Georgia’s State Water Plan

7th Annual Georgia Environmental Conference,
Water Management Practices and Georgia’s Adopted Regional Water Plans,
Session 5, Course 41

August 23, 2011

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Course Format

• Brief Overview of State Water Plan;
• Four Presentations on Selected Water Management Practices;
• Panel/Question and Answer
Presentations

• Industrial Water Conservation;
• Reservoirs;
• Desalination; and
• Aquifer Storage and Recovery
• Comprehensive Water Planning Act directed development of State Plan in 2004 by Water Council;

• State Water Plan approved by General Assembly and signed by Governor in 2008;

• State Water Plan required regional planning through formation of ten regional water planning councils
Regional Water Planning

• Characteristics vary significantly in differing regions across Georgia

• Managing water resources to meet current and future needs will require:
  – regional, resource-based plans
  – that identify the management practices
  – appropriate to the resources and users in each region
Adopted Regional Water Plans

• Regional Water Plan development process initiated March 2009;
• Ten plans adopted by EPD November 15, 2011:
  1) Introduction (Process/Council vision statement/Objectives);
  2) Region Specifics (History/Geography/Characteristics);
  3) Water Resources (Water use/Baseline resource assessments/Ecosystem conditions/In-stream uses);
  4) Forecasting Future Water Needs (Municipal, Industrial, Agricultural, Thermoelectric);
5) Comparison of Water Needs with Resource Capacities (Groundwater and surface water availability/Surface water quality);

6) Addressing Water Needs and Regional Goals (Water management practices selected);

7) Implementing Water Management Practices (Schedules/ Responsible parties/Cost estimates);

8) Monitoring and Reporting Progress (Benchmarks/Plan Update/Plan amendments)
Practices to Reduce Demand/Increase Capacity

- Baseline Resource Capacity
- Capacity reached
- Reducing demand meets needs through 2040
- Increasing capacity meets needs through 2050

Total Forecasted Demand (Broken line indicates total demand with conservation)
RWP practices versus Water Management Practices

• Coosa North Georgia-42
• Altamaha-71
• Middle Chattahoochee-22
• Upper Flint-18
• Lower Flint-Ochlockonee-17
RWPs versus Water Management Practices

• Upper Oconee-38
• Middle Ocmulgee-35
• Suwanee-Satilla-76
• Savannah- Upper Ogeechee-30
• Coastal Georgia-86
Water Management Practices

• Water Conservation
• Agricultural and Forestry BMPS
• Ground and Surface Water Quantity Practices
• Surface Water Quality Practices
Water Management Practices

• Storm Water BMPs
• Land Use Management
• Research and Development
• Local Planning
Georgia’s State Water Plan

Coastal
REGIONAL WATER PLAN

September 2011

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“Municipal and Industrial water uses - encourage implementation and adherence to Tier 1 and 2 water conservation measures established in existing and future rulemaking processes and plans by local governments/utilities.”

“Conduct research to determine the feasibility (technical, financial, legal, political), role, and potential benefits and limitations of aquifer storage and recovery (ASR) in critical gap areas and/or recharge of surficial and other Aquifers.”
“Reverse Osmosis treatment of brackish water - consider feasibility of additional treatment at source of supply through treatment of brackish surface water and distribution of water to help meet water needs in gap areas.”

“Desalination - consider feasibility of removal of salt from ocean water and distribution of water to help meet water needs in gap areas.”

“Possible joint non-main stem reservoir to serve multiple regions/regional council boundaries with Savannah-Upper Ogeechee and Oconee Councils.”
Speakers and Topics

Industrial Water Conservation: Jeff Wilson, Principle Research Engineer and Water Research Center Project Manager, Research & Technology Management, Southern Company Services;

Reservoirs: Jim Mathis, P.E. - Principal Water Resources Engineer, Infratec Consultants, Inc;

Desalination: Chandra Mysore Ph.D., P.E., BCEE, - National Practice Leader-Water, GHD, Inc;

Aquifer Storage and Recovery: Charles Sexton - Director of Engineering, Beaufort Jasper Water and Sewer Authority, South Carolina.