THE GOVERNOR'S WATER TASK FORCE AND THE GEORGIA WATER STEWARDSHIP ACT

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Abstract. On July 17, 2009, Judge Paul Magnuson issued a 95-page ruling that Lake Lanier was not authorized for water supply. Further, releases from Buford Dam could not occur for the sole purpose of meeting water supply needs downstream.

The judge ordered the litigation stayed for three years, allowing for Congressional action approving reallocation of storage in Lake Lanier. If July 17, 2012 arrives with no resolution of the issues, Judge Magnuson's order would compel Metro Atlanta water supply levels to revert to mid-1970s levels.

Governor's Water Task Force. Governor Sonny Perdue convened the Water Contingency Planning Task Force to look at all possible water supply options in the Metro area if the Magnuson decision stands. The Task Force developed a three-pronged water supply approach for the Metro area:

1. **CONSERVE** conservation and efficiency measures and reuse;
2. **CAPTURE** portions of the 50 average inches of rainfall within Georgia's borders; and
3. **CONTROL** over our water supply.

Georgia Water Stewardship Act (SB 370). As a result of the findings of the Task Force, Governor Perdue introduced SB 370 in the 2010 legislative session to implement water conservation recommendations and best management practices. The bill passed and was signed into law on June 1st, 2010. SB 370 recognizes two imminent needs:

1. To create a culture of water conservation in the State of Georgia; and
2. To plan for water supply enhancement during future extreme drought conditions and other water emergencies

Less than two years remain before Judge Magnuson's decision takes effect. But the work of the Governor's Water Task Force and the implementation of the Water Stewardship Act will make conservation a statewide priority, encourage efficient water system operation and promote innovative methods of meeting critical water needs across Georgia.

INTRODUCTION

On July 17, 2009, Judge Paul Magnuson issued a 95-page ruling that Lake Lanier was not built for water supply, based on its original Congressional authorization. In other words, Metro Atlanta and downstream communities could only make use of the water released "incidentally" by Buford Dam operations for water supply, and not by withdrawing water directly from Lake Lanier. Further, releases from Buford Dam could not occur for the sole purpose of meeting water supply needs downstream.

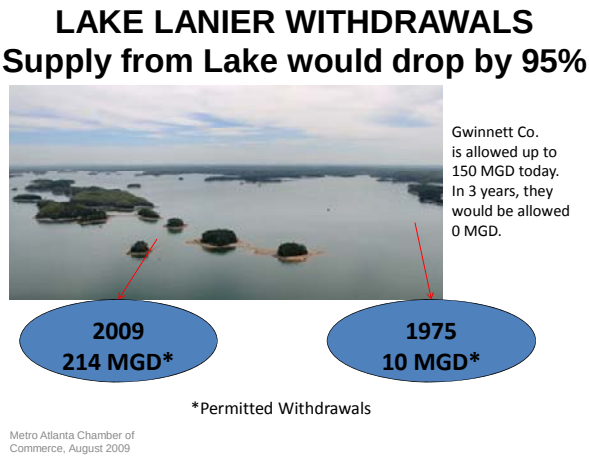

Figure 1. Lake Lanier and the Chattahoochee River downstream provide water supply to 60% of Metro Atlanta residents.

Although the US Army Corps of Engineers (Corps) and the states of Alabama, Georgia and Florida have been negotiating a resolution the interstate water issues for 20 years, numerous lawsuits pertaining to the Apalachicola-Chattahoochee-Flint (ACF) system were filed by the states and ultimately consolidated before Judge Magnuson. In the first phase of the consolidated ACF cases, Judge Magnuson determined that the lack of a Corps action to authorize additional Metro North Georgia water supply constituted a "de facto" reallocation of the storage in Lake Lanier. The Judge also found that current water supply levels exceed the Corps' discretionary authority and thus, Congressional approval is needed for the

Corps to meet existing water supply needs. Currently, water from Lake Lanier is managed for a variety of purposes, including its original purposes of hydroelectric power generation, flood control and navigation, as well as water supply, water quality, aquatic habitat maintenance and recreation.

The judge ordered the litigation stayed for three years, allowing for Congressional action approving reallocation of storage in Lake Lanier. The clock continues to move and will expire on July 17, 2012. If July 17, 2012 arrives with no resolution of the issues, Judge Magnuson's order would compel Metro water supply levels to revert to mid-1970s levels.

GOVERNOR'S WATER CONTINGENCY PLANNING TASK FORCE

Georgia Governor Sonny Perdue responded to the Magnuson order with a four-pronged strategy of:

1. Negotiation;
2. Reauthorization of Lake Lanier;
3. Appeal (filed April 2010 and accepted by the 11th Circuit Court of Appeals); and
4. Contingency Planning.

The Governor's Water Contingency Planning Task Force was formed in the fall of 2009 to address the fourth scenario. The Task Force was comprised of a cross-section of business leaders from all over Georgia and Chairs of Regional Water Planning Councils, assisted by a Technical Committee of Georgia's premier water engineering firms.

The intensive process that the Task Force's Technical Committee used in development and selection of options for the District's water supply included substantial pro bono effort contributed by numerous Georgia engineering firms and the Boston Consulting Group. The results provided a conceptual review of the array of water supply alternatives that would need to be considered should the Magnuson decision go forward.

Alternatives to Address Shortfall. No one knows exactly how the ruling would pan out, if it were to come to pass. But the best working interpretation of the ruling suggests that Gwinnett, Forsyth, and Hall counties – those heavily dependent on Lake Lanier for direct withdrawal of water - would be hit very hard. It also shows a total District deficit of approximately 280 million gallons per day (MGD), roughly the amount of water used by the City of Atlanta, Cobb and Gwinnett counties on an average day. The Task Force considered the 280 MGD total deficit, and evaluated how to meet that need.

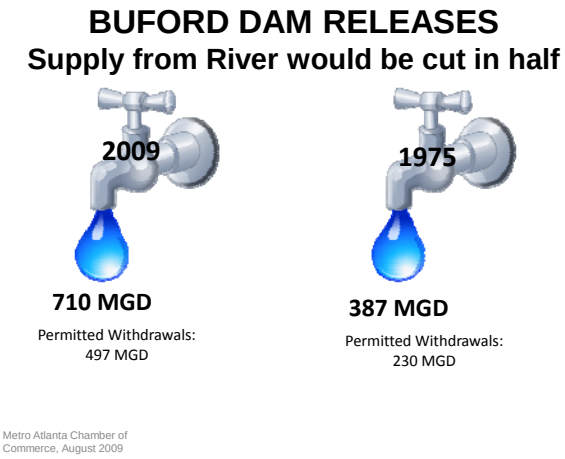

Figure 2.

A potential supply shortfall of this magnitude would have huge economic consequences, and it is important to put a numerical cost to inaction. Relevant economic studies that have examined economic costs of water supply shortfall suggest that the Magnuson decision could mean as much as $26 billion per year in lost business output, or about 10+% of gross domestic product (GDP) for Metro Atlanta. That does not include changes to residents' quality of life or property values. Furthermore, the Task Force did not factor in the impact to Georgia and the broader region, which would be even greater.

The Task Force developed a three-pronged approach to both short- and long-term water supply for the Metro area:

1. **CONSERVE** conservation and efficiency measures and reuse;
2. **CAPTURE** portions of the 50 average inches of rainfall that fall within Georgia's borders; and
3. **CONTROL** over our water supply.

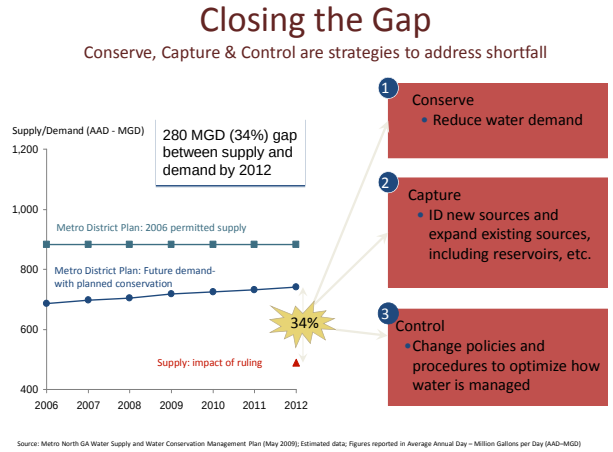

Figure 3.

The work of the Task Force showed that the average usage in Metro Atlanta for 2006, as reported in the Metro North Georgia Water Planning District Plan, is 151 gallons per capita per day. In fact, the District reduced its water consumption from 164 gallons per capita per day in 2003 to 151 in three short years. This confirms that progress has been made and continues to occur. The District's water consumption has actually dropped below the national average overall per capita water use, which is 160 gpcd. When compared with other agencies in the Southeast Region, Metro Atlanta water use is much lower than the average per capita usage in cities such as Columbia and Charlotte, overall usage across Alabama and on par with Florida. Recent Metro North Georgia Water Planning District data show the response by during the last drought, confirming that the current Metro water use efficiency is even better. With statewide water restrictions in place, per capita use in 2008 and 2009 dropped to 104 and 102 gallons per capita per day, respectively. These dramatic reductions are atypical, but the overall trend in water usage in the Metro North Georgia area is substantially downward.

Conservation is currently playing, and will continue to play, a major role for Metro Atlanta. Many conservation options are highly cost-efficient, in addition to being environmentally friendly. The Task Force considered 35 conservation measures, some of which were evaluated quantitatively and some of which were evaluated qualitatively. The measures were organized into six bundles, as follows:

1) Residential retrofits;
2) Sub-metering and water audits;
3) Commercial retrofits and process improvements;
4) Outdoor water usage reduction;
5) Localized water recycling capability; and
6) Enablers to encourage conservation.

These options are a necessary part of any solution, but alone they are insufficient. It is worth noting that Metro Atlanta, after considering the conservation savings in current plans *plus* those options recommended by the Task Force, would achieve efficiency levels comparable to leading metro areas (such as Portland, Oregon).

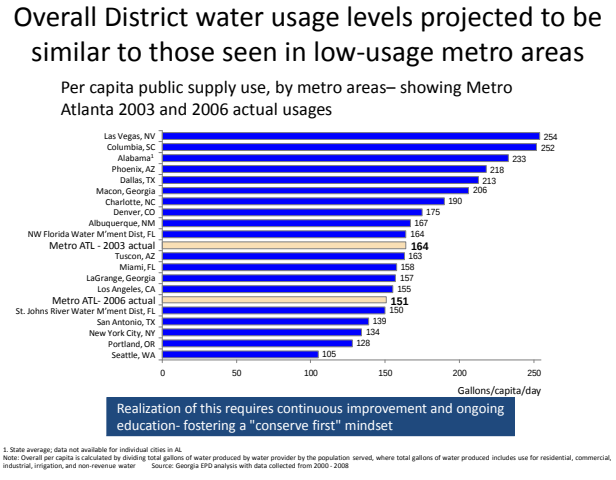

Figure 4.

Nonetheless, even aggressive conservation program, which could ultimately reduce per capita demand by another 10-15 percent, will not meet the potential supply shortfall by 2012. No new supply options would be available by 2012, and even conservation options take time: time for ramp up, adoption and behavior change. The Task Force did identify composite portfolios of solutions for both the 2015 and 2020 time horizons. By 2020, a number of supply options could potentially contribute to the solution. The low-cost 2020 portfolio would require approximately $2.3 Billion, still a huge expense, and its $410/MG cost efficiency is half the unit cost of the 2015 portfolio. The low-cost portfolio was the starting point to apply Task Force feedback and implementation feasibility considerations that allowed the development of the final or "alternate" 2020 portfolio.

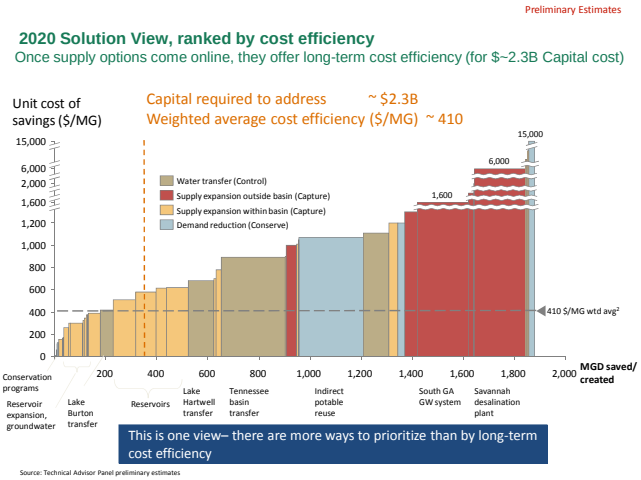

Figure 5. The Water Task force looked at a wide variety of potential measures to close the gap in supply potentially created by the Magnuson decision.

While there was not pure consensus, there is general agreement on a core set of conservation and capture options. These alternatives differ primarily on the mode of conservation and the mix of reservoir expansions vs. new builds.

Summary of Recommendations to the Governor. ***First,*** the Task Force recommended that efforts to pursue the reauthorization of Lake Lanier continue. As the Governor said, this is our best option, and all the Task Force analyses have reinforced that fact;

Second, the Task Force recommended expanded conservation efforts beyond those currently in motion. Of particular note, the Task Force recommended more aggressive leak abatement (with the savings level corresponding to approximately 10% loss rate for the Metro District) supported by mandatory loss audits and reporting.

Third, the Task Force recommended initiating the studies and permitting work in support of the 2015 Contingency Portfolio only if absolutely required. Based on the outlook for reauthorization and the ability to defer (thus avoiding pursuit of the 2015 Contingency Plan), the Task Force recommended initiating feasibility studies and permitting on capture options in the recommended 2020 Portfolio.

GEORGIA WATER STEWARDSHIP ACT (SB 370)

As a result of the findings of the Task Force, Governor Perdue introduced legislation in the 2010 session of the Georgia General Assembly to implement its "no regrets" recommendations with regard to water conservation and best management practices. The bill (SB 370) passed both houses by a wide margin and was signed into law on the shore of Lake Lanier on June 1st 2010. Its major components are summarized below.

Figure 6. Governor Perdue signed the Water Stewardship Act (SB 370) on the shores of Lake Lanier on June 1, 2010.

Recognition of Imminent Needs. SB 370 recognizes two imminent needs:

1. To create a culture of water conservation in the State of Georgia; and
2. To plan for water supply enhancement during future extreme drought conditions and other water emergencies.

State Agency Requirements. Seven state agencies, including the Georgia Department of Natural Resources (DNR) and its Environmental Protection Division (EPD) are required to identify the following before August 1, 2010:

- Opportunities to provide enhanced programming and incentives for voluntary water conservation in 14 specific areas
- Opportunities to enhance the state's water supply
- Establish programs and report progress annually for the next five years

Georgia DNR/EPD Requirements. The Board of Natural Resources is required to adopt rules by January 1, 2011 for minimum standards and best practices for public water systems to improve water conservation in five areas:

- Public Water Systems serving >10,000 individuals conduct a water loss audit by January 1, 2012;
- All Public Water Systems shall conduct a water loss audit by January 1, 2013;
- Political subdivisions may impose more stringent water restrictions than those imposed by the state by application to EPD with "good cause;"
- Outdoor irrigation restricted to 4 p.m. to 10 a.m. (exceptions specified); and
- Political subdivisions may apply for exemptions from water restrictions imposed by the state by application to EPD with "good cause."

Agricultural Permitting. Both surface water and ground water withdrawal statutes are amended to add a system of categories to be classified as:

- Active - acted upon and used for lawful purposes
- Inactive - permittee has requested inactive status to retain ownership for possible future use or reuse in unmodified condition
- Unused - permit has never been used for allowable purposes; expires after two years unless changed to active or inactive; may not be transferred or assigned

Submetering. Multifamily building owners are specifically allowed to use submetering (measuring individual units' water and wastewater use and charging separately

for that use); and all new multiunit residential buildings permitted on or after July 1, 2012 shall be submetered.

Water Conserving Fixtures. SB 370 requires high-efficiency plumbing fixtures in all new construction permitted on or after July 1, 2012, as follows:

- 1.28 gallons per flush toilets
- 2.5 gallons per minute (gpm)at 60 pounds per square inch (psi) shower heads
- 0.5 gallon per flush urinals
- 1.5 gpm at 60 psi lavatory faucets
- 2.0 gpm kitchen faucets

Building Heat Removal. High-efficiency cooling towers will be required in new construction permitted on or after July 1, 2012.

Joint Committee on Water Supply. SB 370 creates a legislative committee of ten members, including five members of the House of Representatives and five members of the Senate. The House and Senate Natural Resources and the Environment Committee chairpersons are to serve as co-chairpersons of the joint committee.

The committee is required to study and analyze the state's reservoir system and strategic needs for additional water supply, including the identification of creative financing options for reservoirs and other opportunities for water supply enhancement. The committee prepared a report with findings and recommendations by December 31, 2010, after which time it was to be dissolved. Recently, Senate Natural Resources Committee Chairman Ross Tolleson petitioned to have the Joint Committee's tenure extended for another year.

CONCLUSION

At the date of this writing, less than two years remain before Judge Magnuson's decision takes effect. Only time will tell if some or all of the water supply issues facing the Metro area are resolved. But the work of the Governor's Water Task Force, and the implementation of portions of its recommendations through the Water Stewardship Act, will make conservation a statewide priority, encourage efficient water system operation and promote innovative methods of meeting critical water needs across Georgia.

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