US EPA ARCHIVE DOCUMENT

EPA Region IV Meeting

Monday, July 27, 2009

Dalton
UTILITIES

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*

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Abutment WWTP

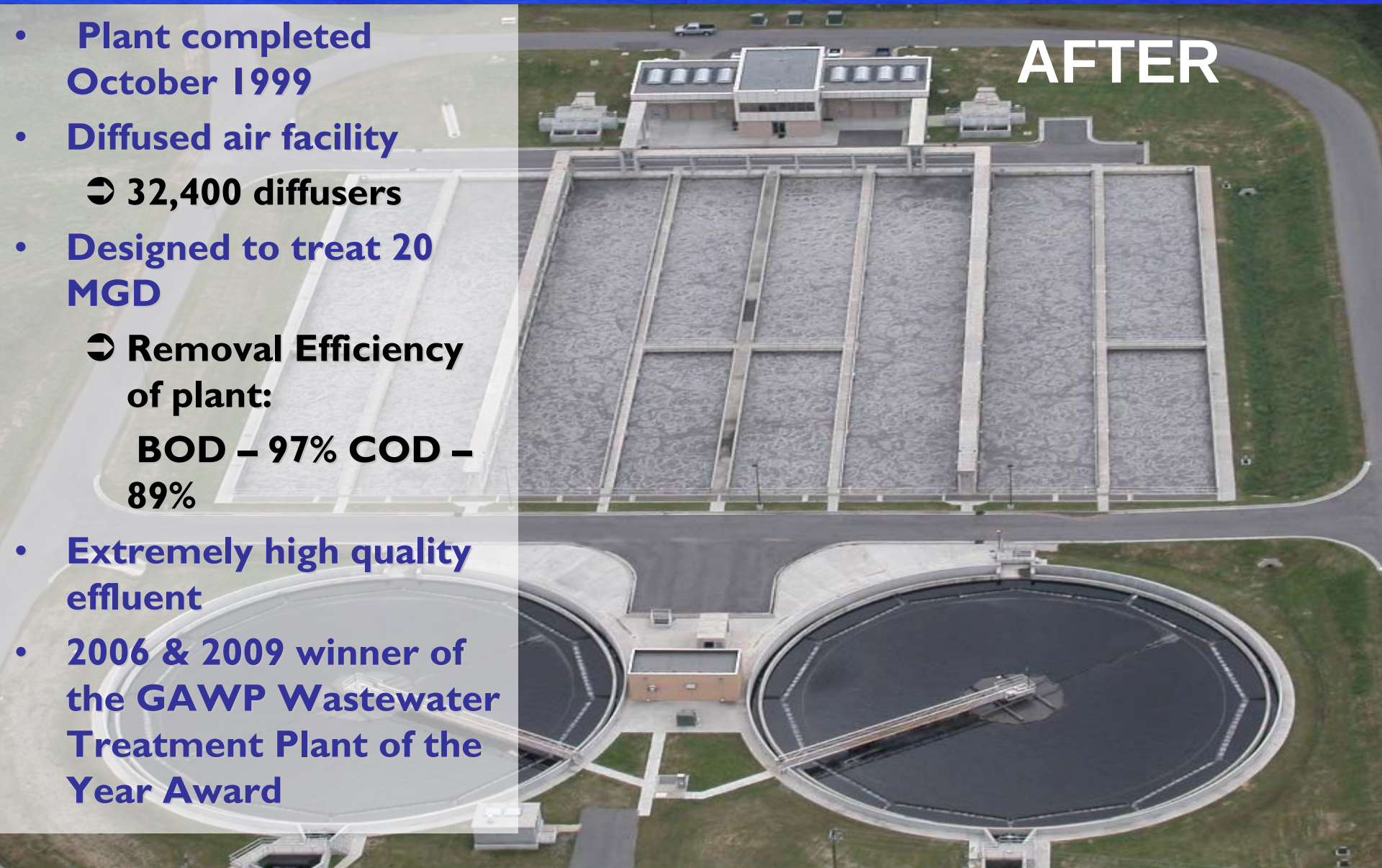
- Our oldest wastewater plant. Refurbished in 1993
  - Went to tapered diffused air system
  - Rebuilt pump stations
  - Placed 2 trickling filters in service that had previously been down
- Can treat between 10 to 12 MGD

Loopers WWTP

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 WWTP

- Original construction - 1970. Redesign & reconstruction completed in Oct. 2002.
- 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

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.

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Composting Operation

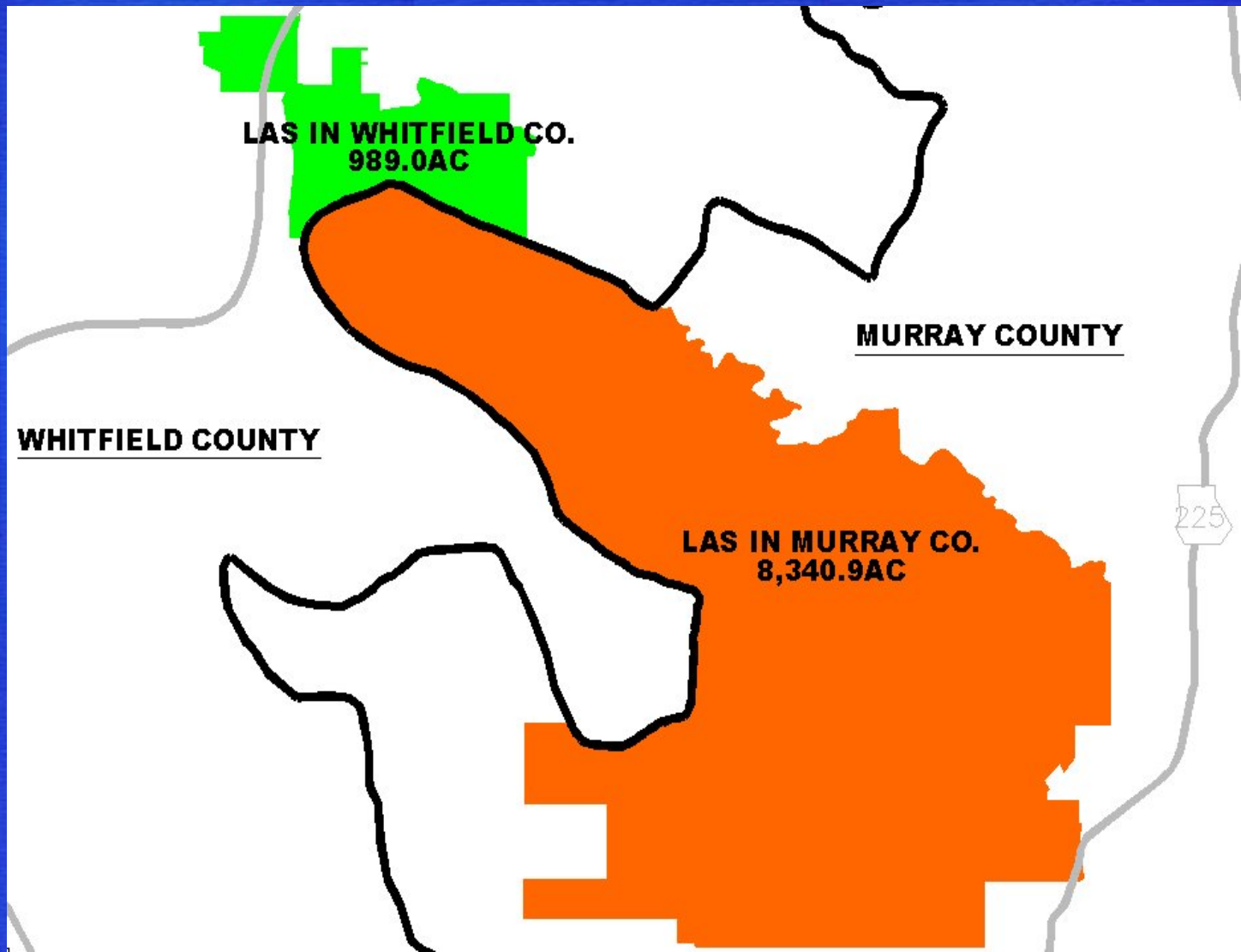
- 100 tons of dewatered solids produced per day - 100% composted
- Composting operation began in January 2002
- Permanent composting facility constructed in February 2005
- Outside entity markets finished product

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, 4605 wetted acres)
- Land application of up to 30 MGD of treated effluent (annual average)



Land Application System - Old

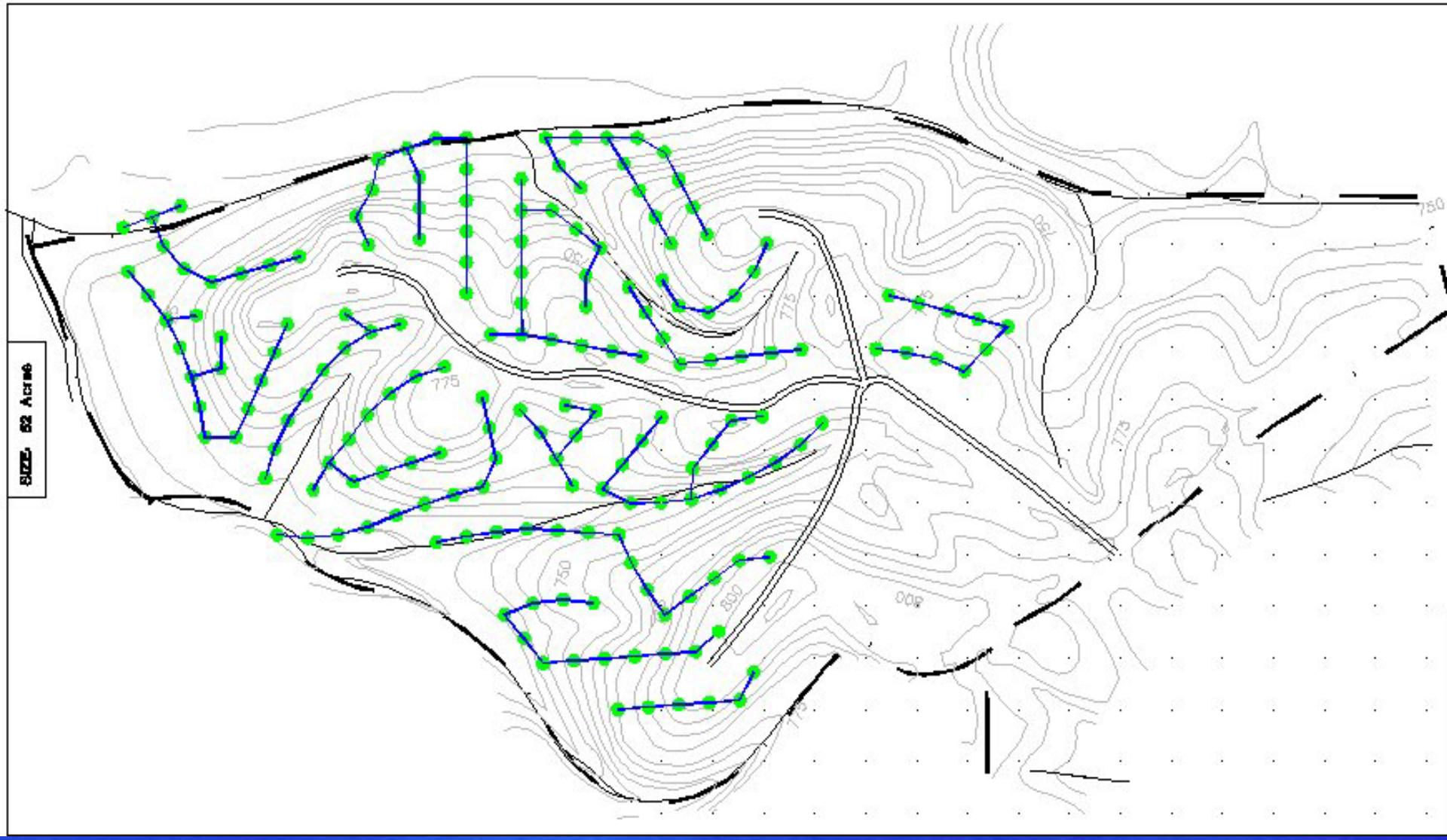
- **The Old Sprayfield System:**
  - Above-ground aluminum piping
  - Mechanical joints (every 30 ft)
  - Unsupported 10’ risers
  - Deflector Sprayheads
    - 30’ spray diameter

Land Application System - Old

Land Application System - Interim

alton
UTILITIES

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

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Wastewater System Awards

1999

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

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

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

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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

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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

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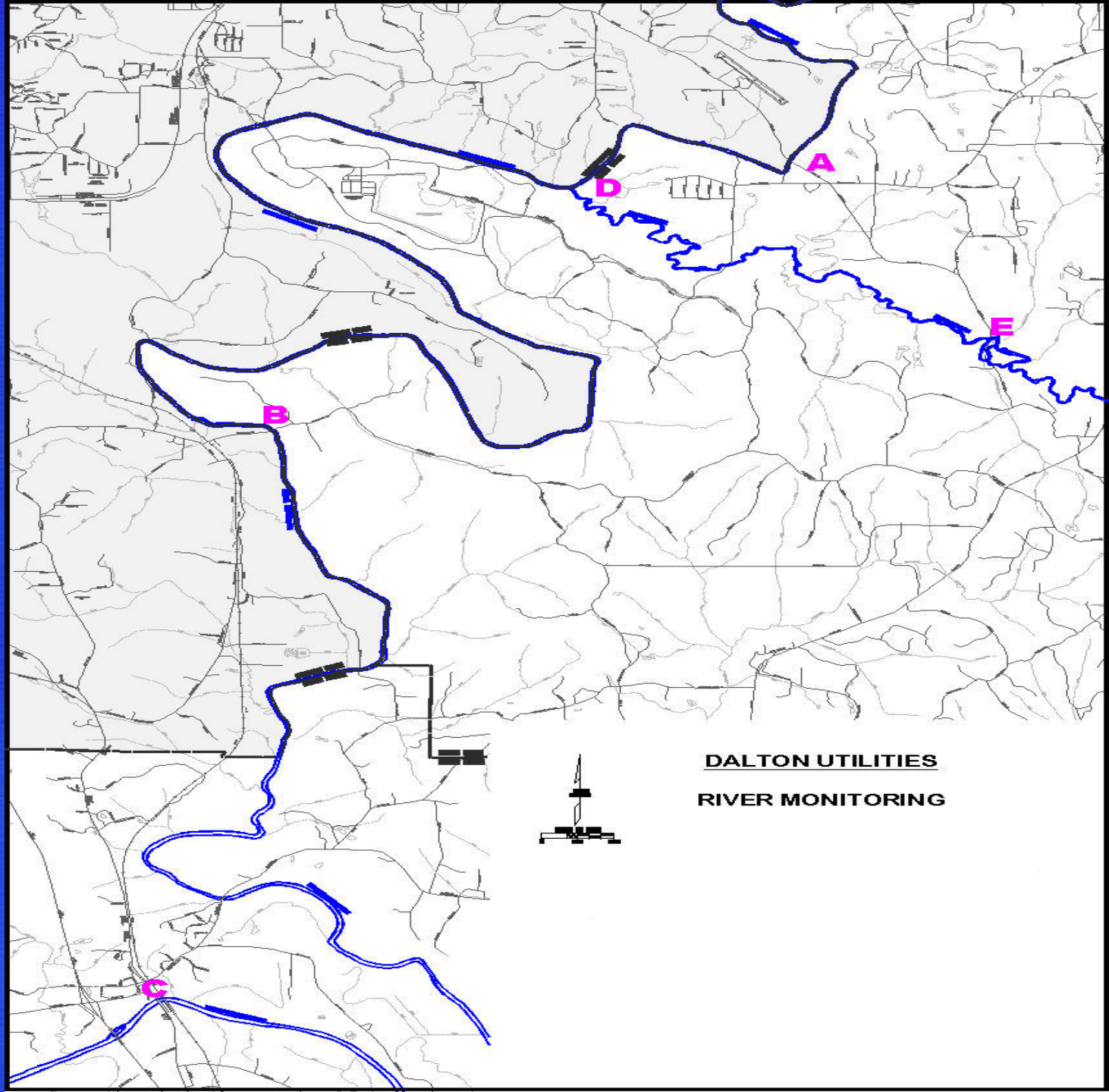
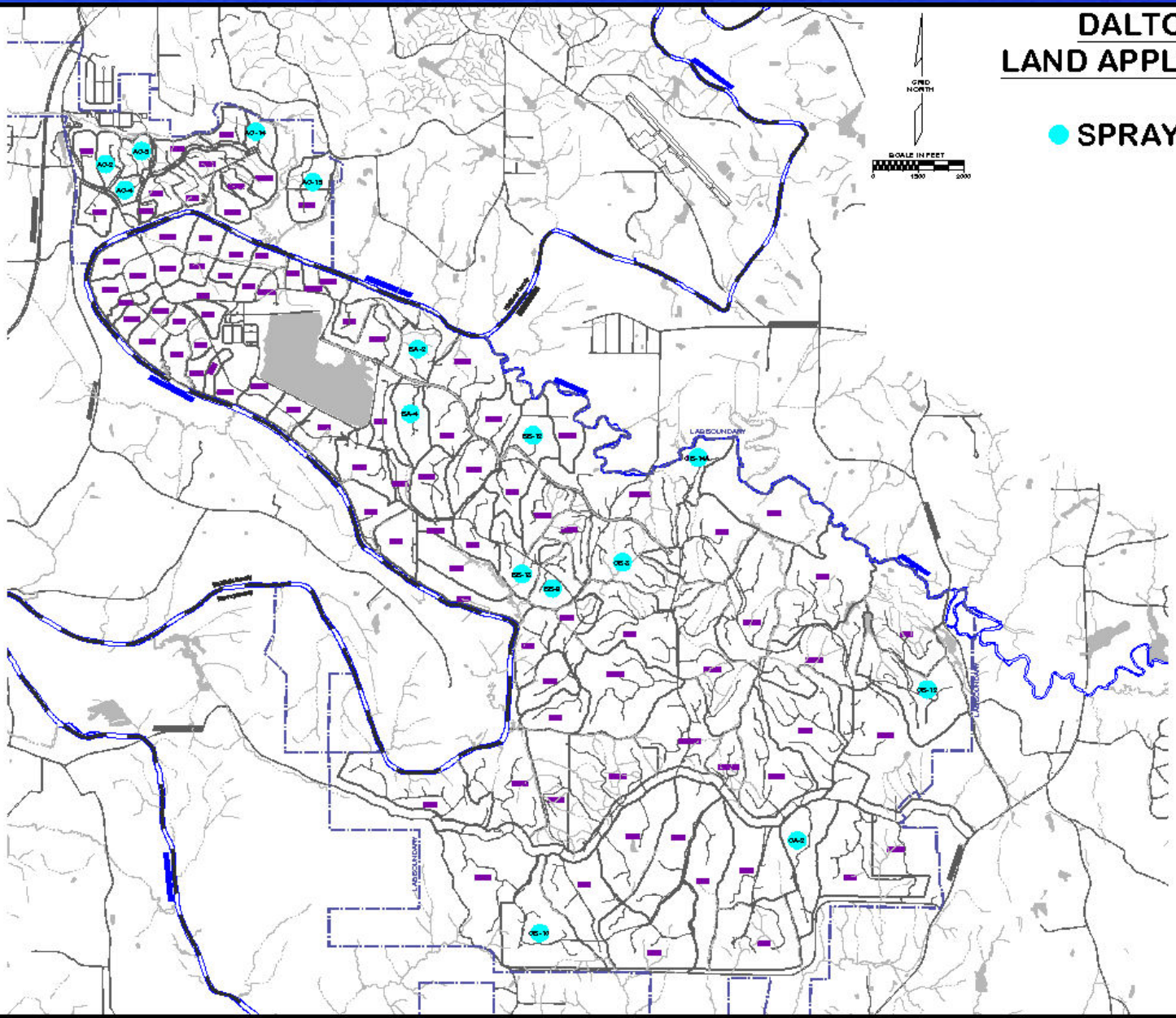
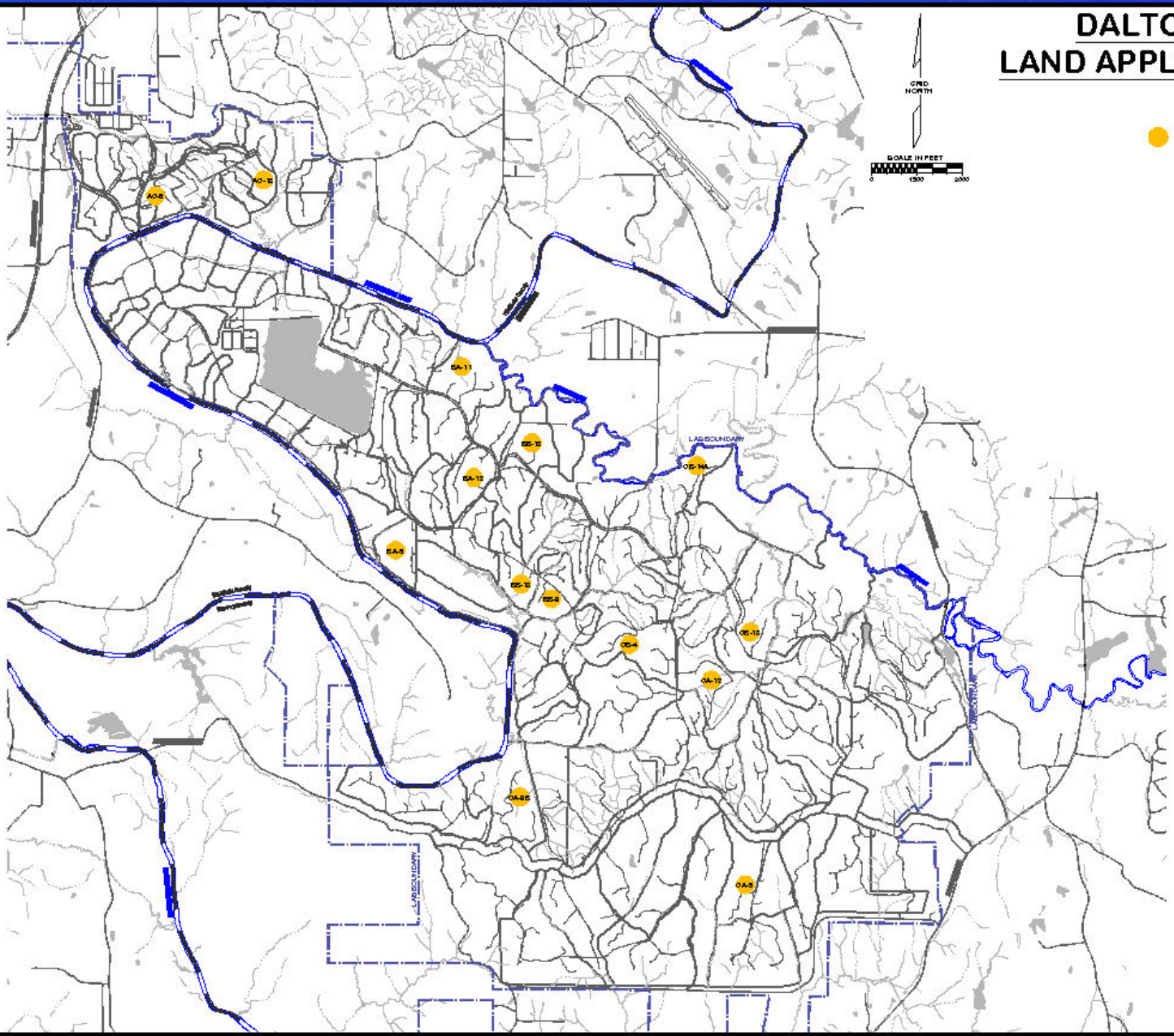
Surface Water Samples



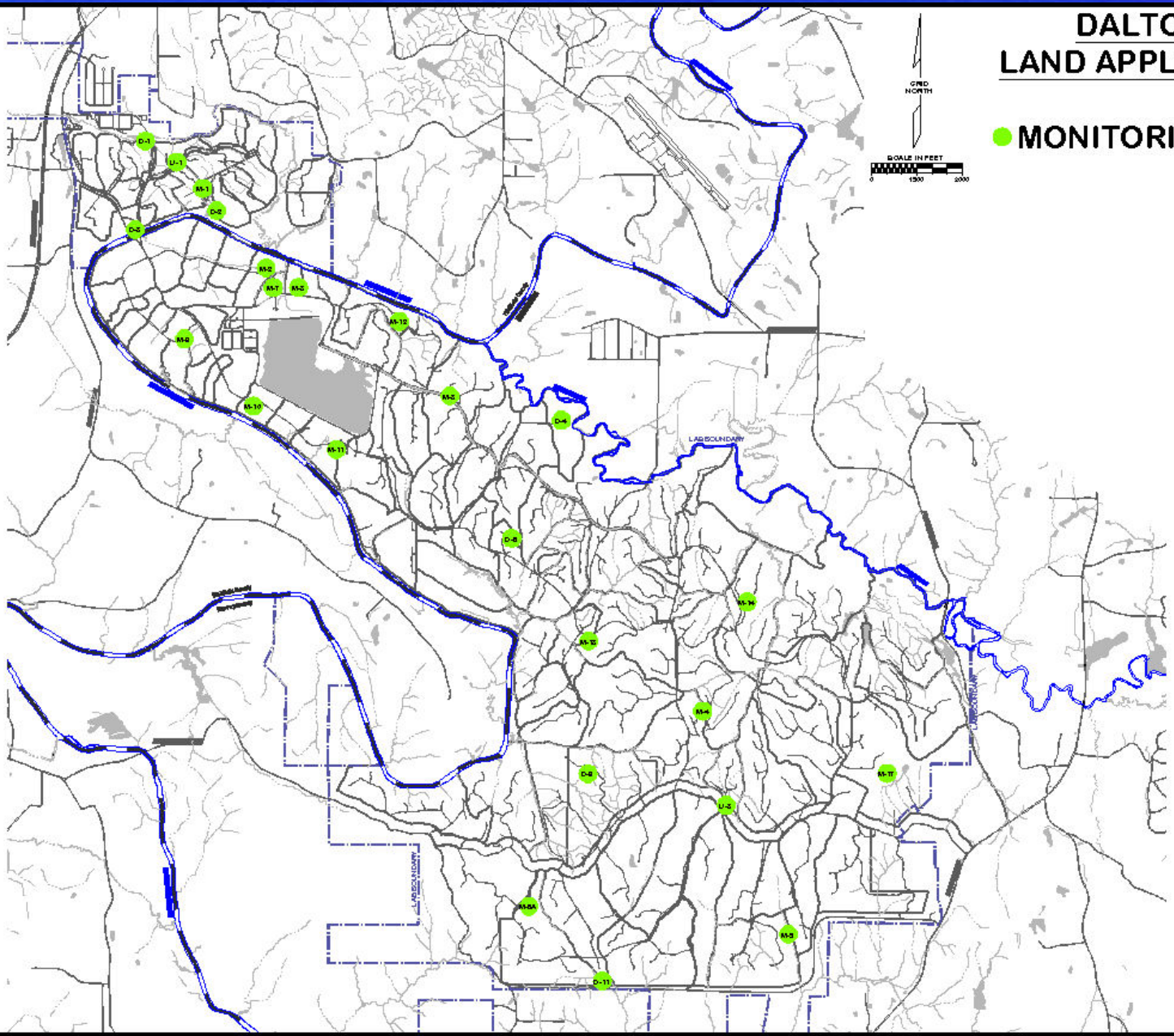
Sprayfield Samples



Soil Samples



Monitoring Well Samples



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**

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