewal
- 1240 MW combined cycle generating plant cooling
- Biodiesel Development/Nutrient Load Reductions
Wastewater System Awards

1999
• GW&PCA Gold Award for Wastewater Treatment Plants & Land Application System

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2001
• GW&PCA Gold Award for Wastewater Treatment Plants & Land Application System
• GW&PCA Laboratory QA/QC Certificate of Achievement in Category of a Wastewater System > 10 MGD

2002
• GW&PCA Gold Award for Wastewater Treatment Plants & LAS
Wastewater System Awards

2003
• GW&PCA Gold Award for Wastewater Treatment Plants & LAS

2004
• GW&PCA Platinum Award for Wastewater Treatment Plants & LAS for five consecutive years of excellence in operations
• GW&PCA Wastewater Collection System of the Year
• Recognized by the Department of Natural Resources’ Board in 2004 for our phosphorus reduction efforts
• GW&PCA Top Op – Danny Mathis (wastewater operator)
• GW&PCA Laboratory QA/QC Certificate of Achievement in Category of a Wastewater System > 10 MGD

2005
• GAWP Platinum Award for Wastewater Treatment Plants & LAS for six consecutive years of excellence in operations
• GAWP’s Wastewater Treatment Plant of the Year Award - Riverbend Plant
Wastewater System Awards

2006
GAWP Platinum Award for Wastewater Treatment Plants & LAS (7th consecutive year)
GAWP Wastewater Treatment Plant of the Year Award - Loopers Plant
GAWP Wastewater Laboratory QA/QC Award
GAWP Wastewater Collection System of the Year Award

2007
GAWP Platinum Award for Wastewater Treatment Plants & LAS (9th consecutive year)

2008
GAWP Platinum Award for Wastewater Treatment Plants & LAS (10th consecutive year)
GAWP’s Wastewater Treatment Plant of the Year Award - Riverbend Plant

2009
GAWP Wastewater Treatment Plant of the Year Award - Loopers Plant
Surface Water Samples
Monitoring Well Samples

DALTON UTILITIES
LAND APPLICATION SYSTEM

• MONITORING WELLS (MW)
Ongoing/Future Initiatives

• Influent Evaluation
  – Georgia DNR Sustainability Division

• Groundwater/Drinking Water Monitoring

• Composting/Solids Operations
  – Landfill existing compost inventory
  – Analyze & remediate sludge digester

• Distribution of Compost
EPA Region IV Meeting
Monday, July 27, 2009