



LAKE LANIER ASSOCIATION, INC.

a 501(c)3 nonprofit organization

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August 21, 2013

Senator William Nelson and Senator Marco Rubio
Subcommittee on Oceans, Atmosphere, Fisheries & Coast Guard
Senate Commerce Committee
SH-425
Washington, DC 20510

Attn: Jeff Lewis, Majority Staff and Kelly Pennington, Minority Staff

Dear Senators Nelson and Rubio:

The Lake Lanier Association, a 3400 member organization has been an advocate for the health and safety of Lake Lanier for over 45 years. We have been a significant voice in the water wars between the states of Georgia, Florida and Alabama for the past 20 years. Additionally, we have been an active participant with the ACF Stakeholders (ACFS) organization since its inception in 2008. Our commitment to that organization is based on the belief that a technical understanding of the ACF basin is critical to making water policy decisions regarding the equitable sharing of water.

It is with significant concern that we observed the special Senate hearing last week and the announcement by Florida Governor Scott that Florida will initiate another law suit to try and take more water from Georgia to support the Apalachicola Bay. We feel that several facts represented in the referenced meeting were provided in error. North Georgia and Atlanta have been unjustly vilified by statements reported from the meeting.

Attached is a report that identifies many of the issues that were not described during the senate meeting. Specifically:

1. There are many contributors to the problems of the oyster industry; many of them the responsibility of the state of Florida.
2. If Atlanta did not exist and therefore did not use any water, the resulting increase in water flow into the Apalachicola bay would be minimal (not even a 2% increase).

3. The recent drought of 2007–2008 was devastating to most stakeholders on the ACF system, not just the oyster industry.
4. North Georgia has implemented many effective conservation strategies over the past 8 years that have resulted in a per capita water usage reduction of approximately 20%.
5. Numerous Georgia municipalities, corporations, and organizations have been working towards a solution to the problems of the Apalachicola Bay and the entire ACF system. As an example, the ACF Stakeholders group is developing computer models that will assist in the management of the water flowing through the system.

We hope that the facts described in the attached report will provide a needed balance to the data presented at the senate meeting.

Respectfully submitted



Val Perry
President



Wilton Rooks
Executive Vice President

Report from the Lake Lanier Association, Inc.

To

Senator William Nelson and Senator Marco Rubio

In conjunction with

The Hearing of the Senate Committee on Commerce, Science & Transportation:

Effects of Water Flows on Apalachicola Bay

Apalachicola, Florida

August 21, 2013

The Lake Lanier area knows first-hand the devastating impact that prolonged drought periods can have on economic factors. During the drought of 2006 - 2008 when Lake Lanier reached its lowest recorded point in its 50 year history, the lake economy lost over a 1,000 jobs and suffered a \$90 million loss in economic productivity. That was 30% of the annual contribution of the lake to the north metro Atlanta economy. So it is not without a level of empathy that we view the oyster industry collapse in 2012. However, we urge the review of all of the factors that have resulted in the collapse before a 'rush to judgment' on the causes.

As Dr. Carl Havens of the University of Florida based Oyster Recovery Task Force reported at the hearing, the accumulative impact of multiple years of drought is a major factor in the collapse of the oyster industry. During the devastating drought of 2006 – 2008, 50% of the water above the conservation level in the federal reservoirs on the Chattahoochee River, including Lake Lanier, was discharged into the Apalachicola River in order to meet the minimum required flow of 5,000 cfs. That amounted to over 200 billion gallons of water over the 2 year time period. Except for the fact that it started raining in January 2008, even more would have been discharged with the inevitable collapse of the entire reservoir system with an impact on the health of over 5 million people in the Georgia part of the ACF Basin. There are no provisions in the operation of the Corps of Engineers reservoirs to avoid such a catastrophic occurrence. Apalachicola would have been in even worse shape if there were no water left to discharge.

The conclusion has to be drawn from this event that the reservoirs served their purpose and that there was 'shared pain' among all of the water users in the basin.



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The recurring droughts since 2008 have only further illustrated the need to store water when it is available in the reservoirs so that they can serve their intended purpose in the basin during severe droughts. Unfortunately NOAA is not able to predict the severity of a drought with sufficient clarity in order for the Corps to store even more water when it is available in anticipation of a severe drought. The result is that millions of gallons of water that could be stored are discharged from the reservoirs during conditions that do not require such discharges to meet the downstream user's requirements, including the Apalachicola Bay.

Oyster Collapse Causes

In addition to the drought, Dr. Havens and Mr. Shannon Hatsfield referred to the poor oyster bed re-shelling project performed by the Florida Department of Agriculture and Consumer Services (DACS) over the last several years. Further, even Governor Scott in his public statement regarding the intended lawsuit to be filed by Florida against Georgia referred to the over harvesting in the bay subsequent to the BP oil spill as a contributing factor as did the oyster community in Apalachicola.

All of these factors that contributed to the collapse of the oyster economy in the bay are well documented in the work of the Oyster Recovery Task Force.

Atlanta's Consumptive Use of Water

There is also well documented data available now that metro Atlanta's consumptive use of water (withdrawals minus returns) amounts to less than 1% of the total flow of the ACF Basin during an average year and only 2% - 3% during even the worst droughts. Too often only the withdrawals are quoted are "gross withdrawals", which disregards the estimated 70% in reclaimed water that metro Atlanta returns to the both the Chattahoochee and Flint Basins. In reality, our inability to track 'lost' water leads to even an over estimation of the net consumption.

Water that is supposedly 'consumed' in the past will eventually find its way back into the surface water system since Atlanta is built on granite and has no significant ground water storage. So we have water re-entering the surface water system today that was counted as consumed some months or years ago through septic tank discharges and leaks in water utility pipes. Water does not disappear. It simply finds different paths to flow to its ultimate destiny; rivers and then to the oceans. The only water really unrecoverable over time to the ACF Basin, and ultimately to Apalachicola, consists of the inter-basin transfers of water to the Atlantic Ocean and that absorbed by plants in the transpiration process and through evaporation. And of course, even the evaporation returns to the surface water systems in the form of rain but sometimes in different water basins.

The uncertainties associated with much of the interaction of precipitation with surface water and ground water systems leads to engineering assumptions of the most conservative nature since it is difficult and un-wise to establish water policy based on un-verifiable data. For example, water withdrawn from water utilities by homes and then discharged into septic tanks is considered 100% consumed. We know that is not accurate. We just don't know what the correct amount is for a short



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time return estimate. That the 'grass is always greener over the septic tank' certainly attests to some amount of that water being caught up in transpiration. But a significant, but unknown, amount flows through the ground and eventually into surface water systems. And of course, the geology of the area impacts the time for migration of the water, leading to even further uncertainties.

While it is convenient to identify a 'bogey-man' as the main causative element in a complex environment, the hard data just does not support the conclusion that metro Atlanta deserves that label. There has been analysis done that suggests that if Atlanta did not exist, there would be even less water flowing into the ACF basin since there would be even greater transpiration of water into vegetation. A major city's impervious surface does have the benefit of rapidly flowing precipitation back to surface waters. We don't suggest that as a long term viable 'solution' for the 20,000 square miles on the ACF watershed, just pointing out that this is a complex issue and does not succumb to sound-bite explanations often preferred by the media.

Atlanta's Conservation Efforts

At the hearing, much was said regarding Atlanta's efforts – or lack thereof – at conservation of water. Those perceptions just do not match reality. Since its beginning by the state legislation in 2001, the Metropolitan North Georgia Water Planning District, has established tough conservation practices for 91 municipalities and 15 counties, which coincidentally is the largest metro area water planning district in the United States. These practices have led to results such as:

- Metro Atlanta's total water consumption has dropped by approximately 15% over the same years that its population has increased by over three-quarters of a million people.
- Metro Atlanta's water consumption tiered water rate plan is among the highest in the nation thereby encouraging voluntary conservation by home owners and businesses.
- Atlanta's per capita water withdrawal demand has dropped from around 170 gallons per day per person (gpdcd) in 2000 to an estimated 145 gpdcd currently and a projected 135 gpdcd in 2035. With the exception of Seattle Washington and Portland Oregon, this is lower than any other major municipal area in the United States. Even this does not take into consideration the amount of water returned to the ACF Basin but is the basis for comparison among other municipalities.

To further illustrate the ongoing conservation program for Atlanta, the following is taken from the MNGWPD Water Supply and Water Conservation Management Plan dated May 2009 as amended:

WATER CONSERVATION PROGRAM

Water conservation is a critical element in meeting the water supply needs within the Metro Water District. When fully implemented, these water conservation measures will reduce the Metro Water District's water demand by the end of the planning period. Much progress related to water conservation has been achieved since the adoption of the 2003 Water Supply and



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Water Conservation Management Plan. The Metro Water District's plan has been instrumental in making water conservation a priority in north Georgia. The Metro Water District is the only major metropolitan area in the country with more than 100 jurisdictions that is implementing such a comprehensive long-term water conservation program that is required and enforced. Tiered water conservation rates have been put in place throughout the Metro Water District. All of the largest water systems have implemented programs to reduce system water loss. Toilet rebate programs are in place and ahead of schedule. The water conservation measures in this Plan update include and go beyond the measures in the 2003 Plan. This update includes:

- The 10 water conservation measures from the 2003 plan
 - Conservation pricing
 - Replace older, inefficient plumbing fixtures
 - Pre-rinse spray valve retrofit education program
 - Rain sensor shut-off switches on new irrigation systems
 - Sub-meters in new multi-family buildings
 - Assess and reduce water system leakage
 - Conduct residential water audits
 - Distribute low-flow retrofit kits to residential users
 - Conduct commercial water audits
 - Implement education and public awareness plan
- 3 of those 10 water conservation measures are strengthened
 - Irrigation meter pricing at 200 percent of the first tier rate
 - 1.28 gpf toilet rebate program only by 2014
 - Minimum local education requirements and optional toolbox of examples is provided.
- 2 new water conservation measures are added
 - Install 1.28 gpf toilets and low flow urinals in government buildings
 - Require new car washes to recycle water.



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New measures adopted since 2009: *expedited water loss reduction; *multi-family high-efficiency toilet (HET) rebates; *meters with point of use leak detection; *private fire lines to be metered; *maintain a water conservation program; water waste policy or ordinance; and HET plumbing fixtures in new construction consistent with state legislation.

Measures denoted () are for implementation only by the water systems that receive their water supply directly from Lake Lanier or the Chattahoochee River.*

Apalachicola Bay Salinity

The work of the University of Florida based Oyster Recovery Task Force and the Apalachicola National Estuarine Research Reserve to focus on salinity data in the Apalachicola Bay has established a wealth of knowledge regarding the productivity of oysters. But in spite of all of the collected data and empirical evidence as to what conditions are optimum for oyster productivity, there are still many questions. There are several bay salinity models that have been developed and run to correlate fresh water flow with salinity in the bay. These models include other factors such as temperature, wind, and tidal conditions that determine the salinity profile in the bay at any given time. Fresh water flow is obviously an important factor and might be the only factor than can be influenced by man. However, much greater analysis must be done to better understand the duration and volume of fresh water that is optimum for oysters.

Oysters have survived for millennia under widely varying hydrologic conditions. For time periods before our own data collection began, tree ring data shows clear periods of greatly reduced fresh water flow in the ACF Basin that predate virtually any anthropogenic influences in the basin. Yet oysters have survived during those time periods. At the hearing there was considerable discussion about ‘man creating the problem’ so ‘man can solve the problem’. While a useful sound-bite to illustrate an emotional point, it misses the point. Today, the criterion is not just the survivability of oysters but their survivability at a sustained level to produce a specific economic result. At the hearing, the majority of the talk by all parties was economic related. This is clearly not an environmentally driven issue, but is an economy driven issue.

Economic Realities

All economies suffer during droughts. How the ‘pain’ gets proportionally shared will always be a challenge to assess. But it should be clear that during the periods of drought that we have had since 2000 and the projected periods of increasing drought frequencies and duration, all water users have to learn to adjust to that reality. Some economic plans might not be viable given the projected future.

Past Decisions

In the name of economic development, several decisions in the past now confront Apalachicola Bay with some unintended consequence:



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- The decision was made to cut a path, known as Sikes Cut, through St. Georges Island so that fishing boats and shrimpers would not have to travel so far to gain access to open waters in the Gulf. This has led to another source of salt water penetration directly into the bay, thereby changing the salinity regime in the bay. Questions exist as to how much influence Sikes Cut has had on bay salinity. That can be determined through appropriate modeling efforts now underway. But oystermen have reported that it does have an effect. If we want to get back to what nature intended as emphasized by the speakers at the hearing, then Sikes Cut should be closed.
- There have been artificial oyster beds put into Apalachicola Bay to increase oyster productivity. These are not 'as nature intended'. They are man-made. Should the criterion for bay health and productivity include the oyster harvest gathered from these artificial beds? How much more fresh water flow is required to support these artificial beds?
- There is a canal that is effectively an inter-basin transfer from the Apalachicola River system to Port St. Joe, Florida. Originally it was to support the paper mill industry, but now targeted to provide fresh water flow for economic development purposes in Port St. Joe. While a small amount currently, it nonetheless represents a diversion of fresh water from the bay that has to be made up by increased fresh water flows from the Georgia portions of the ACF Basin. The future plans for that diversion is now known.
- Outside of the bay, Florida has modified the Apalachicola River significantly so as to allow for a navigation economy that could not be sustained without alterations. The dredging of the river, straightening of the ox-bows, annual dredging of the Chipola Cutoff are some of the alterations that have taken place. According to a USGS report in 2006 by Helen Light, the entrenchment that has occurred in the river has resulted in a 50% increase in fresh water flow to reach the floodplain alongside the river. While seemingly unrelated to the oyster productivity in the Bay, it nonetheless serves as an example of alterations to the natural systems that have been performed by Florida over the years, to their own detriment; all in the name of economic development.

WRDA Modifications

Florida and Alabama's effort to insert a 'poison pill' in the Water Resource Development Act in the Senate by reducing the allowable water supply allocation by 2/3 was clearly an effort to cripple the Atlanta economy. This would have resulted in water withdrawals even lower than is currently withdrawn by Atlanta and with no allowance for returns. Atlanta's only recourse would have been to invest billions in new water storage resources. The theory seems to be that if Atlanta can't grow then maybe Alabama and Florida cities can grow. Hardly a basis for establishing a desire to work together to solve the water conflict. Georgia Senators were derided for using approved Senate procedures to block the action that would have impacted not only the ACF Basin but any water utility withdrawing water from federal projects for water supply purposes throughout the United States.



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Summary

We hope that the take-away points from this report are clear:

1. If metro Atlanta did not exist, Apalachicola Bay would have only a few hundred cubic feet per second flow increase which is insignificant compared to even the 5,000 cfs minimum required flow during droughts and certainly when compared to the nominal annual average flow of 20,000 cfs and more.
2. 'Something' caused a sudden collapse of the oyster population in August – September of 2012. Research is needed to determine what happened in such a short time period.
3. Through the ACF Stakeholders organization, Georgia and metro Atlanta governments, companies, organizations and individuals have a clear and unambiguous track record of working to assist Apalachicola Bay. But it cannot do so under the threat of either Congressional or legal action that will cripple the Atlanta economy.
4. Our water policy decisions by state and federal officials at all levels needs to be based on sound technical understandings rather than emotional outpourings.

Respectfully submitted

Lake Lanier Association, Inc.

