

Water Planning and Conservation in Georgia and beyond

USDA-CSREES

National Water Conference

*Symposium: Water Quantity Issues in the
Eastern U.S.*

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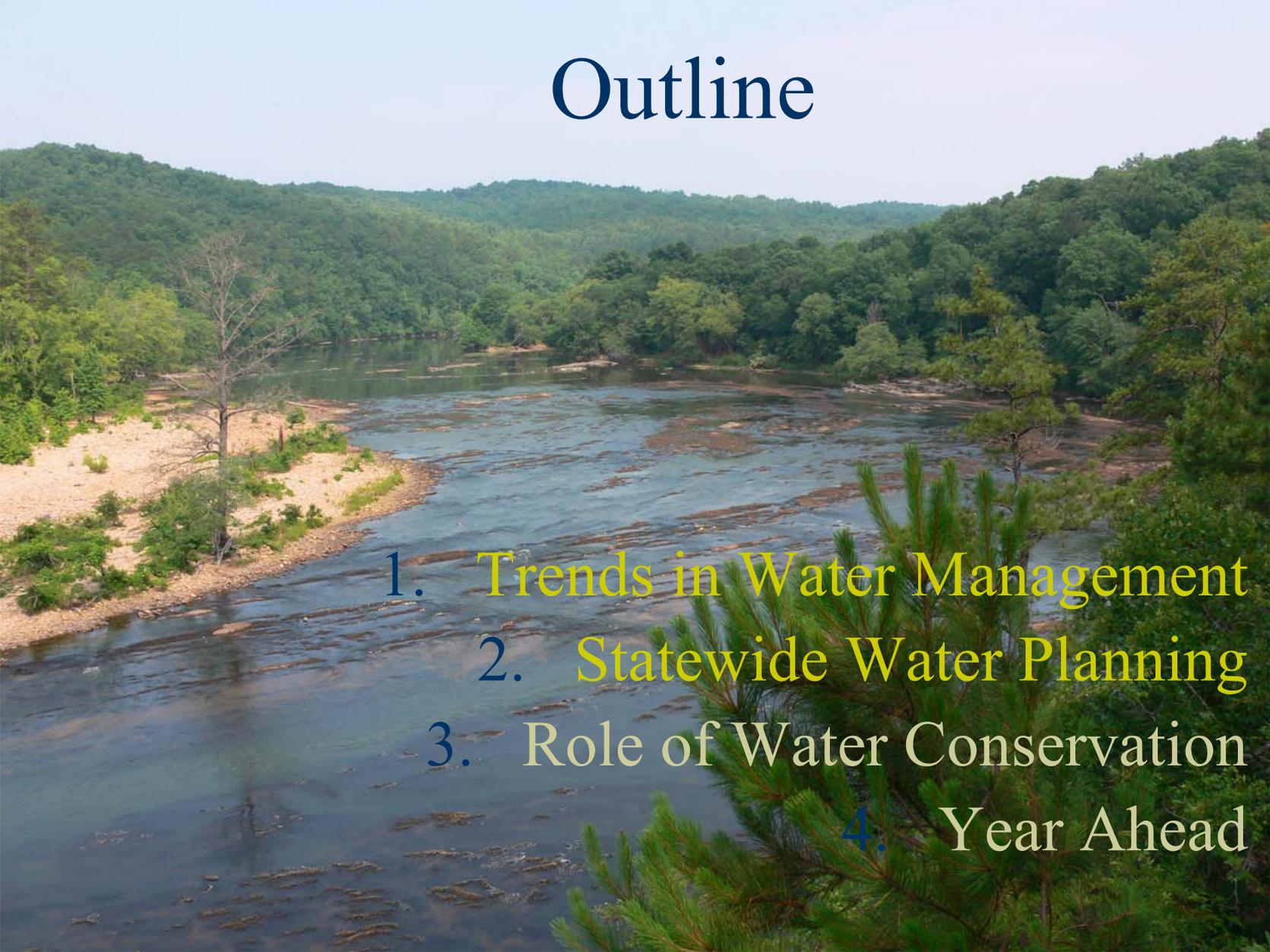
Savannah, Georgia

January 31, 2007



Outline

1. Trends in Water Management
2. Statewide Water Planning
3. Role of Water Conservation
4. Year Ahead



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State Obligations

- ◆ Federal statutes
 - Clean Water Act, Safe Drinking Water Act, etc...
- ◆ Most states have primacy
 - Protect human health
 - Eliminate direct discharges (NPDES - National Pollution Discharge **Elimination** System)
 - Non-point source reduction (TMDLs)
 - Case law requirements

All in all, meeting federal requirements

However...

... the approach has been piecemeal, and as a result:

- Many water bodies are impaired by pollutants
 - Many water sources are over- allocated, and
 - Some species are still threatened
 - Human health threatened
- ◆ States are planning more – long term management

Water Planning Trends

1. Water resources are limited
2. Regulations can further limit resource use
3. Growth is driving increased use
4. Outdoor watering is increasing
5. Water conservation and efficiency as management
 - Efficiency standards – more commonplace
 - Efficiency and conservation are science
 - Efforts to value water more appropriately
6. Water and energy use are closely connected
7. Average consumers are clueless

Statewide Water Management Planning

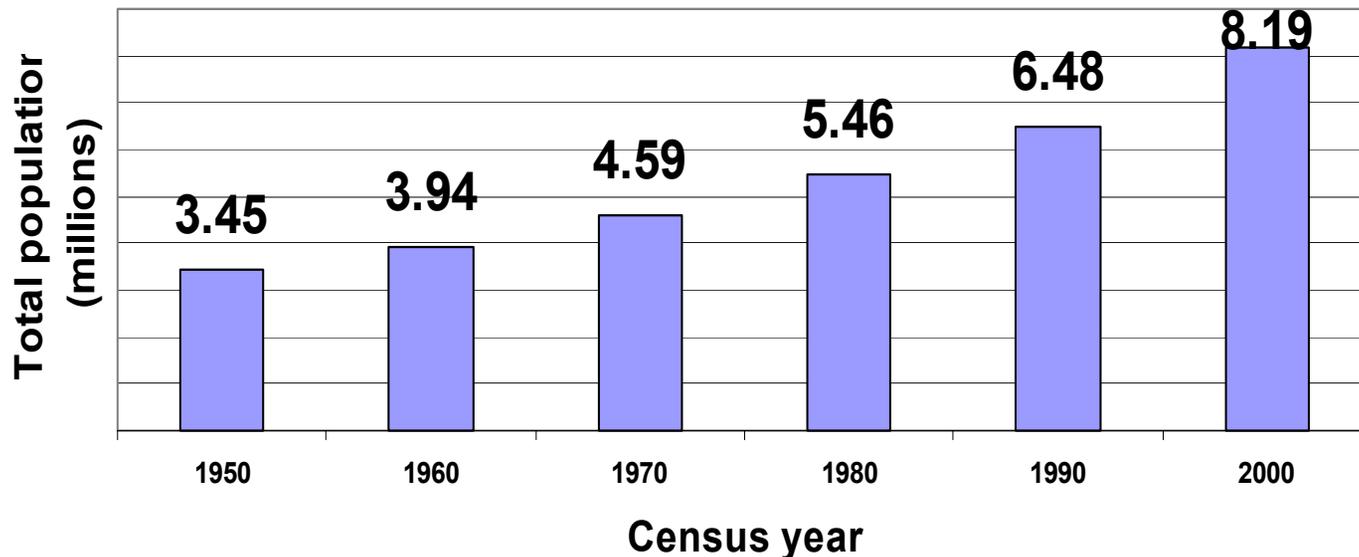
- ◆ State water plans
 - 15+ states have water plans
 - Inventories of available sources and demand or Long-term management strategies?
 - Adaptive/iterative planning or door stops?
 - Stakeholder built or bureaucratic nightmare?



Atlanta Athletic Club

Need for a Georgia statewide water plan

- ◆ Recent and projected increases in population



- ◆ Demand is expected to outpace limited supplies
- ◆ Regional resources are already stressed

Comprehensive Statewide Water Management Planning

- ◆ Water Planning bill adopted in 2004
- ◆ EPD to draft plan development
- ◆ Water Council to oversee plan development
- ◆ Water plan to General Assembly by 2008
 - Statewide water policies
 - Regional planning framework

The Water Council

- ◆ Environmental Protection Division - Chair
- ◆ Department of Agriculture
- ◆ Department of Community Affairs
- ◆ Department of Human Resources
- ◆ Department of Natural Resources
- ◆ Georgia Environmental Facilities Authority
- ◆ Forestry Commission
- ◆ Senate and House Natural Resource Committee Chairs
- ◆ Soil & Water Conservation Commission
- ◆ Two Appointed Senators and Representatives
- ◆ Two Citizen Appointees

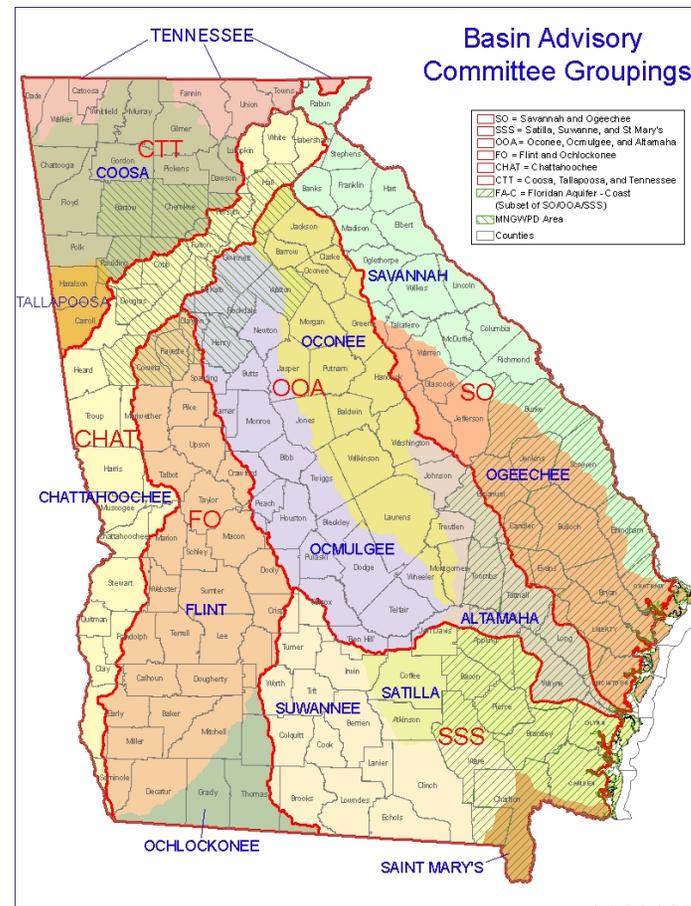
Comprehensive State-wide Water Management Planning Act

Vision Statement

“Georgia manages water resources in a sustainable manner to support the state’s economy, to protect public health and natural systems, and to enhance the quality of life for all citizens.”

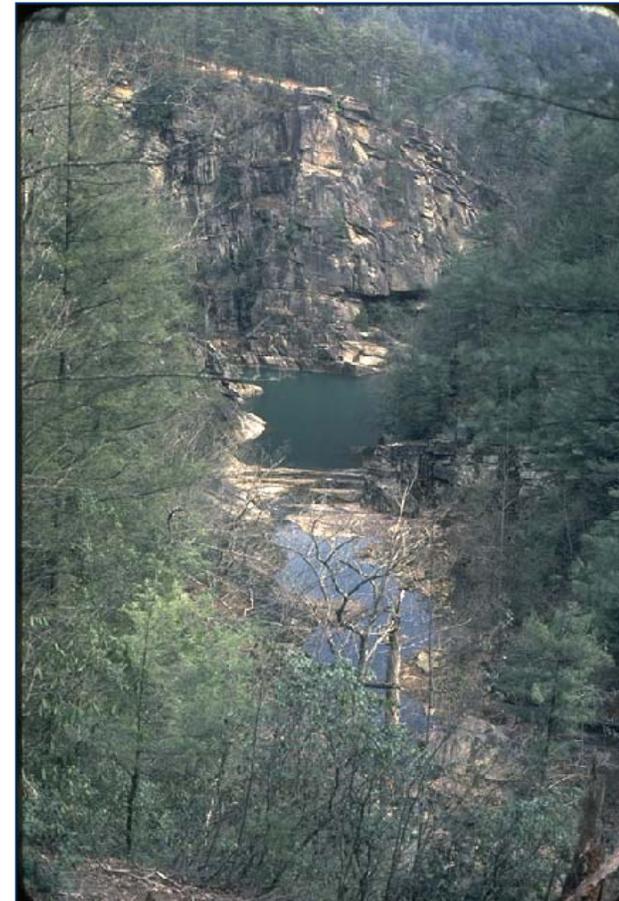
Advisory Committees

- ◆ Technical Advisory Committees
- ◆ Basin Advisory Committees
- ◆ Statewide Advisory Committee



Basic Elements

- ◆ Water quality and water quantity policy framework
- ◆ Sub-state planning guidance
 - “Hot-button” issues
 - Inter-basin Transfers of Water
 - Reservoirs
 - Watershed permitting
 - Water Conservation and Efficiency



Timeline for Plan Development



The Plan will have two major components:

- 1) A state policy framework addressing the four management objectives
- 2) Guidance for sub-state planning

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Water Conservation in Georgia

- ◆ The beneficial reduction in water use, water waste, and water loss
- ◆ Many Benefits:
 - Protect river flows and aquifer levels
 - Extend the life of existing supplies
 - Demonstrate responsible use of shared waters



Each gallon of reduced demand is the cheapest gallon of water available!

Costs: New Water Supply vs. Efficiency

Supply-side (new source development)

- ◆ New Ground or Surface water supplies
 - \$.75 – \$4 million per mgd + O&M
- ◆ Reuse supplies
 - \$1 – \$4 million per mgd + O&M
- ◆ Desalination
 - \$3 – \$6 million per mgd + O&M, pollution
 - O&M: \$250-\$3,000 per mg produced

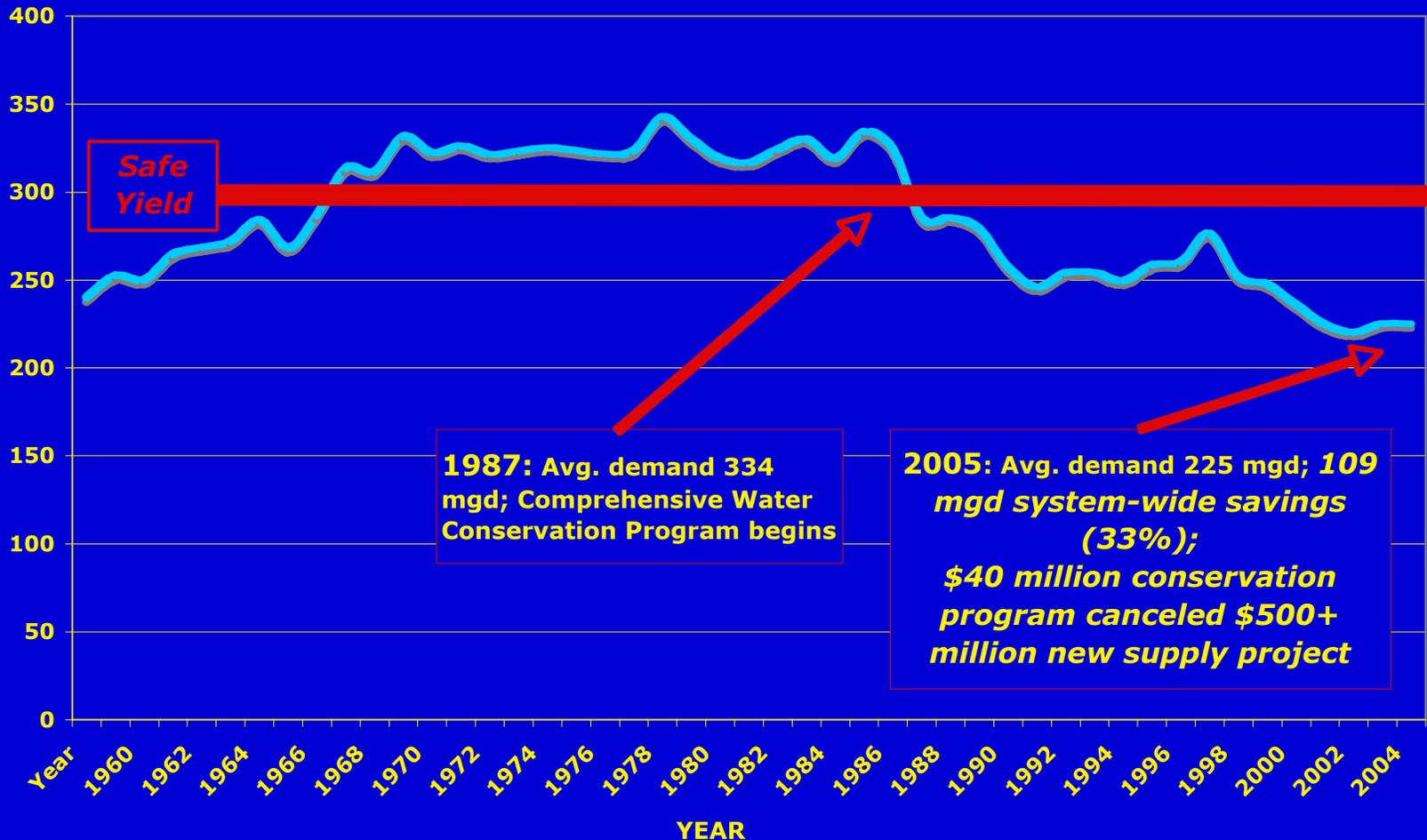
Demand-side (conservation)

- ◆ \$.25 - \$1.0 million per mgd
- ◆ \$0 : United States saved 6-9 bgd through provisions in the Energy Policy Act



Cloudland Canyon State Park, GA

Water Withdrawals in Metropolitan Boston, 1960 to 2005



Source: Massachusetts Water Resources Authority, 2006.

From Amy Vickers' presentation to Governor's Environmental Advisory Council July, 2006

Water Conservation Strategy

- ◆ Water conservation will be foundational in state plan
- ◆ As a supplement to statewide water plan
 - Developed by Multiple Agencies
 - Include information related to:
 - ◆ Practices for each use sector
 - ◆ State agency/government activities
 - ◆ Funding opportunities
 - ◆ Education/Outreach needs
 - Develop guidance for sectors
 - 2008: Public water providers



Water Conservation Goals

General goals that all water uses and sectors can achieve, to some degree

- ◆ Apply statewide
- ◆ Apply to all use sectors and users
- ◆ Not quantifiable – *yet*



Water Conservation Goals

- ◆ Build a conservation ethic through public education and outreach programs and the adoption of conservation-oriented rate structures;
- ◆ Reduce and, where possible, eliminate water loss and water waste;
- ◆ Optimize outdoor water efficiency;
- ◆ Maximize in-house and business efficiency; and
- ◆ Use reclaimed water as an alternative to new water supplies

Standard Conservation Practices

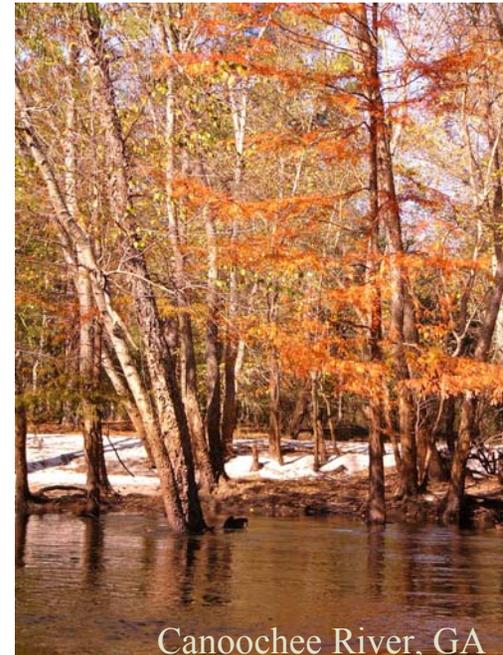
Sector-specific activities or management practices to help achieve conservation goals and minimize withdrawals

- ◆ 130 practices collected from around the country
- ◆ Technical team evaluation
 - Members include : ag, industry, municipal, landscape professionals
 - Conducted qualitative analysis to screen practices
 - Short list to stakeholder for feasibility assessment
- ◆ **RESULT: GA-specific and GA-adapted practices**

Year Ahead

Build stronger knowledge base

- Water usage
- Conservation evaluation
- Establish baseline information
- ◆ Begin with sound practices
 - Build on experience from other states
 - Adapt to new information
- ◆ Launch education campaign
- ◆ Identify state agency activities and initiative



Opportunities Ahead!

- ◆ What to expect:
 - Statewide policy framework – no new resource information
 - Continued strong public involvement
 - Learn from hard lessons
 - Strategic approach to sustain water resources
 - Efforts to build partnerships
- ◆ Get Involved!



WRD - Cloudland Canyon

Opportunities Ahead!

*Unique Opportunity to Establish
Comprehensive Water Management Plan!*

Web Information

Comprehensive Water Planning
www.georgiawaterplanning.org

Georgia Water Council homepage
www.georgiawatercouncil.org

Water Conservation in Georgia
www.conservewatergeorgia.net



Thanks for your Time - Questions?



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New Reality: Water conservation is not an option—it is an imperative

- ◆ Increasing total water demands, trends
 - Water-efficiency technologies growing
 - Resid. gpcd: indoor going down, outdoor going up
 - “Water-saving houses are...wasting water?” – WaterTechOnline, 6/20/06 (Sonoma, CA)
 - AWWARF study of 1200 N.A. homes:
 - 69 gpcd indoor water use (40%)
 - 103 gpcd outdoor water use (60%)