January 29, 2016

Via U.S. Mail and Electronic Mail
Colonel Jon J. Chytka
District Commander
Mobile District, U.S. Army Corps of Engineers
P.O. Box 2288
Mobile, Alabama 36628

Re: Apalachicola-Chattahoochee-Flint River Basin
Water Control Manual and Draft Environmental Impact Statement (October 2015)
COMMENTS OF THE STATE OF GEORGIA

Dear Colonel Chytka:


I. Introduction

Waters within the ACF Basin are critical to the environmental, economic, and social well-being of the citizens of the State of Georgia. The ACF Basin encompasses 20,000 square miles. Approximately 74% of the drainage area of the ACF Basin is in Georgia (15% is in Alabama, and 11% is in Florida), and the ACF Basin covers 50 counties in Georgia (eight in Florida and ten in Alabama). Approximately 72% of the Basin’s population resides in Georgia. The State of Georgia’s economic output exceeds $400 billion, with metro Atlanta accounting for $270 billion of that amount.
The main stems of the Apalachicola, Chattahoochee, and Flint Rivers house 16 projects (five federal and 11 non-federal). Uses for the rivers and impoundments within the ACF Basin include water supply, hydropower generation, recreation, flood control, agriculture, and environmental amenities and protection, among others. Water supply is a particularly critical function of the rivers and impoundments within the ACF Basin. The population of metro Atlanta (nearly 5.5 million) derives approximately 73% of its water supply from Lake Lanier and the Chattahoochee River. The population of Gwinnett County (approximately 860,000) relies entirely on withdrawals from Lake Lanier. Counties that rely on Lake Lanier for water supply comprise the majority of the population for the Atlanta Metropolitan Statistical Area (“MSA”) which, according to the U.S. Census Bureau, is the ninth largest MSA by population in the United States. From 2000 to 2010, the Atlanta MSA grew by 24%, a growth rate exceeded by only two other MSA’s in the United States.

Because the ACF Basin is critical to Georgia, commenting throughout the WCM update process has also been critical to Georgia. On January 14, 2013, Georgia submitted comments on the Corps Scoping Memorandum for the Draft EIS for the ACF Basin. Letter from Judson Turner, Director, Georgia Environmental Protection Division, to Tetra-Tech, Inc., regarding State of Georgia’s comments on the ACF WCM scoping (Jan. 14, 2013) (“Georgia Scoping Comments,” Exhibit A). As the Georgia Scoping Comments made clear, in addition to evaluation of Georgia’s water supply request (then an estimated 408 mgd from the Chattahoochee River and 297 mgd by direct withdrawal from Lake Lanier), the Draft EIS must fully and completely evaluate the economic, environmental, and social impacts of failing to supply those requested amounts, as well as the economic, environmental, and social impacts of the alternatives that Georgia will be forced to implement if the requested amounts are not available.

At about the same time, on January 11, 2013, the State of Georgia submitted an updated water supply request, providing its estimate of water supply needs from the ACF Basin. Letter from Nathan
Deal, Governor, State of Georgia, to Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works, regarding State of Georgia’s Water Supply Request (Jan. 11, 2013) (the “2013 Request,” Exhibit B). It is the 2013 Request upon which the Corps based its analysis in the DEIS, although for the reasons stated below, the 2013 Request has been updated by a December 4, 2015 request. Letter from Judson Turner, Director, Georgia Environmental Protection Division, to Col. Jon Chytka, District Commander, Mobile District, U.S. Army Corps of Engineers, regarding State of Georgia’s Water Supply Request (Dec. 4, 2015) (the “2015 Request,” Exhibit C).

In February 2014, the Corps asked Georgia for further information on water supply alternatives, particularly those measures identified by the Governor’s Water Contingency Task Force. In response to this request, on May 30, 2014, Georgia provided the Corps with an analysis of the extent of potential alternatives to increased withdrawals from Lake Lanier. Letter from Judson Turner, Director, Georgia Environmental Protection Division, to Col. Jon Chytka, District Commander, Mobile District, U.S. Army Corps of Engineers, providing additional information on 2013 Request (May 30, 2014) (the “Georgia Alternatives Analysis,” Exhibit D). As that analysis made clear, Lake Lanier is by far the most cost-effective and environmentally protective alternative for the supply of water to those metro governments located around and in proximity to it.

In 2015, after submitting the Georgia Alternatives Analysis, the State received revised population projections and updated per capita water use figures. As a result, Georgia submitted the 2015 Request to the Corps. The 2015 Request reduces the request for withdrawals from Lake Lanier to 242 mgd (down from 297 mgd) and from the Chattahoochee River to 355 to 379 mgd (down from 408 mgd). The effect of the 2015 Request is discussed below.

The revised estimates were based, in part, on the success of Georgia’s water conservation initiatives. Recognizing both the critical nature of water supply to the economy of Georgia and the
limited availability of that resource, the State has implemented one of the most aggressive and effective water conservation programs in the country. Consequently, per capita water use declined 30 percent from 2000 to 2015, and total water consumption within the metro Atlanta area declined over 10 percent despite a 20 percent increase in population. The Final EIS, including the WSSAR, should address and respond to the 2015 Request as it contains the most recent and best available water use information.

In the sections that follow, Georgia details two areas that the Corps should address in the Final EIS and WCM. First, Georgia discusses the water supply considerations of the DEIS, including the WSSAR. As is shown below, the Corps can fully meet the 2015 Request because the impacts of the 2015 Request are nearly identical to those the Corps has deemed acceptable in the Proposed Action Alternative (Alternative 7H) (“PAA”). In doing so, the Corps will be abiding by the mandate of the Eleventh Circuit decision. See In re MDL-1824 Tri-State Water Rights Litigation, 644 F.3d 1160 (11th Cir. 2011) (per curiam), cert. denied 133 S. Ct. 25 (2012). Second, the State addresses several areas of the ACF Basin’s proposed water management operations that the Corps should address, including lowering flows at Peachtree Creek during the winter months, modifying its approach to navigation, addressing winter draw-down at West Point Lake, re-evaluating Lake Lanier elevation requirements, using updated information in its Endangered Species analysis, reporting the totality of returns, and properly projecting the effect of conservation measures.

II. The Corps Should Revise the WCM to Provide for Water Supply in the Full Amount of Georgia’s 2015 Request.

A. The Corps has the Legal Authority and Factual Basis to Grant All of Georgia’s 2015 Request.

The DEIS was prepared, in part, in response to Georgia’s 2013 Request. Since that Request was submitted, the Metropolitan North Georgia Water Planning District (“Metro District”), as part of its regular planning process, has updated its water supply projections based on 2015 population and
employment forecasts and recent water use data. In light of these updated numbers, over the weeks and months leading up to the DEIS, the State and Metro District provided information and data to the Corps indicating that the 2013 Request was outdated and would be updated with new, and substantially reduced, demand figures. On December 4, 2015, Georgia submitted the 2015 Request, updating the 2013 Request, extending the planning horizon through the year 2050, and reducing the projected water supply demands.

The 2015 Request reduces the requested amount of water from Lake Lanier from 297 mgd to 242 mgd, and from the Chattahoochee River from 408 mgd to between 355 and 379 mgd. The withdrawals from the River are authorized pursuant to the River and Harbor Act of 1946, Pub. L. No. 79-525 (RHA), thus no contracts with the Corps will be necessary. The Corps has determined that withdrawals from the Lake will occur pursuant to allocations made under the Water Supply Act of 1958, 43 U.S.C. § 390b (“WSA”). Of the total 242 mgd requested from the Lake, however, the Corps is only required to allocate 218.7 mgd to new contracts (208.7 mgd under the WSA and 10 mgd for Gwinnett County under the 1956 Act, Pub. L. No. 84-841). The remaining 23.3 mgd will be provided under the existing relocation contracts for the City of Gainesville and City of Buford.¹

The Corps has both the legal authority and the factual basis to issue a WCM that provides for withdrawals fully meeting the 2015 Request. There are several reasons for this conclusion. First, the Corps has the legal authority to grant the 2015 Request. The question of whether water supply is an authorized purpose of the Buford Project has been litigated and decided. In its 2011 order, the Eleventh Circuit stated that “[t]he language of the RHA clearly indicates that water supply was an authorized purpose of the Buford Project.” Tri-State Water Rights Litigation, 644 F.3d at 1192. The court further

¹ The City of Buford’s relocation contract is for 2 mgd. The City of Gainesville’s relocation provides for up to “8,000,000 gallons of water per day from Buford Dam and Reservoir” which has been historically interpreted to mean a net withdrawal of 8 mgd. As provided for in a Supplement to the Relocation Contract, upon execution of a new storage contract, this 8 mgd net withdrawal will become 21.3 mgd.
concluded “that water supply was an authorized purpose of the RHA and that the RHA authorized the Corps to allocate storage in Lake Lanier for water supply storage.” *Id.* In that same opinion, the Court ordered the Corps to reconsider its denial of Georgia’s then-current 2000 water supply request (the “2000 Request”) and provide a timely response.

In response to the Eleventh Circuit’s mandate, the Corps prepared a memorandum outlining its authority to grant Georgia’s 2000 Request. *See* Memorandum from Earl Stockdale, Chief Counsel, U.S. Army Corps of Engineers, for the Chief of Engineers regarding Authority to Provide for Municipal and Industrial Water Supply from the Buford Dam/Lake Lanier Project, Georgia (June 25, 2012) (‘‘Stockdale III,’’ *Exhibit E*). Stockdale III concluded that “the Corps has the legal authority under the relevant statutes to accommodate Georgia’s request.” *Id.* at 5. The Corps determined it has this authority because:

> [I]f the Corps were to change its operations of the ACF system to accommodate Georgia’s [2000 Request], the changes would not be major, and they would not result in serious effects to project purposes systemwide. In fact, the system would be operated in the manner that Congress expected, to achieve all authorized purposes, and the overall hydropower benefits afforded by those operations would exceed the benefits that Congress anticipated when it authorized the ACF plan of development more than 65 years ago.

*Id.* at 42.

Second, the water supply quantities in the 2015 Request are well within the bounds of the analysis already undertaken by the Corps in the DEIS. The PAA in the DEIS provides a total of 633 mgd of water, including 185 mgd from Lake Lanier, 40 mgd from a potential Glades Reservoir, and 408 mgd from the Chattahoochee River. *DEIS* at 6-193, 6-194. Other options considered by the Corps used water withdrawal quantities both higher and lower than those specified in the PAA. Thus, the 2015 Request fits within the range of options considered by the Corps in the DEIS, as shown in the table below:
<table>
<thead>
<tr>
<th>Low Value Considered By Corps</th>
<th>High Value Considered By Corps</th>
<th>PAA (Option 7H)</th>
<th>Georgia 2015 Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Lanier Withdrawals</td>
<td>20 mgd (Options B and C*)</td>
<td>297 mgd (Options D, F, and G)</td>
<td>225 mgd**</td>
</tr>
<tr>
<td>Chattahoochee River Withdrawals</td>
<td>277 mgd (Options A and B)</td>
<td>408 mgd (Options C,D,E,F,G, and H)</td>
<td>408 mgd</td>
</tr>
</tbody>
</table>

From DEIS Table 5.1-2 at 5-8, and 2015 Request.
* Plus withdrawals of 40 mgd from a potential Glades Reservoir
** Including a withdrawal of 40 mgd from a potential Glades Reservoir

Third, as detailed below in Section II.B, given the volumes specified in the 2015 Request, granting the entire 2015 Request produces nearly identical effects on ACF Basin operations as those accepted by the Corps in the PAA. See Memorandum from Wei Zeng, Ph.D., Manager, Hydrology Unit, Georgia Environmental Protection Division, to Judson Turner, Director, Georgia Environmental Protection Division, regarding Technical Evaluation of Georgia’s 2015 Update Water Supply Request and Comments on the Army Corps of Engineers Apalachicola-Chattahoochee-Flint (ACF) River Basin Water Control Manual Draft Environmental Impact Statement (Jan. 29, 2016) (“Zeng Memorandum, Exhibit F). For example, the PAA modeled impacts with total withdrawals (Lake Lanier and Chattahoochee River) at 633 mgd and determined that the PAA created no consequences that would foreclose its selection. Although the lake-versus-river distribution of the withdrawals under the 2015 Request is somewhat different than that specified under the PAA, the total withdrawal amounts under the 2015 Request is actually 12 mgd less than the withdrawal evaluated in the DEIS under the PAA. This is all the more true if the Corps’ analysis addresses other water management issues identified herein. Put another way, because the Corps determined a total withdrawal of 633 mgd in the PAA would not have

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2 In addition to impacts considered in the DEIS, there is virtually no impact on flow at Columbus under 2015 Request modelling. See Zeng Memorandum at 8.
unacceptable adverse effects, the Corps should be able to determine that it can satisfy the State’s 2015 Request for less water.

**B. The Corps has No Rational Basis to Grant the PAA Instead of the 2015 Request.**

The Corps chose the PAA, including a total of 225 mgd from upstream of Buford Dam (185 mgd from Lake Lanier and 40 mgd from Glades), over the other alternatives evaluated in the DEIS. Because the PAA and the 2015 Request are strikingly similar and produce strikingly similar impacts, there is no rational basis for the Corps to agree to the PAA but not the 2015 Request. The 2015 Request and the PAA present comparably in terms of the total withdrawal amount sought, total returns projected, total consumptive use, and even distribution of the withdrawal, return and consumptive uses. See Zeng Memorandum at 3, Table 3. With respect to the area upstream of Buford Dam, the PAA allows for a net withdrawal of 134 mgd (225 mgd gross withdrawal and 91 mgd return rate). The 2015 Request contains a net withdrawal from the Lake of 137.4 mgd (242 mgd gross withdrawal and 104.6 mgd return rate). Id. The delta between what the Corps has approved in the PAA upstream of Buford Dam and the 2015 Request is a mere 3.4 mgd net and 17 mgd gross withdrawal. Because the small amount of additional water from upstream of Buford Dam in the 2015 Request does not negatively affect any project purposes or create any additional environmental impacts, the Corps must grant the entirety of the 2015 Request.

In order to evaluate the impacts of the 2015 Request, the State compared the 2015 Request to the PAA in two different scenarios, both focusing on different record drought data. In the first, the State compared the PAA to the 2015 Request using relevant 2011 withdrawal data (the “2011 Comparison”) instead of the withdrawal data relied on in the DEIS, referring to each as PAA’ and Scenario C, respectively. Zeng Memorandum at 4-5. The epicenter of the 2011 drought was the lower portion of the ACF Basin and resulted in the highest agricultural water use on record. In the second scenario, the State compared the PAA to the 2015 Request using the same withdrawal data as the Corps relied upon in the
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DEIS, including 2007 municipal and industrial (M&I) withdrawal data (the “2007 Comparison”), referring to each as PAA and Scenario D, respectively. Zeng Memorandum at 5. The 2007 drought had the greatest effects in the upper basin and resulted in one of the highest M&I water uses on record.

Under the 2011 and 2007 Comparisons – both potential worst-case drought years in separate parts of the Basin – the difference between the PAA’ and PAA on one side and Scenarios C and D on the other is virtually negligible, and, in some cases, Scenarios C and D produce impacts more beneficial than the PAA’ or PAA. See Zeng Memorandum at 6-11. This general statement holds true across eight different parameters: (1) average reservoir elevations; (2) minimal reservoir elevations; (3) reservoir elevation duration curves; (4) power generation; (5) recreational impacts; (6) Columbus flow; (7) state line flow; and (8) navigation. Id. Because the difference in impacts between the PAA and the 2015 Request is virtually negligible under both scenarios for eight separate ACF Basin parameters, there is no rational basis for granting the PAA instead of the 2015 Request.

C. Allocation of 40 mgd Presently Assigned to the Glades Reservoir Should Remain in Lake Lanier.

The PAA provides that a yet-to-be-constructed or even permitted Glades Reservoir will fulfill part of the State’s 2013 Request. Given the revised 2050 needs projections contained in the 2015 Request, it is clear that Glades Reservoir is no longer part of any strategy to meet the water supply needs of the State through 2050.3 As explained above, because the Corps can grant the entirety of the 2015 Request, including 242 mgd from the Lake, the Corps should not consider water sources outside of the Lake.

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3 Had the State’s water supply needs remained at the 2013 Request level (297 from Lake Lanier or something close to that amount), Glades may have remained part of the region’s long term water supply strategy. Conversely, had Hall County’s, the pending Section 404 permit applicant, population projection through 2050 not decreased as drastically as contained in the new Office of Planning and Budget’s projections, there may have remained some additional water supply need for Hall County from Glades Reservoir. Given those two facts, however, the State can say unequivocally that Glades no longer remains part of the region’s 2050 water supply strategy.
Because a water-supply Glades is not needed through 2050, the Corps must not assign 40 mgd of the State’s water supply request to Glades instead of the Lake. As demonstrated by Georgia EPD hydrologic modeling, the impacts from allocating 40 mgd from Glades compared to an additional 40 mgd from the Lake are virtually identical (i.e., the impacts of allocating 242 mgd from the Lake are nearly identical to the impacts the Corps has already evaluated and accepted in the PAA). See Zeng Memorandum at 6-11.

The Corps concurs. In the DEIS, Alternatives 7D and 7E both provide for 297 mgd of withdrawals above Buford Dam. The only difference is that in Alternative 7D, all 297 mgd come from Lake Lanier, while Alternative 7E provides 257 mgd from Lake Lanier and 40 mgd from Glades. The DEIS explains that these alternatives are “essentially the same.” Draft EIS at 5-26. Based on this alone, the Corps should provide for all 242 mgd to come directly from Lake Lanier.

If, however, the Corps needs an additional reason not to allocate water to Glades, the State asserts that Glades will not be constructed and operated for water supply during the current 2015 Request horizon because it is no longer needed for this purpose. The State is aware of the request from the Savannah District asking Hall County, the current Glades Section 404 permit applicant, to address its current population demand projection in light of the new population numbers. See Letter from Richard Morgan, Senior Project Manager, Savannah District, U.S. Army Corps of Engineers, to Richard Mecum, Chairman, Hall County Board of Commissioners, requesting updated Hall County population projection (Dec. 21, 2015) (Exhibit G). While the State will be working with Hall County on a revised certification of need, the old certification of need provided by EPD Director Jud Turner on April 9, 2013 is outdated and has been rescinded. Letter from Judson Turner, Director, Georgia Environmental Protection Division, to David Lekson, Chief, Regulatory Division, Savannah District, U.S. Army Corps of Engineers, rescinding prior certification of need (Jan. 22, 2016) (Exhibit H).
Given Hall County’s decreased population and corresponding reduced water supply need, the State was able to account for all of Hall County’s projected water supply need through 2050 in the 2015 Request. Given that the Corps can and should meet all of the 2015 Request, there is no outstanding water that would need to come from Glades instead of Lake Lanier. These two points lead to the same inevitable conclusion: there is no need for a water supply Glades through 2050.

If a reservoir in the anticipated Glades location is constructed at all during the current 2050 planning horizon, it will be redesigned⁴ and will operate pursuant to a revised Section 404 permit to provide additional basin storage. This additional storage will be used to support downstream needs during times of low flow and drought.⁵

Because a water-supply Glades will not exist, the Corps’ allocation of 40 mgd from Glades is unrealistic and would serve to arbitrarily reduce the State’s requested water supply allocation by this amount. The Corps is required to evaluate only “reasonable alternatives” (40 C.F.R. § 1502.14(a)) and Glades, as contemplated in the Glades DEIS and the DEIS, is no longer reasonable or even viable. Thus, the Corps cannot use any amount of water from Glades to calculate an allowable allocation of water supply from Lake Lanier. Put another way, the Corps must grant the entirety of the 2015 Request of 242 mgd from the Lake without allocating any of that amount to a reservoir that will not be permitted, constructed or operated for water supply. See also, N. Buckhead Civic Ass’n v. Skinner, 903 F.2d 1533, 1541 (11th Cir. 1990) (“consideration need be given only to reasonable, non-speculative alternatives.”);

⁴ These revised purposes need to be evaluated based on current hydrology, but the State’s concept includes storage during high flow times for dispersal downstream during low flow conditions to provide a myriad of benefits, namely support for Lake Lanier and its multiple purposes, including possible downstream environmental flows.

⁵ The state recognizes that a facility of the nature described above has not yet been permitted in Georgia and for that type of facility to be permitted in Georgia, extensive work will have to occur pursuant to the revised Partnership Agreement between the State, the Corps, and its federal partners to establish the permitting protocol and parameters to study and, ultimately if justified, permit such a facility.
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Utahns for Better Transp. v. U.S. Dep’t of Transp., 305 F.3d 1152, 1172 (10th Cir. 2002) (“To be a reasonable alternative, it must be non-speculative.”).

D. The Corps Must Correct its Approach To The Calculation of Wastewater Returns.

As discussed above, the Final EIS should analyze whether the Corps can grant the entirety of Georgia’s 2015 Request. As part of that analysis, the Corps must use the best available and current data, including the most recent and accurate data related to wastewater return projections. On January 25, 2016, the Metro District released current wastewater return projections stating that 98.96 mgd will be returned to the Lake by the Metro District entities. Memorandum from Katherine Zitsch, Director, Metro District, to Judson Turner, Director, Georgia Environmental Protection Division, regarding Projected Future Treated Wastewater Returns for the Chattahoochee River and Lake Lanier System (Jan. 25, 2016) at 6, Table 3 (Exhibit I). EPD projects that another 5.6 mgd will be returned by the upper counties. Zeng Memorandum at 2. The Corps, therefore, should use the Metro District and EPD’s wastewater return projections in its Final EIS, as both represent the most accurate data on returns.

The Corps’ method of calculating return flows in the DEIS is misdirected. In the 2013 Request, Georgia provided the volume of treated wastewater that the State estimated would be returned to Lake Lanier. The Corps rejected that value and instead developed its own methodology to calculate returns. The fundamental error in the Corps’ methodology is that the Corps looked to historical facility utilization rates (namely 58%) and assumed that utilization will remain constant. This is not a reasonable assumption. Rather, standard industry practice dictates that flows are often initially less than the permitted capacity. This results from the fact that municipalities design their facilities looking five, ten,

6 See, e.g. Strahan v. Linnon, 967 F. Supp. 581, 604 (D. Mass. 1997) (the NEPA decision making process “must be based on current data.”); Nw. Ecosystem All. v. Rey, 380 F. Supp. 2d 1175, 1195 (W.D. Wash. 2005) (“Relying on outdated data or not acknowledging the limitations in a methodology are grounds for setting aside an EIS.”).
or even more years into the future. When a new treatment facility is opened, the initial flows may only be a fraction of its design capacity. As the population in the facility’s service area grows, the flows coming into the treatment facility necessarily increase. By the end of the design period, flows being treated will begin to approach the treatment facility’s permitted capacity. As this occurs, planning and construction begins for new or expanded facilities. The Corps’ assumption that utilization will remain constant at 58% over the course of facility operations contradicts general wastewater treatment facility engineering.

The Corps then compounds this error by using projected return flows as a basis for calculating permissible withdrawals. Specifically, the Corps stated, “Adding net withdrawals of 134 mgd (a net withdrawal that can be accommodated while satisfying other withdrawals) and returns of 91 mgd (the expected return in 2040) results in a figure of 225 mgd in gross withdrawal that can be supported by some combination of Lake Lanier and Glades Reservoir.” DEIS at 5-7. This method of “backing into” permitted water supply withdrawals by adding an artificial return should not form the rationale for something as essential as a region’s water supply future. Again, the Corps must use the correct analysis (such as the Metro District’s 99 mgd, and the upper counties’ 5.6 mgd return flows) in evaluating return flows, and not use inaccurate return flow projections to back into allowable withdrawals.


As noted in the Georgia Scoping Comments, a failure to fully meet Georgia’s water supply needs from Lake Lanier will have substantial adverse consequences within the State, and for that reason the Corps is legally obligated to evaluate the full economic, social, and environmental consequences of failing to meet Georgia’s water supply request. Such consequences and costs include loss of jobs,
industry, and limitations on economic growth, on the one hand, and the economic and environmental costs associated with procuring alternative water supplies, on the other.

In the Georgia Alternatives Analysis, the State analyzed a number of alternatives that were theoretically conceivable as sources of water supply, and using the most recent economic data, concluded that “Lake Lanier is by far the most cost-effective and environmentally protective alternative for the supply of water to those metro governments located around and downstream of it.” Memorandum from Wei Zeng, Hydrology Unity, to Judson Turner, Director Regarding Response to Corps Request for Additional Information (May 30, 2014), attached to Georgia Alternatives Analysis. Despite this well-reasoned conclusion, the PAA does not grant Georgia the entirety of its 2013 Request from the Lake.

The Corps should include the conclusions from and reasoning of the Georgia Alternatives Analysis in the Final EIS, and then either propose a Water Control Manual for Lake Lanier that fully satisfies the 2015 Request or, if that request is not granted in its entirety, fully and completely assess the collective costs of refusing to do so.

F. The Corps Must Abide by the Eleventh Circuit Mandate to Determine How Much of Georgia’s Water Supply Request It Can Grant.

As shown above, the State believes the Corps must correct several aspects of the Corps’ water supply analysis. Reconsideration along these lines is required by the Eleventh Circuit. In its “Remand Instructions to the Corps,” the Eleventh Circuit stated:

As part of the final, definitive statement of the Corps’ water supply analysis, if the agency ultimately concludes that it does not have the authority to grant the Georgia request, it nevertheless should indicate the scope of the authority it thinks it does have, under the RHA, the WSA, and the 1956 Act. This way, the parties will have some further instruction, based on sophisticated analysis, of what the Corps believes to be the limitations on its power.

Tri-State Water Rights Litigation, 644 F.3d at 1201. The DEIS asserts that it can “satisfy a substantial
portion” – but not the entirety – of Georgia’s 2013 Request. DEIS at 5-25, 6-193. Since the Corps does not “grant the Georgia request,” the Eleventh Circuit requires that the Corps must indicate based on “sophisticated analysis,” the amount of Georgia’s request that it can grant. *Tri-State Water Rights Litigation*, 644 F.3d at 1201.

The DEIS does not follow the Eleventh Circuit’s instructions. Without providing any analysis detailing the Corps’ perceived bounds of its authority, the DEIS states that it cannot grant the 2013 Request (combined withdrawals of 705 mgd), but can accommodate withdrawals of 633 mgd as detailed in the PAA. Because the Corps does not explain at which point between 633 mgd and 705 mgd it encounters “limitations on its power,” the DEIS is inconsistent with the Eleventh Circuit instructions.

The need to provide this incremental analysis is unnecessary if the Corps grants the entirety of the 2015 Request. If, however, the Corps does not grant the entirety of the 2015 Request, the Corps should provide the Eleventh Circuit’s required analysis explaining exactly how many millions of gallons per day, per location, the Corps can allow before it encounters “limitations on its power,” and further explain exactly what environmental, hydrologic, or other factors trigger those limitations.

**G. The Corps Should Defer to the State on Crediting Return Flows.**

The DEIS treats all contributed flows (whether return flows from a wastewater treatment plant or made inflows from a reservoir) in the same manner as all other Lake inflows. Georgia believes that this manner of accounting for return flows is bad policy and an intrusion on its state water rights.

Subject to an allocation by the State, entities that contribute flows to a federal project should receive full credit for the flow, such that withdrawals of such volumes are not debited against the contributor’s storage account. Treating contributed flows in this manner not only has no adverse effect on the overall project, but also reflects sound policy in that a refusal to treat contributed flows in this manner significantly lessens the incentive for entities to build storage projects, construct water
reclamation facilities, and otherwise engage in environmentally sound water management practices. Return flows to reservoirs increase the yield of the reservoir by reducing the net withdrawals. As a result, return flows keep reservoir levels higher and mitigate the impact of water supply withdrawals. Return flows to reservoirs are a form of water reuse that Georgia’s state-wide water plan favors. The Corps cannot expect billions of dollars to be spent developing infrastructure to generate these return flows if the Corps declines to credit them to the storage account of the entity responsible for the return of that wastewater (or the made inflow as the case may be), and instead simply transfers the benefits they provide to other users.

In addition, the Corp’s treatment of return flows in the DEIS is an intrusion on the State’s right to allocate water. The Corps has long acknowledged that while federal projects provide storage space for water, it is the states that allocate the rights to the water. Georgia has a rule discussing this specific issue and acknowledging the balance between state and federal rights:

When a user has contracted for the right to utilize storage space within a reservoir that is owned or operated by an agency of the federal government, the Director shall retain authority to allocate any State water rights subject to regulation under O.C.G.A §12-5-31, including the right to withdraw State waters from the project as well as the right to impound made inflow to the reservoir. When the Director allocates to a specific user made inflows to a reservoir, pursuant to the permitting authority and procedure provided by O.C.G.A. §12-5-31, that user will have the right to impound such flows in the storage space for which it has contracted, to the extent storage space is available.

Ga. Comp. R & Regs. 361-3-6-.07(16).

The State has previously exercised this authority by allocating return flows to Allatoona Lake, located in the Alabama-Coosa-Tallapoosa Basin, to the Cobb County-Marietta Water Authority. The State plans to make a similar allocation at Lake Lanier once a storage contract or contracts are executed.

7 See Georgia EPD Permit No. 008-1491-05 (Modified November 7, 2014).
The best way for the Corps to abide by the state versus federal balance is for the Corps to include in the Final EIS an acknowledgement of the Georgia rule and propose a return flow policy that credits contributed flows “in whatever manner such flows are handled under state law.” To provide otherwise would be an intrusion on Georgia’s sovereign rights.

We understand that the Corps is considering a national rulemaking on this topic and thus, at a minimum, the Corps should retain flexibility in any final language regarding return flow credits until such time as a final federal rulemaking becomes effective.

H. The Corps Should Provide its Storage Accounting Methodology and Draft Contracts to the State for Comment.

To effectively operate the ACF Basin – and specifically Lake Lanier – the Corps must establish a storage accounting methodology that tracks multiple water storage accounts. Because the Corps’ chosen storage accounting methodology is a critical factor in basin operations, the Corps must provide this methodology to Georgia so the State can evaluate it and make informed comments. This common-sense request aligns with Corps policy: the Corps is required to “identify any methodologies used and [] make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.” 40 C.F.R. § 1502.24. Courts have continually held “that any supporting data or studies expressly relied upon in an EIS must be ‘available and accessible’ to the public.” State of Cal. v. Block, 690 F.2d 753, 764-65 (9th Cir. 1982). Thus, the Corps must provide the storage accounting methodology and the resources it relied on to reach the methodology.

In addition, as required by the Eleventh Circuit, one of the purposes of the DEIS is to address Georgia’s request for storage in Lake Lanier to be used for water supply. For direct Lake storage withdrawals (as opposed to releases made from the Lake to the River for water supply), the State assumes
that this agreement will be memorialized in a contract. The State is left merely guessing, however, as to the contractual terms and provisions because the Corps did not propose draft contracts in the DEIS.

The State requests that the Corps rectify these omissions in the DEIS by providing both the storage accounting methodology and proposed draft contracts in the Final EIS. Once the Corps has done so, the State expressly reserves the right to comment on the chosen methodology and proposed contracts.

III. Water Management Changes

In addition to hydrologic modeling of the 2015 Request, Georgia also modeled the effects of a number of other water management changes the Corps should make in operating the ACF system. The results of that water management modeling show that those changes did not significantly adversely impact any authorized purposes while at the same time enhancing the Corps’ ability to fulfill the water supply purpose.

A. The Corps Could Operate Buford Dam for a Flow Target of 550 cfs at Peachtree Creek During Winter Months.

To ensure adequate flows to meet water quality standards downstream of wastewater treatment plant discharges in the metropolitan Atlanta area, the Corps historically operated Buford Dam to provide a minimum flow of 750 cfs at Peachtree Creek throughout the year. The PAA, however, proposes an adjustment in the Peachtree Creek Flow Target to 650 cfs for the cooler winter months of November through April; 750 cfs from May through October. As explained below, (1) reducing the flow target to 550 cfs during the winter months could provide significant benefits to the ACF Basin and these benefits can be obtained (2) without adverse effects on water quality and (3) within the scope of the Corps’ operating authority.
1. **A 550 cfs Flow Target Has Significant Benefits to the ACF Basin.**

Reducing the flow target to 550 cfs during the winter months could provide a significant benefit to Lake Lanier storage. A 550 cfs reduced flow target will provide storage benefits in Lake Lanier that are the equivalent of 1.4 feet of elevation higher than the PAA in the most severe drought (2007-2009) (equivalent to 44,000 acre-feet of storage), and 0.6 to 0.9 feet higher in Lake elevation throughout a history of relatively dry years. Zeng Memorandum at 12-13. Those higher Lake levels then provide system benefits to the entire Basin. In a drought year, when basin inflow is lower than average and competing needs in the basin stretch limited resources, maintaining storage in Lake Lanier, the most upstream storage reservoir, preserves maximum operational flexibility to meet all authorized purposes and reduces the amount of time – by five months – that the Basin is in drought operations. Zeng Memorandum at 13; *see also* Letter from F. Allen Barnes, Director, Georgia Environmental Protection Division, to Col. Steven Roemhildt, District Engineer, Mobile District, U.S. Army Corps of Engineers, regarding reduced flows at Peachtree Creek (Nov. 7, 2011) (“Barnes 2011 Letter,” Exhibit J).

2. **Operating to a Winter Flow Target of 550 cfs Will Not Produce Adverse Water Quality Effects.**

Georgia analyzed the effect on water quality of reducing the flow target at Peachtree Creek to 550 cfs during the November through April timeframe. Reducing winter flows to 550 cfs does not adversely affect dissolved oxygen (DO) levels, the parameter that has long been tracked as a key indicator of conditions in the upper Chattahoochee River. Zeng Memorandum at 13; Barnes 2011 Letter at Attachment B to Attachment B. Other water quality parameters are either maintained at these lower winter flows or are or will be addressed by current or planned Georgia Environmental Protection Division regulatory programs to assure that all designated uses are achieved and maintained. Zeng
Memorandum at 14. As a result, there are no water quality impacts that would require flows higher than 550 cfs during the winter months.

3. **Operating to a Winter Flow Target of 550 cfs is Within the Corps’ Operating Authority and Does Not Violate State Law.**

The Corps has previously asserted that the authorizing legislation for the Buford Dam project requires releases sufficient to meet a water quality flow target of 650 cfs at Atlanta. Georgia believes that the Corps is misreading the authorizing documents.

In concluding that there exists a water quality minimum flow of 650 cfs, the Corps has cited language from a report prepared by General Newman, Division Engineer for the South Atlantic Division, (the “Newman Report”). DEIS at 2-76. In paragraph 80 of the Newman Report, General Newman described the total estimated water needs for the Atlanta area as of 1946. He stated,

> In order to meet the estimated present needs of the city, and to prevent damage to fish, riparian owners, and other interests by complete shutdown of the Buford plan during the daily and week-end off-peak periods, varying flows up to a maximum of 600 second-feet should be released from Buford so as to insure at all times a flow at Atlanta not less than 650 second-feet.


The “needs and other interests” of the area at the time included 70 cfs for domestic and industrial purposes and 415 cfs for condensing water for the Georgia Power Atkinson steam plant. Thus, as the sentence makes clear, the value of 650 cfs was not a target for *water quality flow*, but the *total flow* designed to accommodate the sum of all interests, including water quality among other issues.

Focusing, therefore, on the total flow at Atlanta, releases sufficient to meet combined water supply withdrawals and 550 cfs water quality flows will more than meet the 650 cfs threshold specified by General Newman. For example, even under the minimum release of the 2015 Request for water
supply (549 cfs), releasing sufficient quantities to meet that amount plus a water quality flow of 550 cfs would result in a total flow of 1099 cfs, far in excess of the 650 cfs threshold contemplated in the Newman Report.

To the extent the Corps believes that Georgia law prevents it from operating to 550 cfs, that belief is misplaced. The DEIS states that the State has “established a minimum flow standard of 750 cfs downstream of Atlanta’s water supply intake and just upstream of Peachtree Creek.” DEIS at 2-219. It is important to note that the 750 cfs value is not and was never a “standard.” It merely set a flow above which the criteria for the designated use of “fishing” must be met. 750 cfs was used historically for setting waste load allocations and similar purposes, akin to the State’s use of 7Q10 values for unregulated streams. As water quality in the Chattahoochee River improved over the decades, the 750 cfs language was no longer needed. Thus, after proper notice and comment, in August 2015, the State amended Rule 391-3-6-.03(14), the rule containing the reference to 750 cfs, to delete any reference to 750 cfs. Accordingly, no reference to a 750 cfs flow exists in Georgia rules and the Corps should not cite to that value in evaluating operation of the ACF system.

For this reason, the Corps can operate Buford Dam to provide for water quality flows, net of water supply withdrawals, of 550 cfs at Peachtree Creek during the months of November through April (with 750 cfs during the rest of the year). There are no water quality or legal impediments to reduced-flow operations on this basis, and there will be considerable benefits to Lake Lanier storage by doing so which will benefit all authorized purposes.


As part of its evaluation of the DEIS, Georgia studied and modeled the Corps’ operation of the ACF system with regard to navigation. That evaluation shows that PAA navigation operations are more
detrimental to other authorized purposes than need be, and are extremely detrimental to the ACF system. See Zeng Memorandum at 17-19. As a result, the Corps should consider other operational means to meet the navigation purpose.

EPD modeled two scenarios: (1) the PAA and (2) the PAA No Navigation. For the latter, EPD used the Corps’ PAA model and made only one change – it turned navigation operations off. The comparison between the PAA and the PAA No Navigation reveals a number of adverse impacts. First, navigation operations substantially increase the number of days when the ACF system is under drought operation by 33%. Second, over the 73 year period of simulation, PAA navigation operations force the system into Extreme Drought Operations (EDO) on 61 days as opposed to zero days of EDO under the PAA No Navigation. Third, in typical drought years, PAA navigation operations prompt drought operations earlier and make them last longer; in typical non-drought years, navigation operations trigger drought operations. Zeng Memorandum at 17-19.

Because of these extreme results, Georgia believes the Corps should re-evaluate its PAA navigation operations. Among other things, the Corps should consider (1) establishing an inflow forecast mechanism that allows the Corps to trigger navigation operations only when system conditions warrant the navigation release; and (2) implementing navigation operations only where there is an express demand for navigation. To that end, Georgia would like the opportunity to work with the Corps to develop a navigation plan containing such appropriate navigation procedures.

C. **Flood Control Management at West Point Lake Should be Conducted More Beneficially.**

As part of its evaluation of the DEIS, Georgia addressed how the Corps conducts its West Point Reservoir flood control operations. Georgia understands the Corps’ concern regarding flood risk management. Results of EPD’s modelling indicate that the Corps could operate West Point Reservoir in
a manner which would accomplish both improved flood risk management and minimize actions that
would lower reservoir elevations unnecessarily. Among the issues Georgia identified are: (1) the
drawdown occurs in what would otherwise be the period used for refill of the reservoir and (2) the need
to refill the reservoir after drawdown is in direct competition with the need for higher releases for

Georgia requests that the Corps modify the West Point Water Control Manual to incorporate
flexible flood storage management practices at the West Point project, based on better real-time and
probability-based forecast information, and do the same wherever else such practices provide real water
resource benefits without compromising the federal flood risk management purpose.  

D. The Corps Improperly Eliminated The Possibility of Changes in Lake Lanier Elevation.

For decades, many Basin interests have encouraged the Corps to raise the elevation of Lake
Lanier at full pool, however the DEIS eliminated this option at first screening without any analysis. The
Corps’ stated reasons for this decision were that it would not consider (1) “management measures that
suggest the use of flood storage for purposes other than flood storage” and (2) “measures that would
potentially change the existing head limits” of an ACF Basin project. DEIS at 4-7, 4-8. The DEIS,
however, presents no data or analysis suggesting that raising the pool elevation would adversely impact
flood risk management or affect structural integrity.

Despite acknowledging that the Corps has the authority to allocate flood storage to other
purposes, the DEIS dismisses raising the Lake pool stating that the Corps “is not exercising that
discretionary authority as part of this Master Manual update.” DEIS at 4-7. Without further explanation,

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8 Appropriate modification by the Corps of reservoir operation in the Columbus, Georgia and middle Chattahoochee River
region would also help mitigate water quality concerns that arise in extremely low flow periods.
this logic appears circular: the Corps has the authority but cannot exercise it because the Corps has determined it cannot. The State requests that the Corps revisit this decision and consider whether, in light of a WCM update nearly 60 years in the making, it can and should use its authority at this time to raise the Lanier pool.

The DEIS states that “[c]hanges to the existing head [at Buford Dam] could increase the risk to the structural integrity of the [Dam.]” DEIS at 4-8 (emphasis added). It is also possible that raising the Lake by two feet “could not” affect the structural integrity. The Corps does not know because it did not conduct any study regarding whether a change in the elevation of Lake Lanier at full pool would pose any increased risk to the structural integrity of the project. Because it did no analysis, the Corps has no basis for eliminating that action as a possible alternative.

Instead of eliminating at first screen the option of raising Lake Lanier elevation at full pool, the Corps should analyze this option to determine whether, in fact, it would impact the Corps’ flood control operations or Buford Dam’s structural integrity. Georgia suggests that raising the Lake elevation would likely have a positive effect on nearly all of the Corps’ stated objectives for updating the Master WCM. 9 Because of this and because of the strong ACF Basin support for raising the elevation of Lake Lanier, the State requests that the Corps raise the elevation of Lake Lanier at full pool as part of its water management plan.

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9 Those objectives are to: (1) define action zones on a scientific basis that eliminate a disproportionate impact on reservoirs and address current system needs; (2) develop and implement a basinwide Corps reservoir drought operation plan; (3) reduce or eliminate the chance of prematurely returning to drought operations and reducing flows downstream from Jim Woodruff Dam below 5,000 cfs; (4) reduce or eliminate the adverse effect of system operations on federally listed threatened and endangered species; (5) improve system performance to achieve congressionally authorized project purposes; and (6) increase the reliability of navigation on the ACF system. DEIS at 4-3.
E. The Corps’ Analysis Regarding Endangered Species is Flawed.

The Corps has not used the most updated and accurate information in connection with its assessment of the effects of various alternatives on endangered species. In addition, the performance measures used by the Corps are inappropriate. For example, the Corps used a metric for effects on mussels based on the number of days of flow between 5,000 cfs and 10,000 cfs. Using the U.S. Fish & Wildlife Service ("USFWS") criteria indicating appropriate conditions for fat threeridge mussels and bathymetric data from the Corps, Georgia analyzed potential habitat for the mussels in the Apalachicola River. The results indicate that the area of fat threeridge mussel habitat does not increase with higher flows. In fact, evidence indicates that the maximum amount of habitat seems to correspond to flows much lower than 5,000 cfs. Zeng Memorandum at 19-20; Memorandum from Wei Zeng, Hydrology Unity, to Judson Turner, Director, Regarding alternative operations in the ACF Basin (Jan. 11, 2013) at 5-6, attached to Georgia Scoping Comments. In addition, USFWS has conducted a more recent unpublished study indicating large amount of mussel habitat and the existence of large populations of fat threeridge mussels, estimated at between five and six million, several times the mussel population upon which its listing as an endangered species was made, with habitats under a low flow of 5,000 cfs. Put another way, the latest study identifying both a large amount of habitat and a large population of mussels does not point to any gains associated with flows above 5,000 cfs. Zeng Memorandum at 19-20. Based on this data, there is no rationale for the Corps to use flows greater than 5,000 cfs as a performance measure.

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10 On January 14, 2013, Georgia provided the Corps with a set of suggested modeled operational changes in system management, referenced as the “Georgia Contemplation,” along with modeling results on a range of a performance measures. Georgia’s modeling demonstrated that performance measures for meeting all authorized purposes, the including biological needs of endangered species in the Apalachicola River, can be met under the operation set in Georgia Contemplation. In addition, the Georgia Contemplation results in better performance regarding desired flows in the Columbus, Georgia area of the Chattahoochee River. See Georgia Scoping Comments and attachments.
measure for endangered mussels. The Corps should use up-to-date and scientifically valid information in its evaluation of the effects of the 2015 Request on endangered species.

F. The 2015 Request Will Not Have a Material Impact on the Production of Hydropower.

As part of its evaluation of the DEIS, Georgia undertook a study of the effect of the 2015 Request on hydropower production. The 2015 Request will have only minimal impact on hydropower production. Zeng Memorandum at 7. For example, even assuming the 2015 Request water supply demand, the reduction at Lake Lanier in power generation 35 years from today is essentially no different than under the PAA, and the difference would be slighter in the years before Georgia’s water demand reaches 621 mgd. A similar result is shown in relation to the total amount of energy production by all the federal reservoirs in the ACF Basin where the difference between the 2015 Request compared to the PAA is very small.

G. The Corps Erroneously Calculates Returns on a Reach-by-Reach Basis.

The DEIS indicates that the Corps evaluates returns to the Chattahoochee River on a reach-by-reach basis. DEIS at 5-5 to 5-8. Water supply operation in the metropolitan Atlanta area is a complex process. Most of the withdrawals within the metro district take place in Lake Lanier and in the Chattahoochee River between Buford Dam and the confluence with Peachtree Creek. The majority of the return flow, however, takes place between Peachtree Creek and the USGS Whitesburg gage. This makes comparing withdrawals and returns in any one metro-Atlanta reach unwise. Thus, the State suggests that the Corps report the totality of returns so the public and decision-makers can accurately evaluate return rates to the ACF Basin. The Corps should report the withdrawal as the sum of withdrawal across the Buford, Norcross, Morgan Falls, and Atlanta reaches, and the return as the sum of discharged amounts across the Buford, Norcross, Morgan Falls, Atlanta, and Whitesburg reaches.
H. The Corps Incorrectly Projected the Effect of Future Conservation Measures.

After correctly noting that Georgia has successfully implemented numerous effective water conservation measures, and that water conservation is the cornerstone of the metro area’s water supply plan, the Corps states, “In 2011 per capita water use for the metro area was 148 gpcd (gallons per capita per day). EPD projects water use will decrease to an average of 135 gpcd by 2040. It is unlikely that additional conservation measures would result in a significant reduction in Georgia’s 2040 need.” DEIS at 5-3 to 5-4.

This erroneous conclusion is a specific example of why it is necessary when carrying out its assessment of alternatives that the Corps use the 2015 Request. As shown by the Metro District, not only is a reduction in the 135 gpcd figure possible, it has already occurred. In fact, present per capita water consumption averages 108 gpcd across the Metro District. This is twenty percent lower than the 135 gpcd used by the Corps to define peak efficiency in 2040. Future per capita water consumption in 2050 is projected to decrease even further:

Water conservation and efficiency measures adopted by the Metro Water District and the State of Georgia have dramatically decreased water demands within the Metro Water District. In fact, per capita water demand use has declined by over 30 percent since 2000. Similarly, total water withdrawals have decreased by over 10 percent, despite a 20-percent increase in total population. … The efficiency measures put in place are expected to drive per capita water use lower into the future.

Memorandum from Katherine Zitsch, Director, Metro District to Judson Turner, Director, Georgia Environmental Protection Division, Regarding projected future water supply demand for the Chattahoochee River and Lake Lanier System (Dec. 2, 2015) at 5, attached to 2015 Request. The effect of these reduced water demand projections was incorporated into the Georgia 2015 Request and these projections confirm that the Corps should use the 2015 Request in the ACF Final EIS.
I. Georgia Wildlife Management Comments

Georgia’s Wildlife Resources Division previously submitted comments in November 2008 and January 2013 during WCM development, and also has provided comments to the USFWS in May 2011 and May and June 2015, under the Fish and Wildlife Coordination Act, 16 U.S.C. § 661 et seq. These comments document the State’s fisheries objectives for the ACF system, operational impacts on fisheries resources in the basin, and operating procedures to mitigate impacts and support fisheries resources. Those comments are included by reference.

IV. Aspects of the DEIS Require Corrections or Clarifications.

In addition to the above discussion, the DEIS contains a number of factual errors or ambiguities that the State requests the Corps address in the FEIS. Some of these are briefly itemized below:

a. Section 2.6.1.5.3 Mead Westvaco: The DEIS states that Mead Westvaco has a permit to withdraw 27.6 mgd from Walter F. George, but does not say who the permitting authority is. The DEIS should include the permitting authority.

b. Section 2.6.1.5.5 Farley Nuclear Power Plant: The DEIS states that Southern Nuclear defines 2,000 cfs and 74.5 ft at Jim Woodruff as minimum conditions for operation. The Corps should use observed data to determine that these flows historically have been unnecessary, given the percent of time when flow has been lower than 2,000 cfs.

c. Page 4-13, Figure 4.1-5: The caption is not consistent with title of the figure. The revised action zones shown in figure should be of Level 1 action zones, rather than Revised Level 1 action zones.

d. Section 4.1.2.2.2 Revised Level 1 action zones: There appears to be insufficient information justifying the selection of Revised Level 1 action zones as opposed to Level 1 action zones. For example, Georgia is unaware of any quantitative work determining that the Revised Level 1 action zones yields better results in comparison to Level 1 action zones. If such work exists, the Corps should include a figure showing these results.
e. Section 4.1.2.3 Drought Operations (Page 4-17) (Lines 7-9): “If recovery…above Zone 4.” It is unclear if this is an example of how a drought operation is suspended, or a special case for the months of February and March. It appears that this is an example explaining how a recovery in February would trigger the suspension of a drought operation in March. If this is correct, then the text should say “for example.”

f. Section 4.1.2.3.2.2 Revised drought operations suspension trigger (Page 4-18): The Corps at different places in the DEIS used the months of February, March, and April as examples to explain how suspension of a drought operation is carried out. However, the Corps did not say that these are examples, which leaves the impression that these are months with a special suspension mechanism.

g. Section 4.1.2.8.8.4 Revised seasonal flows and Section 4.1.2.8.8.5 Pulse flows: The Corps has incorrectly considered the state line flows prescribed in Georgia Contemplation.

h. Section 4.2.1.2.3 Navigation (Page 4-45, Lines 7-9): “Under this water…of the time.” The percentage of time when a 9-foot or a 7-foot channel is available appears to be an objective, rather than what “this alternative” is able to achieve. This language should be clarified on how the percentage numbers have been obtained.

i. Section 4.2.6.1 Description of Water Management Alternative 6: The Corps misstates that the PTC flow targets in the Alternative are the same as in Alternative 2. According to an earlier table and description, this Alternative contains PTC flow targets proposed by USFWS (with a 2400+ cfs flow target).

j. Section 4.3.2 Hydroelectric Power Generation: The Corps incorrectly modeled Georgia Contemplation (Water Management Alternative 5). Even with this mis-modeling, Georgia Contemplation ranks 3rd in system power, 3rd in Buford power, 2nd in West Point power, and 6th in Walter F. George power. The overall ranking for Georgia Contemplation in power generation is 3rd. If correct settings were used in the model, it is expected that the amount of power generation would increase and the rankings in hydropower generation would also increase.

k. Section 2.1.2.3 Water Quality Standards (Page 2-129)(Lines 29-30 and 35-37): The DEIS makes inaccurate statements about Georgia’s actions regarding U.S. EPA’s recommendations for
numeric nutrient criteria for waterbodies. U.S. EPA requested that each State develop a strategy for adopting nutrient water quality criteria to protect waters from the adverse effects of nutrient over-enrichment. Development of nutrient criteria is a highly complex matter because some level of nutrients are necessary for the health of the aquatic ecosystem, but concentrations that are too high can cause an imbalance in the natural flora and fauna. Therefore, in order to protect its natural resources, it is important that a state’s criteria not be set too low or too high. Georgia developed a plan for adopting nutrient criteria in 2005, subsequently revising the plan in 2008 and 2013. The revised plan specifies the State’s conceptual approach and schedule for development of nutrient criteria for specific waterbody types, and has been reviewed and agreed to by U.S. EPA.

1. Executive Summary, Page 12: In discussing revised drought operations the DEIS states that “If recovery conditions are not achieved in February, drought plan provisions will not be suspended until April, provided composite storage remains above Zone 4.” The correct reference is to Zone 2.

m. Section 2.1.1.6.10, Table 2.1-4: The DEIS reports that the yield of the Yahoola Creek Reservoir (Lake Zwerner) is 25.5 mgd. However, the safe yield of the Yahoola Creek Reservoir is 5.7 mgd.

n. Section 2.1.1.2.5.2 Current Water Use – Georgia - Groundwater: The DEIS states “There, the close connection between surface water and the Floridan aquifer cause groundwater withdrawals to lower surface water levels in droughts, causing the basin to exceed the safe yield for freshwater mussels (Hook et al. 2005).” Georgia has reviewed the referenced report and no such description was found.

o. Section 2.5.3.2 Reservoirs: The DEIS states “Samples from Walter F. George Lake also violated the 15 parts per thousand (ppt) federal standards for total dioxans and furans, with a value of 0.45 ppt.” The sentence is contradictory as the cited 0.45 ppt would not violate the cited standard.

p. Section 4.2.6.2.4 Fish and Wildlife Conservation: The DEIS states the median fall rate as 0.00 feet per day rather than 0.12. The cited 0.00 feet per day median fall rate appears to be incorrect.

q. Section 6.1.1.2.2.4 Alternative 7A: The DEIS incorrectly references Alt1A when discussing a 600 cfs minimum flow. The correct citation is to Alt7A.
r. Section 6.1.1.2.5.1 No Action Alternative: The DEIS states “Downstream of the Chattahoochee gage, basin inflow to the Apalachicola River is essentially uncontrolled. Therefore, flows at the Chattahoochee gage plus the uncontrolled inflows from downstream tributaries to the Appalachicola River comprise virtually all of the freshwater inflow to the Apalachicola Bay.” This is incorrect. Freshwater inflow to the Apalachicola Bay is correctly stated as comprising flows at the Chattahoochee gage, uncontrolled inflows from downstream tributaries to the Appalachicola River, other streams draining into the Bay, minus any depletions taking place in the Florida portion of the ACF Basin.

V. Summary and Conclusion

Please give the foregoing comments careful consideration in making necessary revisions to the ACF WCM and DEIS. As shown above, the Proposed ACF WCM and DEIS should be reworked to incorporate the water supply demands of the 2015 Request. The 2013 Request has been updated, and implementation of a Water Control Manual based on the 2013 Request is no longer appropriate. Upon that correction, the State requests that you consider water management changes as discussed in this letter. Once so modified and corrected, the Corps should issue the ACF Final EIS and WCM granting the entire 2015 Request.

Do not hesitate to contact me if you have any questions or if I can be a resource for additional information that would assist you in this process.

Respectfully submitted,

Judson H. Turner
Director
Georgia Environmental Protection Division
On behalf of the State of Georgia