FINAL
Environmental Impact Statement

Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida, and Georgia and a Water Supply Storage Assessment

December 2016 **Contract number: W91278-10-D-0014-0036**

US Army Corps of Engineers®
Mobile District

Prepared for:
U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, AL 36628

Prepared by:
Tetra Tech
61 St. Joseph Street
Suite 550
Mobile, AL 36602

From:
Sent: Friday, January 29, 2016 7:13 AM
To: ACF-WCM
Subject: [EXTERNAL] Fwd: Lake Lanier Water Level Management

From:
To:
BCC:
Sent: 1/29/2016 8:12:00 A.M. Eastern Standard Time
Subj: Lake Lanier Water Level Management

I am writing to urge you to increase the full pool level to 1073. For the last month the level has been that, and higher. Increasing the lake to that level allows for billions more gallons of water for those times when we experience a drought or water releases from the dam are imperative. A

I do not consider navigation downstream to be an imperative reason to release water. It is providing water transportation to a very few at the expense of millions. Lake Lanier provides drinking water for millions and livelihood for thousands. The navigation/transportation situations have alternative methods to accomplish their end goals. There is no alternative for our drinking water requirements. B

Please consider increasing Lake Lanier's full pool level to 1073, while diligently working to maintain and preserve our water supply. C

Sincerely,
Heidi W. Nufer

1

Response to Comment ACF180 – Heidi Nufer

A. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the ba-sin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

C. See response to comment A

From: Terry Ryan
Sent: Friday, January 29, 2016 7:25 AM
To: ACF-WCM
Subject: [EXTERNAL] WCM Comments From Lake Resident

To Whom This May Concern,

I appreciate the chance to comment on the revised WCM for the ACF. We appreciate the professional management the Army Corps offers to the ACF. My concerns that I hope can be addressed are the water releases proposed during severe droughts. As proposed it could draw Lake Lanier down to the levels we had on 07 and 08. Is it possible to make changes in the WCM that will manage potential droughts using the predictive data the Corps excels at? That would help manage the water pool so future droughts will not impact Lanier as they have in the past causing a huge impact on the lake economy. Is it possible to raise the full pool level another 1 or 2 feet to help with this? A

Thank you for your consideration. B

Terry Ryan

1

Response to Comment ACF181 – Terry Ryan

A. USACE regulations do not allow use of forecasts in real-time project operations. Forecasted conditions may be used for planning future operations, but releases will follow the water control operations plan based on observed conditions within the watershed to the extent practicable. The Drought Contingency Plan (DCP) sections 3-02 and 3-03 contained as an exhibit in the WCMs in appendix A of the EIS includes discussion of drought identification and National Integrated Drought Information System (NIDIS). An NIDIS pilot program has been established for the ACF River Basin with the goal of developing a regional Drought Early Warning Information System. The system will use key indicators of drought to make timely drought forecast. USACE is a contributor and user of the NIDIS pilot project tools.

B. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

From: Bob
Sent: Friday, January 29, 2016 7:46 AM
To: ACF-WCM
Subject: [EXTERNAL] The impact of the Corps' navigation operations proposed WCM is a serious concern

Commander, U.S. Army Corps of Engineers
Mobile District
Attn: PD-EI (ACF-DEIS)

The impact of the Corps' navigation operations proposed WCM is a serious concern. I would like you to consider modifying that plan by taking the following steps:

1. Model and plan for raising Lake Lanier's full pool level to 1073. A
2. Revise the navigation plan to avoid the severe impact the proposed plan will have on Lanier's water levels. B
3. Incorporate rigorous drought prediction that will trigger changes in reservoir operations to preserve lake levels during drought. C
4. Manage the reservoirs to retain maximum storage levels in the reservoirs so that drought conditions will not have the devastating impact that was experienced in December 2007. D

I look forward to your response.

Thank you for your consideration.

Bob

Robert H Schurke

Response to Comment ACF182 – Robert Schurke

A. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

C. USACE regulations do not allow use of forecasts in real-time project operations. Forecasted conditions may be used for planning future operations, but releases will follow the water control operations plan based on observed conditions within the watershed to the extent practicable. The Drought Contingency Plan (DCP) sections 3-02 and 3-03 contained as an exhibit in the WCMs in appendix A of the EIS includes discussion of drought identification and National Integrated Drought Information System (NIDIS). An NIDIS pilot program has been established for the ACF River Basin with the goal of developing a regional Drought Early Warning Information System. The system will use key indicators of drought to make timely drought forecast. USACE is a contributor and user of the NIDIS pilot project tools.

D. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

Greater Columbus Georgia Chamber of Commerce

Columbus, GA
CHAMBER OF COMMERCE
What progress has preserved.

Commander, U.S. Army Corps of Engineers
Mobile District

January 27, 2016

Attn: PD-EI (ACF0DEIS)

Dear Col. Chytka:

The Corps' efforts in compiling the draft Environmental Impact Statement associated with the revised Apalachicola-Chattahoochee-Flint (ACF) Water Control Manual are significant and appreciated. Also, your acceptance of public comments is appreciated.

I recognize the tremendous influence that the Corps exerts in the entire ACF basin and the accompanying challenges in balancing water needs within the framework of federal authorizations.

However, I believe that the Corps has not met its responsibility in protecting the water needs of the Columbus/Phenix City/ Ft Benning region. Our area needs a reliable and sustainable river flow to meet our current and future water needs for recreation; municipal and industrial water supply; and water quality for wastewater assimilation and health of the aquatic environment. A

To remedy this oversight, I recommend that the Corps include in its Water Control Manual a flow control node for Columbus, with the minimum flows of 800 cfs (instantaneous), 1350 cfs (daily) and 1850 cfs (weekly).

I understand that this is not a request for additional water allocation, but a confirmation of sustaining flows that have been achieved consistently since 1975. B

Furthermore, these flows have a long history of widespread support throughout the basin (AL-FL-GA 2003 Compact, AL and GA scoping comments to the Corps, ACF Stakeholders' Sustainable Water Management Plan, numerous public and private entity comments).

It is also my understanding that the Corps has appropriate authorization under the Clean Water Act to release these minimum flows, such that the EPA delegated authority to the states can be fulfilled through issuance of NPDES permits with assurances of minimum flows to assimilate waste load allocations. C

Thank you again for your efforts. Our community is looking forward to a prosperous future with a sustainable supply of clean water and an ongoing cooperative relationship with the Corps.

Sincerely,

Brian D. Anderson
President and CEO

Our mission is to promote business success by being the leader in economic and community development in the region.

Response to ACF183 – Greater Columbus Georgia Chamber of Commerce, Brian Anderson

A. A node for Columbus, Georgia, was included in the HEC-ResSim model (see Figure 2 of appendix E) and HEC-5Q model (See Figure 2.1 of appendix K). USACE already provides a minimum flow of 670 cfs at West Point to aid wastewater assimilation downstream of West Point dam. USACE meets this obligation 100% of the time. The authorized purposes of the federal ACF system do not include a specific directive to meet flow targets at Columbus, Georgia. Nonetheless, USACE's modelling of the PAA over the 73-year hydrologic period of record indicate that a daily average flow of 1,350 cfs at Columbus would be achieved on 94 percent of the days for the PAA compared to 95 percent under the NAA (refer to section 6.1.1.2.3.9).

B. The authorized purposes of the federal ACF system do not include a specific directive to meet flow targets at Columbus, Georgia.
Any purported agreements made between the governors of the states of Alabama, Georgia, and Florida in 2003 have never been approved by the U.S. Congress; therefore, USACE has no authority to operate to support those agreements

C. The authorized purposes of the federal ACF system do not include a specific directive to meet flow targets at Columbus, Georgia. Flows at Columbus for the various alternatives considered are discussed in section 6.1.1.2.3 of the draft EIS and water quality is discussed in various portions of section 6.1.2 of the draft EIS. As described in section 6.1.1.2.3.9 of the EIS, model results over the 73-year hydrologic period of record indicate that a daily average flow of 1,350 cfs at Columbus would be achieved on 94 percent of the days for the PAA compared to 95 percent for the NAA (reflecting current operations.

Columbus, GA
CHAMBER OF COMMERCE
What progress has preserved.

Greater Columbus Georgia Chamber of Commerce

A RESOLUTION BY THE GREATER COLUMBUS GEORGIA CHAMBER OF COMMERCE ENCOURAGING AND REQUESTING THAT THE U.S. ARMY CORPS OF ENGINEERS ESTABLISH FLOW TARGETS FOR THE MIDDLE AND LOWER CHATTAHOOCHEE RIVER.

WHEREAS, Congress authorized the construction of locks and dams in the Apalachicola-Chattahoochee-Flint River Basin, which serve multiple purposes including flood control, hydropower production, water quality, recreation, and navigation from Columbus, Georgia, and Phenix City, Alabama, to and from the Gulf of Mexico; and

WHEREAS, flows from Corps of Engineers reservoirs on the Chattahoochee River provide important and necessary water resources for downstream municipalities and industries; and

WHEREAS, cities and businesses on both sides of the Chattahoochee River, in reliance and anticipation of flows from Corps of Engineers reservoirs, have made substantial investments in water infrastructure, industrial facilities, and steam-driven electrical generation; and

WHEREAS, the continued and future social, economic, and ecological vitality of communities along the Middle and Lower Chattahoochee River depends on the Corps of Engineers providing a steady and reliable source of flow; and

D

WHEREAS, the Corps of Engineers has accorded special legal status to flow targets at Peachtree Creek and the Jim Woodruff Dam; and

WHEREAS, from time to time, the Corps of Engineers is able to rely on uncontrolled flows from the Flint River to satisfy Jim Woodruff requirements without augmenting flows from its Chattahoochee River reservoirs; and

WHEREAS, the Corps of Engineers has allowed flows in the middle and lower sections of the Chattahoochee River to fall to dangerously low levels while flows from Lake Lanier, the largest storage reservoir on the system, were controlled so as to allow reservoir elevation levels to maintain and even increase; and

WHEREAS, the Corps of Engineers justifies operating in that manner by citing a lack of a binding flow target in the Middle and Lower Chattahoochee River; and

WHEREAS, as a consequence, the Corps of Engineers favors one region at the direct expense of another, through water management decisions that allow one region to improve through the refilling of water storage while another region worsens due to diminished flow; and

Our mission is to promote business success by being the leader in economic and community development in the region.

Response to ACF183 – Greater Columbus Georgia Chamber of Commerce, Brian Anderson

D. Comment noted.

WHEREAS, it is inconceivable that Congress, in authorizing the construction and operation of projects in the Apalachicola-Chattahoochee-Flint River Basin, intended for reservoir operations to favor one region over another; and

WHEREAS, despite protracted conflict and controversy over the management of Chattahoochee River reservoirs of the Corps of Engineers, the Governors of the States of Alabama, Florida, and Georgia in 2003 reached an agreement that set forth principles to allocate water flow among the three states; and

WHEREAS, those principles included flow requirements to be included in a water allocation among the states, to be met in part by state action and in part through operation of Corps of Engineers reservoirs; and

WHEREAS, those targets included a flow of 1350 cubic feet per second (cfs) daily average and 1850 cfs weekly average at Columbus, Georgia, and 2000 cfs weekly average at Columbia, Alabama; and

WHEREAS, current operational guidelines of the Corps of Engineers and the draft Water Control Manual, are, therefore, inconsistent with both statutory requirements and flows agreed upon by the three states;

NOW, THEREFORE, BE IT RESOLVED BY THE GREATER COLUMBUS GEORGIA CHAMBER OF COMMERCE that the U.S. Army Corps of Engineers is encouraged and requested:

(1) to establish and honor the flow requirements identified by the Governors of Alabama, Florida, and Georgia, namely, 1350 cubic feet per second (cfs) daily average and 1850 cfs weekly average at Columbus, Georgia, and 2000 cfs weekly average at Columbia, Alabama; and E

(2) to operate the Chattahoochee River reservoirs as an integrated system in the service of all the populations along the full extent of the river, without reliance on uncontrolled flows from the Flint River as a basis to reduce support for certain Chattahoochee River communities. F

ADOPTED, this 27th day of January, 2016, by the Board of Directors of the Greater Columbus Georgia Chamber of Commerce, by unanimous vote.

FOR THE GREATER COLUMBUS GEORGIA CHAMBER OF COMMERCE

Cedric Hill, 2016 Chair

Brian D. Anderson, President and CEO

1414867.1

Response to ACF183 – Greater Columbus Georgia Chamber of Commerce, Brian Anderson

E. Whatever purported agreements were made between the governors of the states of Alabama, Georgia, and Florida in 2003 were never approved by the United States Congress; therefore, USACE has no authority to operate for these flow targets. The stated daily and weekly average flow targets at Columbus, Georgia, are established in the Federal Energy Regulatory Commission (FERC) license for Georgia Power Company projects downstream of West Point Lake (refer to section 6.1.1.2.1). Each of the FERC target flows include an important qualifier, e.g., "a daily average target minimum flow of 1,350 cfs, *or inflow, whichever is less" (emphasis added)*. Model results over the 73-year hydrologic period of record indicate that a daily average flow of 1,350 cfs at Columbus would be achieved on 94 percent of the days for the PAA compared to 95 percent under the NAA (refer to section 6.1.1.2.3.9). The Alabama Office of Water Resources and the Southern Nuclear Operating Company have identified a daily average flow need of 2,000 cfs at Columbia, Alabama, to support continued operation of the Farley Nuclear Plant. Model results indicate that the daily average flow need at Columbia would be met 95 percent of the days over the period of record compared to 96 percent under the NAA.

F. One of the key objectives of the Master WCM update process has been to develop a plan to operate the USACE reservoir projects more effectively as an integrated system in accordance with authorized project purposes. Even with an updated WCM, there will be a greater dependence on releases from the USACE Chattahoochee River reservoirs to meet minimum flow requirements for endangered species conservation below Jim Woodruff Lock and Dam under drought conditions, when uncontrolled flows from the Flint River could be abnormally low. Conversely, abnormally high Flint River flow conditions would not necessarily trigger a corresponding reduction in releases from the Chattahoochee River reservoirs, which would adversely affect middle and lower Chattahoochee River communities. Releases from the USACE Chattahoochee River reservoirs under normal or abnormally high flow conditions in the ACF Basin are governed by project guide curves, action zones, hydropower needs, and other considerations associated directly with each individual reservoir. The rules contain provisions for opportunities to refill the federal storage reservoirs on the Chattahoochee River during periods when endangered species flow requirements can be met primarily by Flint River flows. Refilling the reservoirs is a critical component of managing the system to fulfill authorized project purposes under various hydrologic conditions. During the refill period, USACE continues to manage releases from its reservoirs to fulfill authorized purposes throughout the system.

Response to ACF184 – Florida Department of Environmental Protection

RICK SCOTT
GOVERNOR

January 28, 2016

Mr. Jonathan P. Steverson
Secretary
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, MS 10
Tallahassee, Florida 32399-3000

Dear Secretary Steverson:

Pursuant to Section 380.23(2)(b), Florida Statutes, the Florida Department of Environmental Protection (Department) has referred an objection and finding of inconsistency on the *Draft Environmental Impact Statement, Update of the Master Water Control Manual for the Apalachicola-Chattahoochee-Flint Rivers, Alabama, Florida, and Georgia and a Water Supply Assessment* for a final determination.

After reviewing all the comments, findings and recommendations of all participating agencies, and having received findings of inconsistencies from the Department, the Florida Fish and Wildlife Conservation Commission and the Florida Department of State, as well as the comments of the Northwest Florida Water Management District, I hereby affirm the agencies' finding of inconsistency, a copy of which is enclosed.

Sincerely,

Rick Scott
Governor

cc: Nick Wiley, Executive Director, Florida Fish and Wildlife Conservation Commission
Ken Detzner, Secretary, Florida Department of State
Brett Cyphers, Executive Director, Northwest Florida Water Management District

THE CAPITOL
TALLAHASSEE, FLORIDA 32399 • (850) 488-2272 • FAX (850) 922-4292

2

Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

January 29, 2016

Colonel Jon J. Chytka
U.S. Army Corps of Engineers
Mobile District
Attn: PD-EI (ACF-DEIS)
Post Office Box 2288
Mobile, Alabama 36628

RE: Department of the Army, U.S. Army Corps of Engineers – Draft Environmental Impact Statement, Updated Master Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida and Georgia and Water Supply Storage Assessment
SAI # FL201510087461C

Dear Colonel Chytka:

This letter serves to notify the U.S. Army Corps of Engineers (Corps), pursuant to 15 C.F.R. §930, Subpart C, that the Florida Department of Environmental Protection (DEP), the Florida Department of State (DOS), and the Florida Fish and Wildlife Conservation Commission (FWC) object to the *Draft Environmental Impact Statement, Updated Master Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida and Georgia and Water Supply Storage Assessment* (Draft EIS) as inconsistent with the enforceable policies of the Florida Coastal Management Program (FCMP). DEP received and commenced review of the Draft EIS containing the Corps' consistency statement on October 1, 2015. DEP's response would have been due on November 30, 2015, but is now due January 15, 2016, pursuant to an extension granted by the Corps.

As you are aware, agencies of the State of Florida have provided substantial comments during the scoping for the development of this plan and have continuously expressed concerns to the Corps and others that the Apalachicola-Chattahoochee-Flint (ACF) system is substantially over allocated and burdened with Georgia's existing consumptive uses. Now the Corps is proposing changes to its operations in the ACF Basin in response to Georgia's request to adjust operation and accommodate increased water supply withdrawals from Lake Lanier and the Chattahoochee River. Agencies of the State of Florida have demonstrated, throughout multiple comment phases, the potential for adverse impacts associated with these changes.

A

It has been, and continues to be, DEP's position that the Draft EIS should have evaluated a reasonable alternative that would conform to Florida's enforceable polices.

The enforceable policies of the federally approved FCMP that the Draft EIS is found to be inconsistent with include Sections 253.034(5)(a), 267.061, 373.414, 379.1025, 379.104, 379.2223, 379.2401(1), and

Response to ACF184 – Florida Department of Environmental Protection

A. USACE operates to balance all authorized purposes throughout the ACF Basin.

Water conservation in both urban and rural areas is the responsibility of state or local governments and outside the scope of the Master water control manual (WCM) update. The water supply storage assessment (WSSA) (appendix B in the environmental impact statement [EIS]) considered the effect of implementing additional conservation measures as described by the Metropolitan North Georgia Water Planning District on the future per capita use rate in Metro Atlanta. Section 2.1.1.2.10.1 of the EIS provides a summary of various State of Georgia programs to plan for and regulate surface water and groundwater withdrawals and use in the state, including conservation and efficiency measures and mandatory constraints on municipal and industrial and agricultural water use during extreme drought conditions. A more detailed overview of these programs is presented in appendix G of the EIS.

379.2401(3), Florida Statutes, as more thoroughly described in Attachments A – D, attached hereto and incorporated herein.

Based on the information provided in this letter, including all incorporated attachments, DEP hereby notifies the Corps, pursuant to 15 C.F.R. § 930.43, that the Draft EIS is inconsistent with the enforceable policies of the FCMP. Of particular note, the Corps' determination that the Draft EIS is "consistent to the maximum extent practicable" was not supported with data and information explaining the basis for that determination, such as consistency being prohibited by existing law applicable to the federal agency, as required by 15 C.F.R. § 930.32.

Although I regret having to find the Draft EIS inconsistent with the enforceable policies of the FCMP, I hope the Corps will ensure that future planning efforts address compliance with Florida's enforceable polices.

Please be aware that DEP, FWC, DOS and the Northwest Florida Water Management District have included in the attached letters additional comments pursuant to the National Environmental Policy Act.

Sincerely,

Jonathan P. Steverson
Secretary

Attachments:

Attachment A: Objection and comments from the Florida Department of Environmental Protection
Attachment B: Objection and comments from the Florida Fish and Wildlife Conservation Commission
Attachment C: Objection and comments from the Florida Department of State
Attachment D: Comments from the Northwest Florida Water Management District

cc: Jeffrey L. Payne, Acting Office from Coastal Management Director, NOAA
Lewis C. Sumner, U.S. Army Corps of Engineers
Craig Varn, General Counsel, DEP
Carla Gaskin, Deputy Chief of Staff, DEP
Chris Stahl, Florida State Clearinghouse Coordinator, DEP
Nick Wiley, Executive Director, FWC
Jennifer Fitzwater, Chief of Staff, FWC
Bud Vielhauer, General Counsel, FWC
Robert F. Bendus, State Historic Preservation Office and Director of Historical Resources, DOS
Carlos Rey, Counsel, DOS
Graham Lewis, Environmental Scientist IV, Northwest Florida Water Management District
Breck Brennan, Counsel, Northwest Florida Water Management District

Response to ACF184 – Florida Department of Environmental Protection

3

Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

January 7, 2016

Mr. Chris Stahl
State Clearinghouse Coordinator
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, MS 47
Tallahassee, Florida 32399-3000

Re: Department of the Army, U.S. Army Corps of Engineers, Draft Environmental Impact Statement, Update of the Master Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida, and Georgia and a Water Supply Assessment
SAI #FL201510087461C

Dear Mr. Stahl:

The Florida Department of Environmental Protection (DEP) has reviewed the U.S. Army Corps of Engineers' (Corps') Draft Environmental Impact Statement, Update of the Master Water Control Manual for the Apalachicola-Chattahoochee-Flint (ACF) River Basin in Alabama, Florida, and Georgia and a Water Supply Assessment (DEIS)[1] and its consistency determination under the Coastal Zone Management Act (CZMA). The proposed action alternative (PAA) is Alternative 7H as described in the DEIS Section 5.2.9. DEP provides the following objections, comments, and recommendations in accordance with its duties under Chapters 253, 258, 373 and 403, Florida Statutes, and the State of Florida's approved Coastal Management Program. DEP also provides additional comments under the National Environmental Policy Act (NEPA).

I. INTRODUCTION

As Florida has repeatedly demonstrated in previous comments, the ACF system is substantially over allocated and burdened with existing consumptive uses by the State of Georgia on both the Chattahoochee and Flint River systems.[2] Florida has suffered significant harm from Georgia's increased consumption on the Flint River and from evaporative losses at many small, non-federal impoundments on that river, which are unaccounted for in the Corps analysis. Florida also

A

[1] *Notice of Availability and Notice of Open House—Draft Environmental Impact Statement for Updated Water Control Manuals for the Apalachicola-Chattahoochee-Flint River Basin*, 80 Fed. Reg. 59,741 (Oct. 2, 2015).
[2] *See, e.g.*, Florida Department of Environmental Protection, RE: Comments on AC Water Control Manual, 4 (January 14, 2013).

Response to ACF184 – Florida Department of Environmental Protection

A. USACE has considered Georgia's 2013 request for water, and their subsequent revised 2015 request, in response to the June 28, 2011, opinion of the U.S. Court of Appeals for the 11th Judicial Circuit. This opinion set aside the United States Army's 2002 decision to deny Georgia's 2000 request and ordered a remand to USACE to reconsider whether it has the legal authority to operate the Buford project to accommodate Georgia's request, in light of the legal authority conferred by Congress in the River and Harbor Act of 1946; Public Law 84-841 (July 30, 1956) (1956 Act); and the Water Supply Act of 1958.

Water conservation in both urban and rural areas is the responsibility of state or local governments and outside the scope of the Master water control manual (WCM) update. The water supply storage assessment (WSSA) (appendix B in the environmental impact statement [EIS]) considered the effect of implementing additional conservation measures as described by the Metropolitan North Georgia Water Planning District on the future per capita use rate in Metro Atlanta. Section 2.1.1.2.10.1 of the EIS provides a summary of various State of Georgia programs to plan for and regulate surface water and groundwater withdrawals and use in the state, including conservation and efficiency measures and mandatory constraints on municipal and industrial and agricultural water use during extreme drought conditions. A more detailed overview of these programs is presented in appendix G of the EIS.

suffers harm from Georgia's water withdrawals on the Chattahoochee River. Now Georgia has asked the Corps "to adjust the operation of Lake Lanier, and to enter into agreements with the State or water supply providers to accommodate increases in water supply withdrawals from Lake Lanier and downstream at Atlanta"[3] on the Chattahoochee River to meet Georgia's projected demand for 621 million gallons per day (mgd) through 2040.[4] The Corps is evaluating changes to its operations at Georgia's urging to accommodate Georgia's request for increased water supply on the Chattahoochee River.

Georgia's consumption almost entirely dictates the water entering the Corps' reservoir system. While the amount of rainfall also contributes to inflow, Georgia consumes more water when rainfall declines, thus exacerbating conditions. As a result, the volume of water available for Corps project purposes, including protection of downstream fish and wildlife resources, is significantly restricted by Georgia's consumption. Despite these constraints, the Corps is proposing a PAA to facilitate even greater storage to upstream consumptive uses at the expense of downstream resources and other operating purposes. The DEIS must analyze the full impacts of – and alternatives to – facilitating such water use under NEPA.

The Corps correctly acknowledges that it does not have authority to determine water rights within and among states. Absent an equitable apportionment of the waters of the ACF basin, which Florida is now seeking in a case filed in the U.S. Supreme Court, Georgia is responsible for regulating consumption within its borders. Corps operations cannot prevent the severe harm that Georgia's consumptive water use is causing in the Apalachicola River and Bay. However, the Corps has both the authority and the responsibility to reject water storage requests that imperil protected species and interfere with other project purposes.

Moreover, the Corps has the discretion to determine how to operate its facilities in a way that fairly balances downstream fish and wildlife resources and does not favor upstream water supply requests. As the U.S. Fish and Wildlife Service (USFWS) has explained, "the negative effects of the PAA on fish and wildlife resources are a consequence of reservoir system operation changes *and increases in consumptive demands* that are part of the PAA."[5] Yet, the Corps' flawed methodology and data for ranking and selecting alternatives provide greater weight to upstream project purposes, including water supply and hydropower, over downstream fish and wildlife purposes.

The PAA would facilitate increased ACF withdrawals and consumption simply because Georgia requested it. While purporting to independently assess Georgia's consumptive use projections, the Corps has essentially taken Georgia at its word. The Corps has not meaningfully evaluated water conservation alternatives that would preserve inflows to the Corps reservoirs and increase

[3] 80 Fed. Reg. at 59,741.
[4] On December 4, 2015, the State of Georgia revised its January 11, 2013, water supply request. Georgia now requests 242 million gallons per day (mgd) directly from Lake Lanier and 355 to 379 mgd from the Chattahoochee River above Peachtree Creek. *See* Letter from Judson H. Turner, Georgia Department of Natural Resources, to Jon J. Chytka, U.S. Army Corps of Engineers (December 4, 2015).
[5] USFWS, Draft Fish and Wildlife Coordination Act Report, 15 (July 2015) (emphasis added) (hereinafter "Draft FWCA Report").

Response to ACF184 – Florida Department of Environmental Protection

A

downstream flows, as a result. On the contrary, the Corps merely summarizes Georgia's existing conservation efforts and asserts, without analysis, that it is "unlikely that additional conservation measures would result in a significant reduction in Georgia's 2040 need."[6] This conclusory statement falls short of NEPA's fundamental requirement that agencies rigorously explore all reasonable alternatives to support informed decision-making. NEPA also requires the Corps to evaluate the cumulative impact of Georgia's water use and Corps operations on downstream resources and to meaningfully consider potential mitigation measures. The DEIS fails on both counts.

The harmful impacts of Georgia's increasing water consumption are evident. Periods of low flow to the Apalachicola River and Bay have increased exponentially with a record in 2012 for the least amount of water delivered to the Bay since this information was first tracked in 1923. Yet, 2012 was not the year with the least rainfall.

The DEIS obscures the magnitude of the harm by using flawed unimpaired flow data, relying upon unreliable return flow projections, and underestimating basin wide cumulative water consumption. As Florida has previously shown, reduced flows have harmed Florida's fish and wildlife. This environmental degradation has threatened Florida's vital interests in the Apalachicola River and Bay. The significant harm to downstream resources is also recognized by the USFWS, the expert agency tasked with consulting with the Corps to prevent loss of and damage to wildlife resources. However, the DEIS disregards these harmful impacts of the PAA.

- The USFWS warns "the PAA results in more frequent lower flows that remain low for longer periods compared to the NAA, thereby creating conditions that could increase mortality of both common and federally-listed mussels."[7] Yet the DEIS asserts "adverse effects on listed mussel species in the Apalachicola River would not be expected."[8]

- The USFWS points out "[e]ffects to Gulf Sturgeon were not adequately assessed. . . ."[9] However, the DEIS concludes "[n]o effects on Gulf sturgeon."[10]

- The USFWS points to "[s]everal lines of evidence suggest[ing] that the PAA may result in greater Apalachicola Bay salinities when compared to the NAA."[11] And while it may result in "relatively minor salinity shifts," the USFWS finds it "may exceed salinity thresholds for juvenile Gulf Sturgeon and oysters."[12] However, the DEIS acknowledges only "a negligible effect on the hydrodynamic and salinity characteristics of the Apalachicola Bay estuary."[13]

B

[6] DEIS at 5-4.
[7] USFWS, Draft Fish and Wildlife Coordination Act Report, 21 (July 2015) (hereinafter "Draft FWCA Report").
[8] DEIS at ES-30.
[9] Draft FWCA Report at 33.
[10] DEIS at ES-30.
[11] Draft FWCA Report at 23.
[12] *Id.*
[13] DEIS at ES-30.

Response to ACF184 – Florida Department of Environmental Protection

B. USACE gave consideration to the USFWS recommendations in the draft Fish and Wildlife Coordination Act report dated July 31, 2015, which was also reviewed and endorsed by the Florida Fish and Wildlife Conservation Commission. USACE considered the proposed water management alternative provided by the USFWS. Although the USFWS alternative was not ultimately selected as the PAA, components of the USFWS alternative were incorporated in the PAA. Some of the USFWS recommendations were not within the authority of USACE to implement as part of the Master WCM update process. USACE also developed a detailed response to the draft USFWS recommendations in August 2015, and the USACE response was included in appendix J of the draft EIS.

DEP has made numerous attempts to communicate its concerns to the Corps, including NEPA scoping comments, Fish and Wildlife Coordination Act comments and comments related to Endangered Species Act consultation.

DEP agrees with the Florida Fish and Wildlife Conservation Commission (FWC)[14] that the PAA, which would provide increased upstream water supply to Georgia, will have adverse effects to fish, wildlife, habitat resources, and, additionally, adds to that water quality concerns. Sections III and IV below provide DEP's response to the Corps' consistency determination under the CZMA. The comments in Section V identify analysis needed for the DEIS and PAA to be consistent with the Corps' statutory responsibilities under NEPA and the Fish and Wildlife Coordination Act.

II. FLORIDA'S SIGNIFICANT INTEREST IN PROTECTING ITS RESOURCES FROM HARMFUL IMPACTS OF UPSTREAM CONSUMPTION

The inherent value of the Apalachicola River and Bay ecosystem is of upmost importance to Florida. This unique and pristine ecosystem is one of the most productive estuarine systems on the Gulf Coast and is recognized both nationally and internationally. The congressionally designated Apalachicola National Estuarine Research Reserve (Apalachicola NERR) is a United Nations Educational, Scientific and Cultural Organization Biosphere Reserve, and the region also includes Outstanding Florida Waters (OFWs) and an aquatic preserve designated under Florida law.

The Apalachicola ecosystem hosts a rich diversity of animals and plants, including more than 100 federal or State endangered, threatened or species of concern. The non-tidal portion of the floodplain flanking the River supports a complex forest/swamp ecosystem. Hundreds of miles of off-channel floodplain sloughs, streams and lakes within the Apalachicola River Basin are directly influenced by the volume of flow in the River itself.

C

The Apalachicola River discharges its nutrient-rich freshwater into the Apalachicola Bay. The 280-square-mile Bay provides the vast majority of Florida's rich oyster harvest, supports an active finfish industry and serves as an important nursery area for many marine species.

The Apalachicola River and Bay supports a culturally rich community, dependent on the region's natural resources. Significant local traditions have evolved around the region's seafood and coastal industries, with entire communities surviving for generations on Bay fishing. Recreation and tourism are also important drivers for the local economy.

Florida has taken key steps to preserve the Apalachicola region, given its substantial value and importance to the State. As examples:

- Florida has extended heightened legal protections to the area through designations of Outstanding Florida Waters and an aquatic preserve;

[14] *See* Attachment B to the State's response, Comment from FWC.

Response to ACF184 – Florida Department of Environmental Protection

C. USACE is not authorized to operate the ACF Basin reservoir projects to provide releases specifically for the benefit of fish and wildlife resources or associated habitat conditions in Apalachicola Bay. The environmental effects of the PAA on the Apalachicola River and Bay compared to the NAA (current reservoir operations) are considered in the EIS. The analysis in the EIS demonstrates that the PAA would result in little to no change in flow and water quality conditions in the Apalachicola River and Bay and, consequently, that there would be little to no effect on biological, cultural, and other resources in the river and bay.

- Florida has funded the purchase of 337,606 acres within the region, water quality restoration projects in the estuary and oyster shelling and research; and

- The Northwest Florida Water Management District has adopted rules that reserve from use consumptive withdrawals of surface water from the Apalachicola and Chipola Rivers and Chipola Cutoff.

Maintaining an ample flow of water from the Chattahoochee and Flint River basins is critical to maintaining the ecological, social and economic value of the Apalachicola River and Bay. However, Georgia's increasing storage and consumption of water is leading to the lowest flows on record into the Apalachicola River, harming mussel and fish assemblages, plant species, shellfish species and the communities that depend upon them. The Corps PAA would facilitate even further water supply and storage for Georgia.

III. FINDING OF MATERIAL FAILURE TO COMPLY WITH THE COASTAL ZONE MANAGEMENT ACT.

The Corps has an affirmative obligation to design any updates to its operations in a manner that is consistent with Florida's enforceable policies to the maximum extent practicable and failed to do so. The CZMA requires the Corps to carry out any updates to its ACF operations in a manner consistent with the enforceable policies of Florida's approved Coastal Management Program.[15] To fulfill this purpose, the CZMA implementing regulations require: (1) that the Corps "coordinate with the State agency prior to providing the determination";[16] (2) that the consistency determination "must be based upon an evaluation of the relevant enforceable policies of the management program";[17] and (3) that the determination "shall also include a detailed description of the activity, its associated facilities, and their coastal effects, and comprehensive data and information sufficient to support the Federal agency's consistency statement."[18] The Corps has not fulfilled these requirements.

D

First, the Corps did not coordinate on the consistency determination in any meaningful way with Florida before providing the State of Florida a copy of the DEIS on October 1, 2015. Notably, the USFWS encouraged the Corps to coordinate with Florida regarding impacts to the estuary and the Corps has not done so.[19]

Second, the determination is not based on relevant policies of Florida's Coastal Management Program. Rather, the Corps reports its consistency with Chapters 370 and 372, Florida Statutes. However, those chapters of statute have not existed since 2008. On September 11, 2009, DEP received approval from the National Oceanic and Atmospheric Administration (NOAA) that changes to the enforceable statutes during the 2008 Legislative Session would be incorporated

[15] *See* 16 U.S.C. § 1456(c)(1)(A).
[16] 15 C.F.R. § 930.34(a)(1).
[17] *Id.* at § 930.39(a).
[18] *Id.*
[19] *See* Draft Fish and Wildlife Coordination Act (FWCA) Report at 50.

Response to ACF184 – Florida Department of Environmental Protection

D. Additional analysis was conducted and the documentation of compliance with the Coastal Zone Management Act is included in the introduction to section 6 and in appendix L of the final EIS.

into the approved enforceable policies of the Florida Coastal Management Program. *See* Exhibit 1, attached hereto and incorporated herein. Among those changes were a significant number of technical changes, whereby Chapters 370 and 372, Florida Statutes, were transferred to Chapter 379, Florida Statutes. Since that time, the Florida Legislature has amended Chapter 379, Florida Statutes, and, each time, as needed, DEP submitted the amendments to NOAA.

Third, the DEIS does not provide information sufficient to support the Corps' consistency determination. The Corps' statement references sections of the DEIS and generally disclaims incremental effects on flow conditions in the Apalachicola River. The Corps seemingly copied and pasted an old matrix from more than seven years ago and, without having looked at the statutes, merely added a cross-reference to the DEIS that discussed something that generally appeared to be the topic of the *entire chapter* of the Florida statutes. The CZMA requires more from federal agencies – a substantive and comprehensive review. The Corps' assertions regarding consistency are not supported in the DEIS and the Corps' conclusions rely upon flawed data and methodologies, such as the unimpaired flow data and the way the Corps defines basin inflow that Florida has previously shown to bias upstream consumption over downstream resources. Moreover, the Corps' findings regarding the effects of flow conditions on the Apalachicola River are contrary to the USFWS findings noted above.

D

A federal agency's obligation under the CZMA is not merely perfunctory, but a substantive requirement required prior to taking federal action. "Each Federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone *shall* be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs."[20] The term "consistent to the maximum extent practicable" means "fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency."[21] The Corps' failure to comply with the CZMA regulatory requirements reveals that the Corps made no attempt to ensure that the PAA was consistent with the enforceable policies of the State to the maximum extent practicable. Had the Corps coordinated with Florida and complied with the regulatory requirements, it would have identified the correct statutes and, DEP believes, would have resulted in a meaningful review of the PAA to ensure it was consistent with the approved enforceable polices to the maximum extent practicable.

The Corps must reconsider the PAA and the DEIS analysis to comply with the Act – that is, to review the enforceable policies of the State of Florida, consider the effects of the PAA on Florida, as outlined in previous the State's comments and the USFWS's Draft FWCA Report, and make the PAA consistent with the enforceable polices to the maximum extent practicable. Upon such a re-draft, the Corps must then resubmit a consistency determination to the State.

[20] 16 U.S.C.A. § 1456(c)(1)(A) [italics added].
[21] 15 C.F.R. § 930.32.

Response to ACF184 – Florida Department of Environmental Protection

IV. DETERMINATION OF INCONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT.

On the bases set forth below, DEP objects to the Corps' consistency determination under the CZMA and finds the DEIS inconsistent with Florida's approved enforceable polices under DEP's purview including Sections 253.034(5)(a) and 373.414, Florida Statutes.

A. DEP finds that the PAA is inconsistent with Florida's enforceable policy, which states: "State lands shall be managed to ensure the conservation of the state's plant and animal species and to ensure the accessibility of state lands for the benefit and enjoyment of all people of the state, both present and future." § 253.034(5)(a), Fla. Stat.

Aquatic preserves are State-owned submerged lands that "have exceptional biological, aesthetic, and scientific value, as hereinafter described, be set aside forever as aquatic preserves or sanctuaries for the benefit of future generations."[22] The Apalachicola Bay Aquatic Preserve was established in 1969 and is described in the Official Records of Gulf County in Book 46, pages 77-81, and in the Official Records of Franklin County in Volume 98, pages 102-106.[23] These and other coastal resources have been recognized by the Florida Legislature as providing "a variety of natural, commercial, recreational, ecological, industrial, and aesthetic resources of immediate and potential value to the present and future well-being of the residents of this state which will be irretrievably lost or damaged if not properly managed."[24]

E

The Apalachicola NERR, which encompasses within its boundaries the aquatic preserve, was designated in 1979 and is a joint partnership between the NOAA and DEP. Apalachicola Bay is not only one of NOAA's 28 National Estuarine Research Reserves and a state aquatic preserve, but also a United Nations Educational, Scientific, and Cultural Organization Man and the Biosphere Reserve. As the second largest research reserve in the country at 234,715 acres, much of the acreage (117,485) is State-owned submerged lands, including significant acreage of brackish submerged vegetation, seagrasses (*Halodule wrightii*), oyster reef (*Crassostrea virginica*), tidal flats and unconsolidated bottom. DEP is entrusted with the duty to manage approximately 117,485 acres of sovereign submerged lands and 6,794 acres of uplands.

The remaining wetland and upland areas within Apalachicola NERR are leased and managed by state and federal entities, including the Northwest Florida Water Management District, FWC, St. Vincent National Wildlife Refuge and Dr. Julian G. Bruce St. George Island State Park (the latter of which is also managed by DEP). The remainder of inholdings, managed by Apalachicola NERR, includes an extensive fresh/brackish forested floodplain- marsh system and a barrier island (Little St. George Island). Much of the property adjacent to the Reserve and Apalachicola Bay (more than 85 percent of Franklin County) is also publicly owned, such as the Apalachicola National Forest and Tate's Hell State Forest, as well as land owned by The Nature Conservancy and FWC.

[22] § 258.36, Fla. Stat.
[23] § 258.39, Fla. Stat.
[24] § 380.21, Fla. Stat.

Response to ACF184 – Florida Department of Environmental Protection

E. USACE responded specifically to the USFWS draft Fish and Wildlife Coordination Act report comments in appendix J of the EIS.

The comment specifically refers to access to the floodplain during drought. It also mentions access to that area by aquatic organisms. In both cases, floodplain connectivity occurs during high water, not during droughts. USACE would have no mechanism to provide sufficient water to establish the necessary high flows during drought conditions.

Determination of Inconsistency

The enforceable polices of the State provide that "State lands shall be managed to ensure the conservation of the state's plant and animal species and to ensure the accessibility of state lands for the benefit and enjoyment of all people of the state, both present and future."[25]

The Corps consistency determination states that "[t]he PAA would not have an adverse effect on administration and management of state lands in the Apalachicola River corridor" nor on the "administration and management of state parks and preserves."[26] DEP disagrees. The PAA, which includes increased upstream water supply, will negatively affect DEP's ability to fulfill its statutory obligations to manage state lands in a way that ensures (1) "the conservation of the state's plant and animal species" or (2) "the accessibility of state lands for the benefit and enjoyment of all people of the state, both present and future."[27]

(1) *Conservation of the State's plant and animal species.* Apalachicola Bay lies at the terminus of the Apalachicola River. The river has the greatest influence on the salinity of Apalachicola Bay and thus, the species and habitats that are located there. Because of the myriad habitats, temperate climate and relatively pristine condition, the Apalachicola NERR is one of the most biologically diverse areas in North America. The Apalachicola NERR is home to several endangered and imperiled species. The river and bay are also historically tremendously productive, supporting commercial and recreational fisheries including finfish, shrimp and oysters. However, the PAA, including increased water supply to Georgia, would imperil the State's ability to conserve the State's plant and animal species in the river and bay by decreasing flows and increasing frequency and duration of extreme low-flow events. DEP's concerns are mirrored in the USFWS Draft FWCA Report, which finds that "based on model results provided by the Corps, the negative effects of the PAA on fish and wildlife resources are a consequence of reservoir system operation changes and *increases in consumptive demands* that are part of the PAA."[28]

As further support, DEP agrees with FWC's review as to the impact of the PAA on plant and animal species and incorporates by reference herein its letter (Attachment B).

(2) *Accessibility of State lands for the benefit and enjoyment of all people of the State, both present and future.* The low-flow conditions, especially during drought, proposed by the Corps in the PAA limit access to backwater areas within the floodplain of the Apalachicola River. These areas are important nurseries for many fish, invertebrates, reptiles and birds. As such, the desire is high for recreational use including boating, kayaking, fishing, birding and hunting. Tourism

[25] § 253.034(5)(a), Fla. Stat.
[26] DEIS at L-4.
[27] § 253.034(5)(a), Fla. Stat.
[28] Draft FWCA Report at 51 [emphasis added].

Response to ACF184 – Florida Department of Environmental Protection

E

throughout the area, and the revenue derived from such tourism, is frequently dependent on guide fishing, ecotourism and other natural resource-based activities.

The low-flow ecosystem changes set forth in the PAA may additionally alter DEP's ability to conserve the system in its present state or in its historical state (recognized as an aquatic preserve, OFW and NERR). These conditions would force DEP to modify its management planning and approach (e.g., exotic species management, restoration and monitoring), shifting funding priorities and focus areas further toward these issues and away from its other goals and priorities.

For the reasons set forth above, DEP finds the PAA inconsistent with Section 253.034(5)(a), Florida Statutes, an approved State enforceable policy.

B. DEP finds that PAA is inconsistent with the requirements that dams be operated with required reasonable assurances that the State water quality standards will not be violated and that the operation is clearly in the public interest pursuant to Section 373.414, Florida Statutes.

The Jim Woodruff Dam "is immediately below the confluence of the Chattahoochee and Flint Rivers and marks the upstream extent of the Apalachicola River."[29] The Corps operates five dams on the Chattahoochee River, including the Jim Woodruff Dam. There are no federal impoundments on the Flint River upstream of Jim Woodruff Dam. Georgia consumptively uses water withdrawn from both the Chattahoochee and Flint Rivers. The Corps determines how much water to release from its reservoirs based, in part, upon calculated inflows to the ACF Basin. Georgia's use of those waters reduces the inflows and the resulting flows released from Jim Woodruff Dam.

F

Recognizing the potential for environmental impacts resulting from the construction and operation of surface water management systems, the Florida Legislature set forth in Part IV of Chapter 373, Florida Statutes, criteria for activities in surface waters and wetlands. More specifically, Section 373.4131, Florida Statutes, a State enforceable policy, sets forth Florida's regulation of the operation of dams and reservoirs, among other activities. Further, the Florida Legislature specifically requires that the operation of dams must "not be harmful to the water resources" nor be "inconsistent with the overall objectives of the district."[30] In order for a regulated activity to meet those two requirements, reasonable assurances that State water quality standards applicable to jurisdictional waters[31] will not be violated and that such activity in, on, or over jurisdictional surface waters or wetlands[32] is not contrary to the public interest.[33] Florida Statutes make this standard even stricter for an activity that "significantly degrades or is within an Outstanding Florida Water (OFW)."[34] The vast majority of the Apalachicola River and Bay

[29] DEIS at 7-1.
[30] § 373.414(1), Fla. Stat.
[31] § 403.031(13), Fla. Stat.
[32] § 373.421(1), Fla. Stat.
[33] § 373.414(1), Fla. Stat.
[34] § 373.414(1), Fla. Stat.

Response to ACF184 – Florida Department of Environmental Protection

F. The comment directly relates to concerns about flow. As previously discussed, the PAA would not reduce median flows or low flows on the Apalachicola River. Compared to the NAA, the PAA would result in one instance of 4,500 cfs compared to zero during the 73-year period of record. Overall, water quality dissolved oxygen on the Apalachicola River would remain unchanged under the PAA, as discussed in EIS section 6.1.2.

As previously discussed, the median and low flows below Jim Woodruff Lock and Dam would remain unchanged. Additionally, minimum releases required by the current revised interim operating plan would remain unchanged in the PAA.

are designated as an OFW.[35] Because it is an OFW, proposed activities must be "clearly in the public interest."[36]

Determination of Inconsistency

DEP finds that the PAA is inconsistent with Section 373.414, Florida Statutes, an enforceable policy, in that (1)) the State sets forth water quality standards for Dissolved Oxygen which may be adversely impacted by the PAA, primarily in the sloughs and lakes connected to the Apalachicola River and (2) the PAA is contrary to the public interest.

(1) DEP does not believe that the DEIS can properly claim that "[n]o water quality problems below Jim Woodruff Dam have been identified in association with project operations."[37] The DEIS appears to only review Dissolved Oxygen as it relates to releases of water from reservoirs, but fails to account for how low flows may cut off the connectivity between the mainstem of the river and the sloughs and lakes on the floodplain and adversely affect water quality. With certain connectivity losses, Dissolved Oxygen concentrations in sloughs and lakes in the Apalachicola floodplain can decrease. Dissolved Oxygen water quality standards are specifically set forth in Florida Administrative Code Rule 62-302.553. DEP finds that the PAA fails to fully review its impacts to Dissolved Oxygen and finds that decreases in Dissolved Oxygen could result in a violation of the state's Dissolved Oxygen water quality criterion. F

For example, one study found that the "discharge of the Apalachicola River directly affects the connectivity between the mainstem of the river and the sloughs or lakes on the floodplain and thus the overall quality of habitat for all aquatic organisms." Further, the results of the study showed that low Dissolved Oxygen levels in the sloughs or lakes were associated with periods of low flow in the mainstem of the river and the resulting loss of connectivity between the mainstem of the river and the sloughs or lakes. These depressed Dissolved Oxygen levels often fell below the applicable water quality criterion intended to protect fish and other aquatic organisms from adverse/lethal impacts.[38] These types of adverse impacts do not appear to have been evaluated in the DEIS.

(2) DEP finds that the operations as described in the PAA are contrary to the public interest. The enforceable policies of the State outline how to determine whether an activity is "not contrary to the public interest or is clearly in the public interest."[39] DEP finds that the Updated Water Control Plan fails to meet many of the criteria established in Section 373.414(1)(a), Florida Statutes:

1. Whether the activity will adversely affect the public health, safety, or welfare or the property of others;

[35] Fla. Admin. Code R. 62-302.700.
[36] § 373.414(1), Fla. Stat.
[37] DEIS at 7-8.
[38] Environmental Science Associates/Phillip Williams & Associates, Appalachia River Large Slough Water Quality Monitoring Report: An Assessment of Habitat Quality Using Dissolved Oxygen Concentrations in Floodplain Water Bodies in Relation to River Flow and Connectivity, March 12, 2012 (rev. Oct. 1, 2013).
[39] § 373.414(1), Fla. Stat.

2. Whether the activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
3. Whether the activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling;
4. Whether the activity will adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
5. Whether the activity will be of a temporary or permanent nature;
6. Whether the activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of Section 267.061, Florida Statutes; and
7. The current condition and relative value of functions being performed by areas affected by the proposed activity.

F

Specifically, DEP finds that the PAA, including increased upstream water consumption, will certainly adversely affect fishing and recreational values and adversely alter the value of functions being performed by the bay and river.[40] These impacts are well documented by FWC in its response,[41] which is incorporated by reference herein.

DEP finds that the PAA, including increased upstream water consumption, would also adversely affect the flow of water, as documented by the USFWS.[42]

Finally, DEP finds that the low flow conditions proposed by the PAA would adversely affect navigation, a statement supported by the Corps in its DEIS. DEP disagrees, however, with the Corps' statement that "[t]he lack of dredging and routine maintenance has led to inadequate depths in the Apalachicola River navigation channel…."[43] Rather, DEP finds the Corps' explanation later in the document more accurate. "Flow is the primary factor that influences the degree to which authorized project depths in the Apalachicola River navigation channel are achieved."[44] Additional flows in the Apalachicola River would result in increased navigability.

For these reasons, DEP finds that the PAA is contrary to the public interest and therefore inconsistent with the enforceable policies of the State.

C. DEP and the Northwest Florida Water Management District jointly find that the Updated Water Control Plan frustrates and impinges on the reservation of water adopted by the District in accordance with Section 373.223, Florida Statutes.

The use of water is regulated under Part II of Chapter 373, Florida Statutes. Florida has long protected water resources and ecology of an area through its regulatory program and implementation of the three-part test, for which an applicant must establish that the proposed use

[40] *See* § 373.414(1)(a)2. and 7., Fla. Stat.
[41] *See* Attachment B to the State's response, Comment from FWC.
[42] *See, e.g.*, Draft FWCA Report at 21, 34 and § 373.414(1)(a)3., Fla. Stat.
[43] DEIS at ES-12.
[44] DEIS at 2-66 [emphasis added].

of water is a reasonable-beneficial use as defined in Section 373.019, Florida Statutes; will not interfere with any presently existing legal use of water; and is consistent with the public interest.[45] Permits are required for these consumptive uses, which must assure that the use is not harmful to the water resources of the area. § 373.219(1), Fla. Stat.

In addition to permit conditions, the Florida law provides that the State's Water Management Districts may "reserve from use by permit applicants, water in such locations and quantities, and for such seasons of the year, as in its judgment may be required for the protection of fish and wildlife or the public health and safety."[46] Recognizing the need the protect the Apalachicola River, floodplain and Bay, the Northwest Florida Water Management District (District) adopted by rule a reservation at a number of gauges for the protection of fish and wildlife for all seasons of the year.[47] Further, the District found that surface water withdrawals from the main stem of the Apalachicola River, the main stem of the Chipola River, and the Chipola Cutoff were not in the public interest.[48]

G

The reductions in flow resulting from the PAA frustrate the entire purpose of the reservation. For reasons already explained in this memo and incorporated herein, the PAA fails to protect fish and wildlife and results in flow reductions so severe that the efficacy of protective measures instituted by the District under Florida law are diminished.

V. THE DEIS FAILS TO IDENTIFY REASONABLE ALTERNATIVES, ADVERSE EFFECTS, OR SET FORTH MITIGATION OF IMPACTS.

DEP has, throughout the scoping process, provided numerous comments on what the EIS should include. Unfortunately, many issues continue to remain unaddressed by the DEIS. As outlined below, the Corps must meaningfully consider all reasonable alternatives, the full impacts of the alternatives, including the cumulative impacts of basin wide consumption, and potential measures to mitigate the significant harm to downstream resources.

A. The DEIS improperly frames the action, precluding meaningful analysis of impacts.

The framing of the action and identification of a baseline are critical steps in an agency's NEPA analysis. The purpose and need for the action establishes the reasonable range of alternatives that an agency must consider in an EIS,[49] and the baseline is the tool for measuring impacts of those alternatives. The DEIS's framing of the action favors water supply to Georgia over other project purposes, including fish and wildlife resources, and the choice of baseline obscures impacts of upstream depletions.

H

[45] § 373.223, Fla. Stat.
[46] § 373.223, Fla. Stat.
[47] Fla. Admin. Code R. 40A-2.223(1)-(4).
[48] Fla. Admin. Code R. 40A-2.223(5)-(6).
[49] *See* 40 C.F.R. § 1502.13.

Response to ACF184 – Florida Department of Environmental Protection

G. USACE is aware that the State of Florida has sued the State of Georgia for an apportionment of water in the ACF system. USACE operates the ACF system pursuant to its congressional mandate to balance all authorized project purposes. USACE does not own the water or have a responsibility to establish flow targets to evenly apportion the water. Apportionment of the water in the ACF is an issue between the states that is currently being litigated before the U.S. Supreme Court. USACE will review the court's decision and respond appropriately.

H. The EIS complies with all applicable laws and federal regulations.

The DEIS states that the purpose and need for updating the manual includes *making a decision* on whether to grant Georgia's water supply request.[50] However, the alternatives carried through for further analysis in the DEIS all include upstream water withdrawals. While two alternatives considered included only currently authorized storage in Lake Lanier,[51] all of the alternatives evaluated in the DEIS include current levels of water withdrawal downstream of Lake Lanier.[52] Therefore, the analysis improperly presumes Chattahoochee River withdrawals at least at current levels, with the majority of the alternatives considered by the Corps assuming increased withdrawals. The presumption of increased water withdrawals is taken one step further, as the PAA assumes the development of a new reservoir on the Chattahoochee River, above Lake Lanier – the Glades Reservoir.

H

The U.S. District Court for the Middle District of Florida previously concluded that the Corps violated NEPA when it ignored the existing impacts when performing a NEPA analysis on the 2008 IOP.[53] The Court explained it was "troubled by the Corps' refusal to take responsibility for its utter failure to conduct any sort of environmental analysis whatsoever on the plan by which it has operated the ACF Basin for more than 20 years." The Court further stated that "the law is clear that actions of the scope and magnitude of the 1989 WCP require the comprehensive environmental analysis performed in an EIS." The Corps cannot ignore this finding and sweep existing impacts into an environmental baseline in a manner than insulates those impacts from examination. This is precisely the kind of behavior that the court found violates NEPA.

Moreover, the DEIS's baseline for comparison of alternatives precludes meaningful analysis of impacts to the Apalachicola River and Bay. It presumes at least current levels of downstream Chattahoochee River water withdrawals and it presumes current operations, despite the fact that current levels of withdrawals and current operations have never been reviewed under NEPA. The DEIS should provide a mechanism for evaluating the incremental impacts of increasing upstream depletions over time and how this has changed the natural hydrograph to the detriment of downstream resources.

B. The DEIS fails to fully review a reasonable range of alternatives, including alternatives that truly balance downstream fish and wildlife resources.

NEPA requires all federal agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."[54] NEPA implementing regulations recognize that the alternatives analysis is "the heart of the environmental impact statement."[55] An EIS must include a discussion of "the environmental impacts of the alternatives including the proposed action,

I

[50] DEIS at 1-4.
[51] The two relocation agreements signed in the 1950s remain in force. All other agreements for water supply withdrawals from Lake Lanier were terminated in 1990. DEIS at 5-1.
[52] *See* DEIS Table 5.1-2.
[53] *See In re Tri-State Water Rights Litigation*, Case No. 3:07-md-01-PAM-JRK, Memorandum and Order (07/21/10). The Court ultimately found the violation prudentially moot and elected not to impose any remedy for the Corps' violation.
[54] 42 U.S.C. § 4332(2)(E).
[55] 40 C.F.R. § 1502.14.

Response to ACF184 – Florida Department of Environmental Protection

I. USACE evaluated alternatives that included a range of various water management measures and alternatives from no storage at Lake Lanier for water supply to the full amount of Georgia's 2013 request (Georgia submitted an updated request in 2015 that was included in the final EIS). The PAA in the draft EIS represented an intermediate value within that range of alternatives. The authorized purposes of the federal ACF system do not include a specific directive to provide freshwater inflows to Apalachicola Bay to sustain the resources of the bay. USACE does make releases to limit adverse effects to threatened and endangered species downstream of Jim Woodruff Lock and Dam, including Apalachicola Bay. USACE consulted on the PAA and the results are presented in appendix J of the final EIS. In the biological opinion the USFWS concluded that effects to estuarine invertebrate production are insignificant because the PAA provides slightly beneficial effects from increasing the number of freshwater pulses and increasing the number of days greater than or equal to 16,200 cfs in the winter. USFWS also anticipate only minor changes in salinity regimes and estuarine habitat due to the WCM.

[and] any adverse environmental effects which cannot be avoided should the proposal be implemented."[56] The relevant impacts include direct, indirect and cumulative impacts. Agencies must "[r]igorously explore and objectively evaluate *all reasonable alternatives*," including "reasonable alternatives not within the jurisdiction of the lead agency."[57] The Corps' failed to meaningfully analyze reasonable alternatives and the Corps' alternatives screening does not meet its obligations under NEPA.

First, the Corps failed to meaningfully evaluate alternatives to Georgia's increased consumption to meet Georgia's projected water demands. While the DEIS identified conservation and water use efficiency programs as a potential alternative to address Georgia's water supply request—and indeed "the first step in reducing consumption and overall demand for water supply,"[58] the Corps prematurely dismissed that alternative from consideration. Rather, without any supporting documentation, the DEIS merely summarizes existing water-conservation, related activities without analyzing the extent to which additional measures are available.[59] The DEIS then concludes, without any supporting analysis, "[i]t is unlikely that additional conservation measures would result in a significant reduction in Georgia's 2040 need."[60]

This does not meet NEPA's requirement to rigorously explore and objectively evaluate the alternative. As the U.S. Environmental Protection Agency (EPA) explained in its scoping comments on the DEIS, "EPA recommends that demonstrated water efficiency/conservation implementation *be required as the primary alternative* before commitments are made for new supply/storage uses."[61] EPA also recommended specific measures that should be considered before committing to new water uses. Additional conservation and efficiency measures are a viable alternative to meet Georgia's projected demands and they must be properly considered in the EIS.

Second, the Corps failed to meaningfully evaluate reasonable fish and wildlife alternatives and to give that purpose appropriate weight. While the Corps identified a number of water management alternatives related to fish and wildlife conservation, most of which were recommended by the USFWS, it eliminated almost all of those measures from consideration, without adequate justification.[62] Moreover, as the FWC notes in its letter, one of the few fish and wildlife alternatives that were retained for further analysis favors reservoir sport fish spawning over threatened and endangered species downstream.[63] In contrast to the fish and wildlife purpose, alternatives supporting water supply withdrawals were carried through the DEIS for further analysis.

[56] 40 C.F.R. § 1502.16.
[57] *Id.* (emphasis added).
[58] DEIS at 5-3.
[59] *Id.* at 5-3, 4; Appendix G.
[60] *Id.* at 5-4.
[61] Letter from Heinz Mueller, EPA Region 4, "EPA Scoping Comments on the Notice of Intent for the Water Control Manual Update and the Environmental Impact Statement (EIS) for the Apalachicola-Chattahoochee-Flint River (ACF) Basin, Alabama, Florida, and Georgia" (January 14, 2013).
[62] DEIS at 5-34, 37-39.
[63] *See* Attachment B to the State's response, Comment from FWC, pp. 4-5.

Third, the Corps' combination of water management alternatives resulted in inappropriate dismissal of important measures. Each alternative considered by the Corps included a combination of between 10 and 11 measures, but the Corps offers no explanation for how the packages were formulated. As a result, some individual measures were not selected as the preferred alternative simply because of how they were combined by the Corps. As the District noted, Florida's previously recommended revised basin inflow calculation was dismissed because of its combination with other operational elements. The Corps should revisit its approach to alternative formulations or, at a minimum, explain the methodology for combining individual components.

Fourth, the Corps only considered two revisions to the drought plan—one revision to the trigger for initiating the drought plan and one revision to the drought operations suspension trigger.[64] However, both of those alternatives are designed to increase drought operations. DEP requests that the Corps consider other alternatives, such as lowering the trigger for initiating the drought plan and the suspension trigger.

Fifth, the Corps' detailed impacts analysis must include a greater range of alternatives.

The Corps developed a ranking for the performance of water management alternatives based on model results and ranked them one to seven, with one being the best performer and seven being the worst. The Corps concludes that Alternative 7 "best balances the authorized project purposes" and is therefore the PAA.[65] The DEIS only analyzes water management Alternatives 1 and 7. Alternative 2 received a composite ranking of 2, just behind Alternative 7, and before Alternative 1 (the No Action Alternative, or NAA). However, the Corps did not fully consider Alternative 2 as a potential water management alternative in the DEIS. This alternative is important for consideration as it received a higher ranking than Alternative 7 for fish and wildlife, an area of significant concern to the State of Florida. DEP requests that Alternative 2 be fully evaluated and include an assessment comparing it to Alternative 7H and the NAA.

Finally, the Corps' process for ranking water management alternatives did not give equal weight to fish and wildlife purposes. Water management alternative 7, which was selected by the Corps as the PAA based on composite rankings, had the lowest ranking for fish and wildlife purposes of any water management alternatives.[66] In contrast, water management alternative 7 was the top ranked alternative for water supply.

It is not surprising that the ranking favored water supply over fish and wildlife conservation. The USFWS identified significant flaws in the Corps' ranking methodology, concluding that "[u]sing the selection methodology provided to the Service means that the alternative selected by the Corps for consideration in the DEIS does not appear to accurately represent multiple project purposes, and does not appear to give fish and wildlife equal consideration . . . ."[67]

[64] DEIS at 4-17 and 4-18.
[65] *See* DEIS at ES-16 and Table ES-3.
[66] DEIS at Table 4.3-14.
[67] Draft FWCA Report Appendix XV at 1.

- The USFWS explained that the Corps' ranking methodology treats "small difference within a project purpose" the same as "large differences." "Project purposes do not appear accurately represented when equal weight is given toward inconsequential and consequential differences among alternatives within a project purpose."[68] As an example, the USFWS pointed to the percent of years with Days < Flow, one metric intended to quantify effects of Apalachicola River low flows on mussels. The USFWS noted that there is a 0.00 percent difference between the second and third ranked alternative and a 24.8 percent difference in the first and second alternative with respect to that metric. In each instance, there is only one point difference in ranking, but there is a substantial variance in improvement of that metric. In contrast, there is very minimal difference in any of the hydropower alternatives. Yet, the differences in hydropower alternatives were treated the same as the meaningful differences in the fish and wildlife metric described above.[69]
- The USFWS found that "[a]n incomplete set of fish and wildlife performance measures was used to score and then rank alternatives for the Fish and Wildlife project purpose." Although three performance measures recommended by the USFWS were *mentioned* by the Corps, they were not explicitly factored into the ranking and selection of alternatives. The USFWS concluded "the set of fish and wildlife performance measures used by the Corps in the ranking do not fully capture the relationship between water management alternatives and their effect on fish and wildlife resources."[70]
- The USFWS expressed concerns that "some alternatives considered in Phase 1 may have performed differently than the one selected to proceed in Phase 2 if higher consumptive uses are incorporated into the modeling; using the unrealistic volume of consumptive withdrawals could insert some bias into the alternative selection process." This is important because "[d]epending on how an alternative is parameterized in HEC-ResSim, some alternatives may be more resilient than others when consumptive uses are increased."[71]

Thus, the USFWS has identified fundamental problems with the methodology, such that, rather than balancing project purposes, the methodology favored other purposes over fish and wildlife conservation. Florida agrees with the USFWS that these ranking issues "render conclusions" regarding alternative selection "questionable."[72] The Corps must address the weaknesses in its alternatives ranking methodology.

C. Flawed data and assumptions undermine the DEIS analysis and favor upstream consumption.

Despite previous critiques and recommendations from the State of Florida, the Georgia Water Resources Institute (GWRI), the U.S. Geological Survey (USGS) and the USFWS, the Corps'

[68] *Id.* at 3.
[69] *Id.* at 3-4.
[70] *Id.* at 2, 4-5.
[71] *Id.* at 7.
[72] *Id.* at 1.

Response to ACF184 – Florida Department of Environmental Protection

evaluation of impacts of the PAA relies upon flawed data and faulty assumptions that render the underlying analysis unreliable. Each of the shortcomings outlined below fundamentally skews the DEIS's analysis. To fulfill its obligations under NEPA, the Corps must revise its assumptions and data to address these flaws.

1. **Significant problems with Unimpaired Flow data.**

There are significant deficiencies in a key data set relied upon the Corps in the DEIS – a synthetic hydrologic record named the Unimpaired Flow (UIF) data set. The Corps' evaluation of the effects of water management alternatives in the DEIS is based on the simulations of ACF operations using the Hydrologic Engineering Center (HEC)-ResSim model.[73] The ResSim model used by the Corps critically depends upon the UIF data set. The DEIS defines the UIF as follows:

> Historically observed flows adjusted to account for, and computationally remove the effects of, some of the human influence within river basins, such as the construction of large surface water reservoirs, withdrawals and returns for municipal and industrial water uses, and withdrawals for crop irrigation, that have altered the otherwise naturally expected flow regime of the system. An unimpaired flow data set is necessary to determine critical yield by removing (to the extent possible) identifiable and quantifiable alterations in flow regime attributable to man-made changes in the river basin.[74]

The UIF thus attempts to capture how the river basin would have behaved over a 73-year history in the absence of human influence, while the ResSim model is used to forecast how those same 73 years would have played out had various alternative scenarios of human involvement (including water management systems, withdrawals and returns) been in place during that history. The ResSim forecasts are then used to evaluate the environmental impact of each alternative.

Thus, inaccuracies in the UIF will necessarily result in inaccuracies in the forecasted behavior of the river system and the assessment of environmental impacts. The impacts assessment is the heart of the NEPA analysis. Some of the impacts considered—in particular, impacts on the environmental health of Apalachicola River and Bay—are of paramount importance to the State of Florida and the many residents of the State who depend upon a healthy and vibrant bay for their livelihood and recreational and aesthetic enjoyment.

[73] "USACE used the Hydrologic Engineering Center (HEC)-ResSim model to simulate ACF operations for the Water Management No Action Alternative and the six other water management alternatives over a 73-year hydrologic period of record (1939 through 2011)." DEIS at ES-14.
[74] DEIS at 11-8.

J

Response to ACF184 – Florida Department of Environmental Protection

J. Documentation of the updated unimpaired flow data set for the period 1939–2011 is included in appendix O of the EIS. The unimpaired flow data set has continued to expand since its initial development and release in 1997 to support USACE's *ACT/ACF Comprehensive Water Resources Study*. With every update to the data set, USACE shares the data with the three states—Alabama, Florida and Georgia—for review and input. Revised assumptions by the states such as facility reach assignments, replacement of missing data, and superior correlations are examples of improvements since 1997. The data set was developed to provide modeling support for the impacts analysis of proposed water management alternatives. USACE will continue working with the states to improve the unimpaired flow data set for the intended purpose. An important distinction: The unimpaired flow data set was never intended to represent natural flow conditions. As stated in the Unimpaired Flow Report in Volume I, Surface Water Availability, of the 1997 Water Resources Study, as with all data sets, development of this data set involved various assumptions and approximations. The analyst must consider those items and judge their effect on any analysis employing the unimpaired flows. Use of the data should be carefully evaluated based on the methods, assumptions, and data irregularities described in the report. Missing data fill-in, correlations, net evaporation calculations, channel routings, withdrawals and returns, leakages, and flow smoothing are some of the many factors which were considered before using these data.

At the outset, we note that additional information is needed to more fully evaluate the current version of the UIF. The UIF has been developed over time. The original version of the UIF was completed in 1997, and provided a record of daily flows for the calendar years 1939 through 1993.[75] The UIF was later extended to include the calendar years 1994 through 2001.[76] Although 2004 is the last formal documentation of the UIF provided by the Corps, there have been numerous changes since. In 2010 and 2012 reports, the Corps indicates the UIF had been extended through 2008.[77] Appendix E of the DEIS makes reference to a version of the UIF that extends through 2011 and cites a 2014 report that is still under development as the documentation.[78]

The DEIS and appendices should provide information on the origin and content of these UIF data sets and the computer files that contain them. Each data set contains records of daily flow for numerous stations along the river as modified by various computational steps described in the original 1997 report. However, these different records are identified by highly abbreviated codes that are uninterpretable without further explanation. Documentation is thus needed at a basic level simply to identify and describe each data set.

J

It appears that the various UIF data sets cited above were not just extended in time but modified in other undisclosed ways such that the entire record from 1939 on is changed. A comparison of the daily cumulative unimpaired flows in the Apalachicola River at Chattahoochee between 1939 and 2001 shows numerous differences, some of staggering size, in individual daily flow values between the 2004 and 2014 versions. This is a particular concern with respect to daily flows of less than 5,000 cubic feet per second (cfs). Low flows are of greatest concern with respect to the health of Apalachicola Bay and the seemingly wholesale alteration of low flows in the data raises concerns about the accuracy of a critical part of the record during not just 1939-2001 but also during the later droughts in 2006-2008 and 2011-2012.

The sweeping, and for some days drastic, changes to the UIF between its different versions suggest inaccuracies and demands explanation and justification. To fulfill the purposes of NEPA, the EIS process requires transparent and verifiable forecasts of the impacts of water withdrawals, water management alternatives and other human alterations of the river basin. At present, the analysis of those alternatives is a black box that depends on estimates of the unimpaired flow that are undocumented but appear on examination to be ever changing without explanation. At a

[75] U.S. Army Corps of Engineers Mobile District, ACT/ACF Comprehensive Water Resources Study, Surface Water Availability, Volume I, Unimpaired Flow (July 8, 1997).
[76] U.S. Army Corps of Engineers Mobile District, Extended Unimpaired Flow Report January 1994 – December 2001 for the Alabama-Coosa-Tallapoosa and Apalachicola Chattahoochee Flint (ACT/ACF) River Basins (April 2004). This version of the UIF data set was captured in a computer file named ACFCUM_8.DSS. The modifier DSS indicates this is a data storage file created using the USACE Hydrologic Engineering Center Data Storage System or HEC-DSS.
[77] U.S. Army Corps of Engineers Mobile District, Federal Storage Reservoir Critical Yield Analysis, Alabama-Coosa-Tallapoosa (ACT) and Apalachicola-Chattahoochee-Flint (ACF) River Basins (February 2010); and U.S. Army Corps of Engineers Mobile District, Apalachicola-Chattahoochee-Flint (ACF) Remand Modeling Technical Report (June 2012).
[78] DEIS Appendix E at 18, 70.

minimum, documentation comparable to that in the 2004 Corps report,[79] should be provided. However, the complete set of database, spreadsheet and DSS computer files that underpin the UIF development should also be provided.

Based on the information that is provided and assessments of prior versions of the UIF data, there are significant flaws in the data, which have been highlighted by a number of parties, including the GWRI and the USGS. In an August 6, 2013, letter to the Corps,[80] the State of Florida identified the following specific actions needed to correct inaccuracies in the ACF UIF data:

1. Add estimated evaporative losses from non-Federal impoundments.
2. Account for changes in timing of flows due to storage effect of non-Federal impoundment.
3. Correct underestimated Federal reservoir evaporative losses.
4. Address the effects of agricultural consumption on long-term decline in aquifer storage.
5. Correct underestimation of agricultural demands.
6. Address other problems identified in the GWRI report.
7. Address other problems identified by USGS.
8. Address model integrity issues raised by the State of Alabama.

J

The concerns expressed in that letter remain unresolved in the UIF data upon which the DEIS analysis is based. With respect to concerns number 1 and 2 in the list above, evaporation from and transient water storage within non-Federal impoundments are growing causes of flow depletion in the river, particularly during critical summertime low-flow periods. The storage capacity of these many small impoundments is of the same order as that of Lake Seminole. Evaporative loss from these impoundments significantly decreases streamflow. These numerous small impoundments, although not considered in the Corps' simulations of the basin, have potentially significant effect on streamflow into the State of Florida.

With respect to concern number 5, prior estimates of agricultural demands are unrealistically low. Proper accounting for agricultural demands would significantly reduce unimpaired flows, particularly during the growing season when low-flow conditions are most common.

The GWRI report[81] referenced in concerns number 6 and 7 was largely based on a systematic reach-by-reach comparison of a UIF data set developed for the Georgia Department of Natural Resources (Georgia DNR) against the Corps' 2010 or 2012 version of the UIF for the ACF

[79] *Supra* note 76.
[80] Letter from Gregory Munson, Deputy Secretary of the Office of Water Policy & Ecosystems Restoration of the Florida Department of Environmental Restoration, to James Hathorn, Jr., Chief of the Water Management Section of the Mobile District of U.S. Army Corps of Engineers (August 6, 2013).
[81] A.P. Georgakakos and M. Kistenmacher, Georgia Water Resources Institute, Georgia Institute of Technology, Unimpaired Flow Assessment for the Apalachicola-Chattahoochee-Flint River Basin, Draft Technical Report (October 2012).

Response to ACF184 – Florida Department of Environmental Protection

basin. The comparison was restricted to the period 2002 through 2007 for which the two data sets had been independently derived. GWRI identifies a number of systematic errors that compromise the UIFs estimates over monthly and longer time periods, including:

- Flaws in the methods for filling in missing streamflow records that result in systematic biases and inaccurate streamflow estimates.
- Trends in the unimpaired flows that are at odds with precipitation, including obviously erroneous abrupt rises and falls in streamflow and a failure to account for changes in groundwater pumping over time.
- Significant differences in municipal withdrawals between the Georgia DNR and Corps data sets as well as internal inconsistencies within each data set.
- Agricultural withdrawal estimates that fail to account for year-to-year climate resulting in withdrawal estimates that are low for dry years and high for wet years.
- Evaporation losses that differ between the Corps data set, Georgia DNR data set, and GWRI's own estimates. The UIF data sets also fail to account for evaporation losses from non-federal impoundments.

J

Additional errors affect the UIF estimates on a daily time scale. GWRI states that as the result of the many errors affecting them, the UIFs "need to be improved before they can support valid water management assessments." GWRI concludes "[t]hese errors undermine the results of ResSim and other river basin simulation models operating on daily time steps. As a consequence, model outputs are not representative of actual system conditions."

Significantly, these errors have not been addressed and no similar independent analysis has been carried out to assess the UIF for subsequent years and the accuracy or inaccuracy of those flows has not been examined. In light of the significant discrepancies that have been identified, such an independent review is warranted for the current version of the UIF and discrepancies must be addressed before the data can be relied upon to assess impacts of the alternatives.

2. **Failure to adequately assess agricultural consumption on Flint River.**

As the USFWS points out in the Draft FWCA report, the Corps failed to account for increased agricultural consumption in the Flint River basin in its DEIS analysis.[82] However, both surface water withdrawals from the Flint, and more significantly, groundwater pumping in the Flint basin, have a significant impact on the water flowing through Woodruff Dam into the Apalachicola River.

[82] Draft FWCA Report at 47.

The Corps acknowledges "substantial groundwater-to-surface water transfer in the lower portions of the Flint River."[83] The DEIS explains that "the Upper Floridan aquifer is hydraulically connected to the Flint River and, consequently, groundwater discharge contributes more significantly to baseflow in the Flint River than in the Chattahoochee River."[84] However, the DEIS fails to account for increases in groundwater pumping and the effects of agricultural consumption are not properly accounted for in the UIF data, as noted above.

K

As the USFWS has explained, "[p]umping of groundwater from the Floridan Aquifer is contributing to decreased spring outflows and lowered stream levels."[85] According to the USFWS, "during periods of drought, streams may cease to flow entirely; be reduced to isolated pools of hot water, low dissolved oxygen (DO), low food resources, and concentrated contaminants; or dry up completely for long stream stretches."[86] The USFWS highlights the use of center pivot irrigation in the lower Flint River system as a significant driver of water use,[87] and notes that "[i]n the past 25 years, center pivot irrigation has increased in the Apalachicola–Chattahoochee–Flint (ACF) River Basin."[88] The USFWS attributes pumping in the ACF Basin to significant lowering of groundwater levels, which even impacts adjacent basins. "Increased pumping in the ACF Basin has lowered groundwater levels along the boundary with neighboring Ochlockonee and Suwannee River Basins by more than 24 feet."[89] As the USFWS notes, "[t]he potential impacts to mussels, their host fishes, and their respective habitats from ground water withdrawal may be profound."[90]

In sum, the long-term effects of agricultural consumption and groundwater pumping in the Flint River basin are significant and unaccounted for by the Corps. As a result, the DEIS significantly understates impacts to the Apalachicola River and Bay.

3. **Failure to adequately assess the data and assumptions underlying Georgia's request.**

Georgia has asked the Corps to nearly double the amount of water withdrawn from Lake Lanier and the Chattahoochee River to satisfy 2050 demands, but the Corps' assessment of Georgia's request does not provide the critical appraisal needed to fulfill NEPA's objectives.

L

While the Corps purported to do an independent assessment of Georgia's demand, including population growth and water needs,[91] the framework used by the Corps appears to overestimate demand. Moreover, while the Corps acknowledged that Georgia overestimated its projected

[83] DEIS at 2-17.
[84] *Id.* at 2-53.
[85] U.S. Fish and Wildlife Service, Recovery Plan for Endangered Fat Threeringe, Shinyrayed Pocketbook, Gulf Moccasinshell, Ochlockonee Moccasinshell, Oval Pigtoe and Threatened Chipola Slabshell, and Purple Bankclimber, 62 (September 19, 2003).
[86] *Id.*
[87] *Id.*
[88] U.S. Fish and Wildlife Service, Endangered and Threatened Wildlife and Plants; Proposed Threatened Species Status for the Suwannee Moccasinshell, 80 Fed. Reg. 60335, 60351 (October 6, 2015).
[89] *Id.* at 60341-42.
[90] Recovery Plan at 62.
[91] *See* DEIS Appendix B.

Response to ACF184 – Florida Department of Environmental Protection

K. The EIS acknowledges the impact of groundwater withdrawals on surface water flows in the Flint River. Because that impact is ultimately reflected in the surface water flows in the Flint River over the hydrologic period of record for the model simulation, USACE believes it has adequately captured the effect in its modeling through basin inflows. It is outside the scope of the EIS to predict future agricultural consumptive demands.

L. The comment cites the USACE assessment within the EIS but does not indicate how demand was overestimated. Using available data to the greatest extent practicable, USACE validated Georgia's request. USACE has no authority to require that projected return flows be met nor that system losses to be corrected.

(2040) return flows above Buford Dam, it accepted Georgia's high projections for Chattahoochee River return flows. By overestimating the return flows, the Corps' analysis underestimates impacts to the Apalachicola River and Bay of granting the water supply and storage request. If the Corps grants any part of Georgia's request, it should require that the projected return flows be met as a condition of continued supply. Finally, the water supply and storage assessment does not account for system losses. Yet this metric is important because reductions in water loss could significantly lower demand.

D. The DEIS ignores demonstrated impacts of prioritizing upstream water supply purposes over downstream resources and inadequately addresses cumulative impacts.

The DEIS suffers from a fundamental failure to fully evaluate adverse effects of the PAA and alternatives. This is due, in large part, to flaws in the data and assumptions underlying the Corps' analysis as noted above. The following adverse effects must be addressed to fulfill NEPA's function of giving "appropriate consideration" to environmental amenities and values.

Effects to the Apalachicola River and Bay. The PAA selected in the DEIS includes increased water supply to Georgia, despite impacts to the Apalachicola River and Bay from existing upstream depletions. Notwithstanding the clear and acknowledged likelihood that under the PAA, which presumes increased water supply to Georgia, flows of 5,000 cfs or lower will be triggered more frequently and for longer durations in the future,[92] the Corps claims that the PAA, will have:

- "[N]o appreciable effect on flow conditions downstream of Jim Woodruff Lock and Dam or on freshwater inflows into Apalachicola Bay";[93]
- Only "a negligible effect on the hydrodynamic and salinity characteristics of the Apalachicola Bay estuary";
- "[N]o effects on estuarine fish and aquatic resources";
- "[N]egligible effects on water quality conditions in the Apalachicola River and Bay";[94] and
- "[N]egligible effect on the aquatic resources and ecological function of the Apalachicola Bay estuary".[95]

The Corps' unsupported conclusion of no impacts is at odds with information Florida has submitted in numerous commenting processes as well as findings of the USFWS. The USFWS

[92] DEIS at ES-18.
[93] *Id.* at ES-27.
[94] *Id.* at ES-30.
[95] *Id.* at ES-33.

Response to ACF184 – Florida Department of Environmental Protection

M. The flows downstream of Jim Woodruff Lock and Dam as suggested in the comment are met in virtually all circumstances under current operations and would be met as well under the PAA. Accordingly, the flows into Apalachicola Bay would be equal to or exceed these suggested rates.

Alternative 7H was the Proposed Action Alternative in the draft EIS. This alternative is no longer a viable alternative because of revised water supply needs provided by the state of Georgia in December 2015. Alternative 7K is the new selected PAA and is described in the final EIS. Based upon HEC-ResSim modeling, extreme drought operations under the PAA would be triggered one time and would result in flows between 5,000 and 4,500 cfs during about 3 months over the 73-year hydrologic period of record, or about 0.3 percent of the days. Under the NAA, extreme drought operations would not be triggered. Occurrences of flows between 5,000 and 4,500 cfs under the PAA would be extremely rare and of short duration when they occur. Thus, the effect of operations under the PAA on conditions in Apalachicola Bay would be negligible. It is correct that drought operations would be triggered more frequently under the PAA. However, the PAA reflects a more proactive approach to operate in a slightly more conservative manner to conserve reservoir storage with the onset of drier conditions in the basin, while continuing to fulfill project purposes and water needs throughout the ACF Basin. The drought plan reflected in the PAA will tend to make the ACF Basin more drought resilient than under current operations (i.e., the NAA), particularly when the most severe drought conditions occur in the basin. However, median flows for the NAA and PAA as shown in Figure 6.1-54 of the final EIS are essentially the same. Additionally, Table 6.1-12 of the final EIS shows the percent of days over the modeled period of record in which flows would equal or exceed selected flow values at the gage in Chattahoochee, Florida. On the basis of the data in this table, the difference between the percent of days in which flow is greater than or equal to 6,000 cfs for the NAA is 0.5 percent as compared to the PAA. Efforts to assess the effects of water management activities on salinity in the Apalachicola Bay were conducted as part of the ongoing coordination between the USACE Mobile District and the USFWS under the Fish and Wildlife Coordination Act.

concluded "the negative effects of the PAA on fish and wildlife resources are a consequence of reservoir system operation changes *and increases in consumptive demands* that are part of the PAA."[96] Moreover, "[s]everal lines of evidence suggest that the PAA may result in greater Apalachicola Bay salinities when compared to the NAA."[97] According to the USFWS, "[d]ifferences in low flows most likely manifest themselves in relatively minor salinity shifts, but may exceed salinity thresholds for juvenile Gulf Sturgeon and oysters."[98] The low flows could create "conditions that could increase mortality of both common and federally-listed mussels."[99] The DEIS must acknowledge these impacts and must evaluate effects on bay salinity and nutrient composition, effects on timing, quantity and quality of freshwater inflow, effects on floodplain habitats and wetlands, and vegetation changes and impact on natural food web. Importantly, Florida disagrees with the DEIS's unproven assertions that impacts of the PAA are inconsequential in relation to sea level rise and that rainfall heavily influences freshwater flows into the bay.

M

Cumulative Impacts and *Effects of Groundwater Withdrawals from the Flint River Basin.* NEPA requires an agency to evaluate cumulative impacts—"the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions."[100] The DEIS's cursory discussion of cumulative impacts – less than five pages long – does not meet this requirement.

Although the DEIS considers consumption from additional non-federal dams proposed in the ACF basin, such as Glades Reservoir, the true cumulative impact of these facilities is not reflected in the alternatives analysis. As USFWS pointed out in the Draft FWCA Report, in Phase I of the alternatives ranking analysis, the Corps assumed no withdrawals from Glades Reservoir and assumed Lake Lanier withdrawals orders of magnitude less than what is currently being withdrawn.[101] However, USFWS notes that the water management alternatives evaluated in Phase I would likely perform differently under higher consumption rates, since some alternatives may be more resilient than others to increased consumption.[102] Thus, the cumulative impact of these proposed facilities is not reflected in the performance metrics of the water management measures.

The most significant shortcoming of the cumulative impacts discussion is the failure to evaluate the cumulative impacts of basin wide water consumption. As the USFWS finds, "[i]t is reasonable to expect that future conditions exhibiting the cumulative combination of increased population growth, consumptive demands, wastewater input, changes in climate, and continued operation of Federal projects will show increasing impacts to these natural resources."

[96] Draft FWCA Report at 51 (emphasis added).
[97] *Id.* at 23.
[98] *Id.*
[99] *Id.* at 22.
[100] 40 C.F.R. § §1508.7.
[101] Draft FWCA Report, Appendix XV.
[102] *Id.*

Though the DEIS recognizes the "complex interrelationships between surface water, groundwater, and the numerous competing demands on water resources in the ACF Basin,"[103] and recognizes the fact that "groundwater discharge contributes more significantly to baseflow in the Flint River than in the Chattahoochee River,"[104] the DEIS failed to properly review impacts associated with Georgia's groundwater withdrawals, primarily in the Flint River Basin. The DEIS finds that "[t]otal groundwater withdrawals in the ACF Basin increased between 1970 and 1990 by nearly 214 mgd (243 percent), largely as a result of an increase in groundwater use for agriculture and principally in southwestern Georgia."[105] As noted above, Flint River Basin withdrawals and groundwater pumping have a significant impact on the water flowing into Woodruff Dam and eventually into the Apalachicola River and Bay. However, *none* of the proposed alternatives set forth an evaluation of the impacts on the system resulting from these withdrawals and what might happen if mitigation of those impacts were imposed. The Corps' failure to properly account for both current and projected future consumption in that basin fundamentally undermines its cumulative impacts assessment. DEP requests that basin wide consumption, including groundwater withdrawals, be evaluated in the cumulative impacts assessment and the mitigation of the impacts of groundwater withdrawals be evaluated by the DEIS. Such an evaluation should provide the Corps with the ability to consider available mitigation measures that would increase alternatives with fewer impacts to the Apalachicola River and Bay.

M

Effects of Water Consumption. DEP is disappointed to find that the DEIS fails to critically evaluate the effects of water consumption and increased demands by Georgia in its selection of the PAA, despite the fact that water consumption was identified by the USFWS as a cause of the negative impacts of the PAA. Further, as previously stated in this letter, the PAA fails to fully consider alternatives addressing progressive and iterative water conservation opportunities that Georgia should pursue. The upstream water consumption reduces water flowing into the Corps' reservoirs and dams, limiting the water available for other project purposes and bringing reservoirs into drought operations more frequently and for longer durations. Critically evaluating the impacts of Georgia's expansive use would allow the DEIS to evaluate alternatives that have not currently been undertaken and which could result in increased alternatives with fewer impacts to the Apalachicola River and Bay.

Effects on Navigation. Numerous times in the DEIS, the Corps discusses the navigability of the Apalachicola River. The Corps frequently focuses on dredging as the primary means to *increase* navigability. The Corps notes that it is unable to perform dredging due to its failure to secure water quality certification for its proposed activities.[106] Given that water quality is a project purpose, it appears to be antithetical to seek to dredge in order to achieve increased navigability when such dredging would result in water quality concerns. Rather, given that "[f]low is the primary factor that influences the degree to which authorized project depths in the Apalachicola

[103] DEIS at 2-1.
[104] DEIS at 2-53.
[105] DEIS at 2-82.
[106] *See* DEIS at 2-59, 2-66.

Response to ACF184 – Florida Department of Environmental Protection

River navigation channel are achieved,"[107] the DEIS should have considered a greater range of alternatives that increased flow at the Jim Woodruff Dam to achieve such a project purpose.

Effects on Water Quality. DEP believes that the Corps failed to evaluate for impacts resulting from hydrological impacts to the Apalachicola River floodplain as a result of low flow conditions set forth in the PAA and reiterates its comments relating to Dissolved Oxygen made earlier in this letter. DEP requests that the alternatives review these impacts.

Socioeconomic Effects. The DEIS also fails to address the economic impact to the region's long-established seafood industry from potential effects to Apalachicola Bay's salinity. Unfortunately, while recognizing comments made during the scoping process that there was the potential collapse of the seafood and fishing industry in the Apalachicola Bay region,[108] there is no response to that concern in the DEIS. Rather, the DEIS disclaims impacts to the oyster industry,[109] despite recognizing that salinity is "one of the major limiting factors in oyster production" that depends on river discharges.[110] Moreover, the DEIS ignores economic impact to the communities that have depended upon the oyster industry for generations. These impacts must be disclosed and evaluated in the DEIS.

M

Effects on Threatened and Endangered Species. The DEIS does not provide sufficient information to fully evaluate the Corps' consideration of impacts to threatened and endangered species because the DEIS lacks analysis, deferring to the forthcoming biological assessment that will be prepared for Section 7 consultation. The DEIS states that any alternative that violates the Endangered Species Act (ESA) will not be considered,[111] but that cannot be true, since the Corps concedes that it has not yet conducted ESA analysis. The USFWS confirms that insufficient analysis has been conducted, stating "[e]ffects to Gulf Sturgeon were not adequately assessed."[112] The DEIS fails to address potential impacts to listed species identified by the USFWS in the Draft FWCA Report, including to the Gulf Sturgeon[113] and federally listed mussels. [114] The State of Florida reserves the right to submit supplemental comments when the Corps provides information regarding impacts to threatened and endangered species.

Relatedly, the Corps' rejection of the USFWS's request for cooperating agency status undermines Florida's strong interest in protecting its fish and wildlife resources. NEPA implementing regulations and guidance establish that the lead agency "has the responsibility to solicit cooperation from other federal agencies that that have jurisdiction by law or special expertise on any environmental issue that should be addressed in the EIS.[115] The Corps summarily rejected USFWS's request for cooperating agency status. However, the USFWS has

[107] DEIS at 2-66.
[108] DEIS at 1-12.
[109] DEIS at 6-198.
[110] DEIS at 2-206.
[111] DEIS at ES-6.
[112] Draft FWCA Report at 33.
[113] *Id.* at 23.
[114] *Id.* at 21.
[115] Council on Environmental Quality, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18026, 18030 (Mar. 23, 1981).

both "special expertise," as the expert federal wildlife agency, and jurisdiction by law, given USFWS's role under the FWCA and ESA. This is another way that the Corps has given less weight to fish and wildlife resources over upstream consumptive uses.

E. The Corps is obligated to consider mitigation and has failed to do so.

An EIS must discuss potential mitigation measures that "cover the range of impacts of the proposal."[116] "Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not 'significant') must be considered, and mitigation measures must be developed where it is feasible to do so."[117]

Having failed to evaluate adverse effects, the Corps fails equally to review mitigation of those effects. In section 6.10, the Corps sets forth its "mitigation considerations" in 718 words, most of which are directed at adverse water quality resulting from metro-Atlanta consumption and associated wastewater discharges. The majority of the remaining few paragraphs is dedicated to "unforeseen conditions." Only a single sentence is directed to "measures known to benefit fish and wildlife, such as current fish spawning and passage procedures as well as ramping rates and flow targets in the Apalachicola River at Chattahoochee, Florida" and no specifics are provided. Thus, the Corps makes "[n]o specific mitigation commitments" relating to the PAA. This falls short of the "reasonably complete discussion of possible mitigation measures" that the Supreme Court has explained is necessary to avoid "undermin[ing] the 'action forcing' function of NEPA."[118] "Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects."[119]

N

Mitigation can and should include not only actions to be taken by the Corps, but also actions that could be taken by local, regional or state governments or by private entities. The Council on Environmental Quality (CEQ) explains that "[a]ll relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies."[120]

The USFWS generally recommended that the Corps generally outline an approach to mitigation of the impacts of the PAA on fish and wildlife resources.[121] More specifically, the USFWS stated:

> Impacts to the estuary that result from lower inflow and higher salinities have been quantified using empirical relationships and models. Mitigation for these impacts should

[116] *Id.* at 18031.
[117] *Id.*
[118] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351-352 (1989) (Stevens, J.).
[119] *Id.*
[120] 46 Fed. Reg. at 18031.
[121] Draft FWCA Report at 50.

Response to ACF184 – Florida Department of Environmental Protection

N. USACE has consulted with representatives of the State of Florida, who provided comments during numerous scoping and the public comment process. Because the PAA would have insignificant impacts compared to the NAA (current reservoir operations), as described in the EIS, no mitigation is required.

be determined and implemented, and we recommend that the Corps consult with the State of Florida and the Service's Panama City Field Office.[122]

The Corps has not consulted with the State of Florida, disclaiming impacts to the estuary.[123] Given the demonstrated impacts, recognized by the USFWS and explained by the State of Florida in numerous scoping and commenting opportunities, the DEIS must address mitigation.

F. Conclusion

DEP believes that the DEIS has failed to address the adverse impacts associated with the PAA, which includes increased water supply to Georgia. While the Corps concludes that there is no difference in flows from the Apalachicola River under the NAA versus the proposed alternatives,[124] DEP believes this finding is a result of the DEIS' failure to properly evaluate alternatives, including a full evaluation of varied and alternative drought plans; the impacts of groundwater withdrawals on the system; the ability for the state of Georgia to further institute water conservation measures; increasing flow as a way of increasing navigability; and increasing flow as a means to ensure protection of floodplain water quality.

O

In addition, a technical correction sheet is provided for your convenience as an attachment to this letter.

Sincerely,

Jonathan P. Steverson
Secretary

[122] *Id.*
[123] DEIS Appendix J.
[124] DEIS at 6-198.

Response to ACF184 – Florida Department of Environmental Protection

O. Evaluating a greater number of alternatives would not change the impacts between the NAA and the PAA. USACE proposed and evaluated water management measures and alternatives that balance across all authorized project purposes throughout the basin while considering Georgia's water supply storage request as directed by the 11th Circuit Court of Appeals. In developing water management measures and alternatives, USACE considered stakeholder needs and uses throughout the system.

Technical Correction List

In addition to the substantive comments offered above, DEP provides the following minor technical comments. Corrections are provided in strike through/underline for your convenience.

Section 2.1.2.4.3 Estuarine Monitoring, page 2-143	
Line 9	ANERR is one of ~~25~~ 28 NOAA-designated research reserve sites.
Lines 11-12	In addition to routine water quality monitoring, the ANERR collects data on ~~fecal coliform,~~ sediment erosion and accretion rates~~,~~ and fish and macroinvertebrate populations while the Florida Department of Agriculture and Consumer Services collects data on fecal coliform.
Lines 15-16	The ANERR water quality data are collected using data loggers at four water quality stations within Apalachicola Bay since ~~2002~~ 1993.
Lines 16-17	The data loggers record temperature, depth, salinity, pH, dissolved oxygen, and turbidity every ~~15~~ 30 minutes since 1993 and every 15 minutes since 2007.
Lines 17-18	The data are transmitted to the NERRS Centralized Data Management Office every 2 to 3 ~~hours~~ weeks for compilation and analysis.
Lines 20-22	In addition, nutrient samples are collected over a 25 ~~24~~-hour period at one location monthly to determine the impacts of tidal cycles and diurnal variations on estuarine nutrient concentrations.
Lines 25-28	Monitoring projects, which are conducted by both state and local entities, include periodic water sampling by the Florida Department of Agriculture and Consumer Services for consumption of shellfish and data collection on toxic *red tide* algae blooms by the Florida Department of Agriculture and Consumer Services and Florida Fish and Wildlife Conservation Commission ~~Apalachicola Riverkeeper~~.
2.5.3.3. Apalachicola Bay and Estuary, page 2-205	
Lines 1-3	As 1 the second-largest of the ~~27~~ 28 existing national estuarine research reserves, the Apalachicola Reserve encompasses 246,766 ac, 135,680 of which are state-owned submerged lands.

P

Response to ACF184 – Florida Department of Environmental Protection

P. Corrections have been made in the final EIS.

4

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

SEP 11 2009

Mr. Danny Clayton
Florida Coastal Management Program
Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Dear Mr. Clayton:

Thank you for the Florida Department of Environmental Protection's June 11, 2009, request that changes to the Florida Code Chapters 161; 163 Part II; 186; 252; 253; 258; 259; 260; 267; 288; 334; 339; 370; 372; 373; 375; 376; 377; 379; 380; 381; 388; 403; 553; 582 and 597 enacted by the Florida legislature during the 2008 legislative session be incorporated into the Florida Coastal Management Program (FCMP). You requested that changes to the Florida Code Chapters described below be incorporated as routine program changes (RPCs), pursuant to Coastal Zone Management Act (CZMA) regulations at 15 C.F.R. part 923, subpart H, and Office of Ocean and Coastal Resource Management (OCRM) Program Change Guidance (July 1996). OCRM received the request on June 17, 2009 and needed to extend OCRM's decision deadline to September 18, 2009 in order to complete our review.

Based on our review of your submission, we concur, with the exceptions described below, that the changes to the Florida Code Chapters 161; 163 Part II; 186; 252; 253; 258; 259; 260; 267; 288; 334; 339; 370; 372; 373; 375; 376; 377; 379; 380; 381; 388; 403; 553; 582 and 597 are RPCs and we approve the incorporation of the changes as enforceable policies of the Florida CMP. Federal Consistency will apply to the approved changes only after you publish notice of this approval pursuant to 15 C.F.R. § 923.84(b)(4). Please include in the public notice the list of changes to enforceable policies provided in this letter, and please send a copy of the notice to OCRM.

SECTIONS APPROVED

- See enclosed list of the enforceable policies and non-enforceable components incorporated as changes to the Florida CMP.

QUALIFICATIONS

- OCRM is approving the incorporation of seven sections of Chapter 161 that were resubmitted as part of this submission (161.0415, 161.052, 161.053, 161.05301, 161.54, 161.55, and 161.56) and Chapter 553, sections 553.73 and 553.79 (the Florida Building Code Act (FBCA)). By incorporating sections 553.73 and 553.79 Florida has addressed

Response to ACF184 – Florida Department of Environmental Protection

This letter and attachment provided to USACE for information as part of ACF184.

OCRM's previous denial of incorporating Chapter 161, which references the Florida Building Code (FBC) (states cannot incorporate by reference enforceable policies into their federally approved coastal management programs). Chapters 161 and 553 refer to both the FBCA and FBC; causing confusion as to what is the FBC. Chapter 553, sections 553.73 and 79, are the FBCA, which directs the State to *establish* the FBC in regulations. Therefore, the FBC is not sections 553.73, 553.79 or Chapter 161; rather, the FBC is found in Florida regulations in F.A.C. 9B-3.047 and other regulations. F.A.C. 9B-3.047 and these other FBC regulations have not been submitted to OCRM for incorporation into the Florida Coastal Management Program (FCMP) and are not part of the FCMP. Therefore, any CZMA federal consistency decisions based on the above-referenced sections of Chapters 161 or 553 would need to be made on these statutes, not on the FBC found in F.A.C. 9B-3.047 and other regulations.

SECTIONS NOT APPROVED

Due to the comprehensive nature of Florida's submissions, OCRM is including the following list of sections that either were previously not approved by OCRM or have not been resubmitted, and therefore are not part of the approved program:

- Section 253.61(1)(d) of Chapter 253: State Lands

  The FCMP previously submitted changes to section 253.61(1)(d). These changes were not approved by OCRM and therefore, section 253.61(1)(d) is not an enforceable policy of the FCMP and cannot be used for federal consistency. In a letter dated July 31, 1996, OCRM stated that revisions to section 253.61(1)(d) pursuant to a July 10, 1996, RPC request, were a substantial change to uses subject to management and therefore must be resubmitted as an amendment. *See* letter from Jeffrey Benoit, Director, OCRM, to Ralph Cantral, Executive Director, FCMP (July 31, 1996). Because the issues raised in our July 31, 1996, letter have not been addressed, OCRM is not, at this time, approving the incorporation of section 253.61(1)(d) into the FCMP.

- Sections 377.06, 377.24(9), and 377.242(1)(a)(5) of Chapter 377: Energy Resources

  The FCMP previously submitted changes to sections 377.06, 377.24(9), and 377.242(1)(a)(5). These changes were not approved by OCRM and therefore sections 377.06, 377.24(9), and 377.242(1)(a)(5) are not enforceable policies of the FCMP and these policies cannot be used for federal consistency. *See* letter from John King, Chief, Coastal Programs Division, to Lynn Griffin, Administrator, FCMP (May 13, 2004). *See also* letter from Jeffrey R. Benoit, Director, OCRM, to Ralph Cantral, Executive Director, FCMP (July 31, 1996). Florida incorrectly identifies section 377.06 as part of the FCMP. *See* FCMP RPC Request for Concurrence, Volume III, page 1038 (May 2005). Because the issues raised in our July 31, 1996, letter have not been addressed, OCRM is not, at this time, approving the incorporation of sections 377.06, 377.24(9), and 377.242(1)(a)(5) into the FCMP.

- Section 380.23(3)(d) of Chapter 380: Land and Water Management

  As noted on page 920 in Volume III of this FCMP RPC Request for Concurrence, section 380.23(3)(d) is not being submitted for incorporation into the FCMP at this time. Therefore, section 380.23(3)(d) (federal activities within the territorial limits of neighboring states) is not an enforceable policy of the FCMP and this policy cannot be used for federal consistency.

- Sections 379.2251 and 379.362 of Chapter 379: Fish and Wildlife Conservation (formerly codified as 370.103 and 379.362, respectively)

  As noted on page 671 in Volume II of this FCMP RPC Request for Concurrence, sections 379.2251 and 379.362 were not previously included in the approved FCMP, and are not being submitted for incorporation into the FCMP at this time. Therefore, sections 379.2251 and 379.362 are not enforceable policies of the FCMP and cannot be used for federal consistency.

- The FCMP previously submitted changes to section 403.7125. Specifically, 403.7125(2) and 403.7125(3) were not approved by OCRM, since these sections specifically refer to an "owner or operator of a landfill owned or operated by a local or state government or by the Federal Government," and directs these owners or operators to establish fees and provide financial assurances. The CZMA does not authorize States to regulate federal agencies or federal lands, and therefore cannot approve this section as part of the Florida Coastal Management Program. *See* letter from John King, Chief, Coastal Programs Division to Lynn Griffin, Administrator, FCMP (July 2, 2008).

PUBLIC AND FEDERAL AGENCY COMMENTS

OCRM received no comments on this RPC submission.

Thank you for your cooperation in this review. Please contact Josh Lott at (301) 713-3155, extension 178, if you have any questions.

Sincerely,

for John King, Chief
Coastal Programs Division

Enclosure: Approval of Policies Incorporated into the Florida Coastal Management Program

Enclosure to OCRM's September 11, 2009, Approval of the Incorporation of Changes to the Florida COASTAL MANAGEMENT PROGRAM

Changes marked with an asterisk (*) are incorporated into the Florida COASTAL MANAGEMENT PROGRAM, but do not contain enforceable policies that can be used for Federal Consistency.

Description of State Law/Policy/Program Authority	State Legal Citation [section of the statute or rule]	Enforcement Mechanism(s) [the law(s) and mechanism(s) used to implement and enforce the section of the statute or rule]	*Note: all sections were enacted during the 2007 legislative session Date Effective in State
ADDED:			
Inlet Management; planning, prioritizing, funding, approving, and implementing projects.	161.143	Sections 161.041, .042, .088, .091, 101, .142, and .161, F.S.	7/1/2008
Prohibited activities; penalties.	258.008	Sections 258.004, .007, and .037, F.S.	7/1/2008
The Florida Small Business Development Center Network; purpose.	288.001*	n/a	7/1/2008
Small Business Regulatory Advisory Council.	288.7001*	n/a	7/1/2008
Small business advocate.	288.7002*	n/a	7/1/2008
List of flocculants permitted.	373.4185	Sections 373.016, .036, .129, .413, .416, and .430, F.S.; and Section 403.021, F.S.	7/1/2008
Florida Energy and Climate Commission.	377.6015*	n/a	7/1/2008
Florida Green Government Grants Act.	377.808	Sections 377.601, .703, and .802, F.S.; and Sections 403.021 and .061, F.S.	7/1/2008

Florida Ships-2-Reefs Program; matching grant requirements	379.2495	Section 379.249, F.S.	7/2/2008
The Stan Mayfield Working Waterfronts; Florida Forever program.	380.5105	Section 259.105, F.S.; and Sections 380.502, .507, and .508, F.S.	7/1/2008
Leah Schad Memorial Ocean Outfall Program.	403.08601	Sections 373.016, .196, and .250, F.S.; and Sections 403.021, .061, .0615, .064, and .0645, .086, .087, .088, .0881, and .0885, F.S.	7/1/2008
Florida Climate Protection Act.	403.44	Sections 377.601, and .703, F.S.; and Sections 403.021 and.061, F.S.	7/1/2008
Recycling.	403.7032	Sections 403.021, .061, .075, .085, .086, .413, .44, .702, .704, .7046, .705, .706, .7061, .707, .708, 7095, .713, and .7145, F.S.	7/1/2008
Department analysis of particular recyclable materials.	403.7033	Sections 403.021, .061, .702, .704, .7046, .705, and .7095, F.S.	7/1/2008
Methane capture.	403.7055	Sections 403.021, .061, .0872, .413, .44, .702, .704, .7046, .7061, and .70611, F.S.	7/1/2008
Florida Building Code.	553.73	Sections 161.041, .0415, .052, .053, .142, .54, .55, and .56, F.S.	7/1/2008
Permits; applications; issuance; inspections.	553.79	Sections 161.041, .0415, .052, .053, .142, .54, .55, and .56, F.S.	7/1/2008
Florida Aquaculture Policy Act; short title.	597.001	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Definitions.	597.0015	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Legislative declaration of public policy respecting aquaculture.	597.002	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Legislative intent.	597.0021	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Powers and duties of Department of Agriculture and Consumer Services	597.003	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008

Aquaculture certificate of registration.	597.004	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Prohibited acts; penalties.	597.0041	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Cultured shellfish theft reward program.	597.0045*	n/a	7/1/2008
Aquaculture Review Council.	597.005	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Aquaculture Interagency Coordinating Council.	597.006	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Shellfish regulation; leases.	597.01	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
Shellfish processors; regulation.	597.02	Sections 253.002 and 67 - .75, F.S.; Sections 379.2523, 2524, 2525, and .361, F.S.; and Sections 403.088 and .814, F.S.	7/1/2008
MODIFIED:		The following are only modifications of previously established policy.	
Minor technical change. (resubmittal)	161.0415		7/1/2008
Minor technical change. (resubmittal)	161.052		7/1/2008
Minor technical change. (resubmittal)	161.053		7/1/2008
Minor technical change. (resubmittal)	161.05301		7/1/2008
Minor technical change.	161.091		7/1/2008
Minor technical change.	161.142		7/1/2008
Minor technical change. (resubmittal)	161.54		7/1/2008
Minor technical change. (resubmittal)	161.55		7/1/2008
Minor technical change. (resubmittal)	161.56		7/1/2008
Minor technical change.	163.3177		7/1/2008
Minor technical change.	186.007		7/1/2008
Minor technical change.	252.373		7/1/2008
Minor technical change.	253.002		7/1/2008

Minor technical change.	253.01		7/1/2008
Minor technical change.	253.02		7/1/2008
Minor technical change.	253.025		7/1/2008
Minor technical change.	253.0325		7/1/2008
Minor technical change.	253.033		7/1/2008
Minor technical change.	253.034		7/1/2008
Minor technical change.	253.0341		7/1/2008
Minor technical change.	253.111		7/1/2008
Minor technical change.	253.82		7/1/2008
Minor technical change.	258.001		7/1/2008
Minor technical change.	258.007		7/1/2008
Minor technical change.	258.11		7/1/2008
Minor technical change.	258.12		7/1/2008
Minor technical change.	258.39		7/1/2008
Minor technical change.	258.397		7/1/2008
Minor technical change.	259.032		7/1/2008
Minor technical change.	259.035		7/1/2008
Minor technical change.	259.037		7/1/2008
Minor technical change.	259.041		7/1/2008
Minor technical change.	259.105		7/1/2008
Minor technical change.	259.1051		7/1/2008
Minor technical change.	267.031		7/1/2008
Minor technical change.	267.0612		7/1/2008
Minor technical change.	267.071		7/1/2008
Minor technical change.	267.0731		7/1/2008
Minor technical change.	267.173		7/1/2008
Minor technical change.	288.0655		7/1/2008
Minor technical change.	288.1045		7/1/2008
Minor technical change.	288.1089		7/1/2008
Minor technical change.	288.1223		7/1/2008

Minor technical change.	288.1254		7/1/2008
Minor technical change.	288.705		7/1/2008
Minor technical change.	288.7094		7/1/2008
Minor technical change.	288.7102		7/1/2008
Minor technical change.	288.8175		7/1/2008
Minor technical change.	288.9015		7/1/2008
Minor technical change.	288.90151		7/1/2008
Minor technical change.	288.9551		7/1/2008
Minor technical change.	288.975		7/1/2008
Minor technical change.	339.08		7/1/2008
Minor technical change.	339.135		7/1/2008
Minor technical change.	339.175		7/1/2008
Minor technical change.	339.2818		7/1/2008
Minor technical change.	339.2819		7/1/2008
Minor technical change.	339.55		7/1/2008
Minor technical change.	339.61		7/1/2008
Minor technical change.	373.026		7/1/2008
Minor technical change.	373.0361		7/1/2008
Minor technical change.	373.046		7/1/2008
Minor technical change.	373.073		7/1/2008
Minor technical change.	373.0831		7/1/2008
Minor technical change.	373.089		7/1/2008
Minor technical change.	373.109		7/1/2008
Minor technical change.	373.1391		7/1/2008
Minor technical change.	373.1501		7/1/2008
Minor technical change.	373.1502		7/1/2008
Minor technical change.	373.1961		7/1/2008
Minor technical change.	373.199		7/1/2008
Minor technical change.	373.228		7/1/2008
Minor technical change.	373.25		7/1/2008

Minor technical change.	373.414		7/1/2008
Minor technical change.	373.4211		7/1/2008
Minor technical change.	373.459		7/1/2008
Minor technical change.	373.4592		7/1/2008
Minor technical change.	373.4595		7/1/2008
Minor technical change.	373.47		7/1/2008
Minor technical change.	373.472		7/1/2008
Minor technical change.	373.59		7/1/2008
Minor technical change.	375.041		7/1/2008
Minor technical change.	376.303		7/1/2008
Minor technical change.	376.3071		7/1/2008
Minor technical change.	376.30711		7/1/2008
Minor technical change.	376.30715		7/1/2008
Minor technical change.	376.3072		7/1/2008
Minor technical change.	376.30781		7/1/2008
Minor technical change.	376.308		7/1/2008
Minor technical change.	376.79		7/1/2008
Minor technical change.	376.8		7/1/2008
Minor technical change.	376.82		7/1/2008
Minor technical change.	376.86		7/1/2008
Minor technical change.	377.42		7/1/2008
Minor technical change.	377.601		7/1/2008
Minor technical change.	377.602		7/1/2008
Minor technical change.	377.603		7/1/2008
Minor technical change.	377.604		7/1/2008
Minor technical change.	377.605		7/1/2008
Minor technical change.	377.606		7/1/2008
Minor technical change.	377.608		7/1/2008
Minor technical change.	377.701		7/1/2008
Minor technical change.	377.703		7/1/2008

Minor technical change.	377.705		7/1/2008
Minor technical change.	377.801		7/1/2008
Minor technical change.	377.802		7/1/2008
Minor technical change.	377.803		7/1/2008
Minor technical change.	377.804		7/1/2008
Minor technical change.	377.806		7/1/2008
Minor technical change. (transferred from 370.01 and 372.001)	379.101		7/1/2008
Minor technical change. (reenacted and transferred from 372.01)	379.102		7/1/2008
Minor technical change. (reenacted and transferred from 372.021)	379.1025		7/1/2008
Minor technical change. (reenacted and transferred from 372.03)	379.10255		7/1/2008
Minor technical change. (reenacted and transferred from 372.05)	379.103		7/1/2008
Minor technical change. (reenacted and transferred from 372.002)	379.104		7/1/2008
Minor technical change. (transferred from 372.705)	379.105		7/1/2008
Minor technical change. (reenacted and transferred from 370.023)	379.106		7/1/2008
Minor technical change. (reenacted and transferred from 372.101)	379.201		7/1/2008
Minor technical change. (reenacted and transferred from 372.127)	379.202		7/1/2008
Minor technical change. (transferred from 372.106)	379.203		7/1/2008
Minor technical change. (reenacted and transferred from 372.102)	379.204		7/1/2008
Minor technical change. (reenacted and transferred from 372.672)	379.205		7/1/2008
Minor technical change. (reenacted and transferred from 372.103)	379.206		7/1/2008
Minor technical change. (transferred from 372.105)	379.207		7/1/2008
Minor technical change. (transferred from 370.0603)	379.208		7/1/2008
Minor technical change. (reenacted and transferred from 372.991)	379.209		7/1/2008
Minor technical change. (transferred from 372.09)	379.211		7/1/2008
Minor technical change. (reenacted and transferred from 372.074)	379.212		7/1/2008
Minor technical change. (transferred from 372.5701)	379.2201		7/1/2008
Minor technical change. (transferred from 372.5702)	379.2202		7/1/2008
Minor technical change. (transferred from 372.72)	379.2203		7/1/2008
Minor technical change. (transferred from 372.5712)	379.2211		7/1/2008
Minor technical change. (transferred from 372.5715)	379.2212		7/1/2008

Minor technical change. (transferred from 372.573)	379.2213		7/1/2008
Minor technical change. (reenacted and transferred from 372.12)	379.2222		7/1/2008
Minor technical change. (reenacted and transferred from 372.121)	379.2223		7/1/2008
Minor technical change. (reenacted and transferred from 372.19)	379.2224		7/1/2008
Minor technical change. (reenacted and transferred from 372.025)	379.2225		7/1/2008
Minor technical change. (reenacted and transferred from 372.0215)	379.223		7/1/2008
Minor technical change. (reenacted and transferred from 370.06091)	379.224		7/1/2008
Minor technical change. (reenacted and transferred from 370.18)	379.2252		7/1/2008
Minor technical change. (reenacted and transferred from 370.19)	379.2253		7/1/2008
Minor technical change. (reenacted and transferred from 370.20)	379.2254		7/1/2008
Minor technical change. (transferred from 372.831, which is not considered enforceable policy for federal consistency purposes)	379.2255*		7/1/2008
Minor technical change. (transferred from 372.8311, which is not considered enforceable policy for federal consistency purposes)	379.2256*		7/1/2008
Minor technical change. (reenacted and transferred from 372.74)	379.2257		7/1/2008
Minor technical change. (reenacted and transferred from 372.77)	379.2258		7/1/2008
Minor technical change. (transferred from 372.7701)	379.2259		7/1/2008
Minor technical change. (transferred from 370.21)	379.226		7/1/2008
Minor technical change. (reenacted and transferred from 370.06092)	379.2271		7/1/2008
Minor technical change. (reenacted and transferred from 370.06093)	379.2272		7/1/2008
Minor technical change. (reenacted and transferred from 372.97)	379.2281		7/1/2008
Minor technical change. (reenacted and transferred from 372.971)	379.2282		7/1/2008
Minor technical change. (reenacted and transferred from 372.072)	379.2291		7/1/2008
Minor technical change. (transferred from372.073)	379.2292		7/1/2008
Minor technical change. (reenacted and transferred from 372.771)	379.23		7/1/2008
Minor technical change. (transferred from 372.265)	379.231		7/1/2008
Minor technical change. (reenacted and transferred from 370.03)	379.232		7/1/2008
Minor technical change. (reenacted and transferred from 372.995)	379.233		7/1/2008
Minor technical change. (transferred from 370.021(7))	379.2341		7/1/2008
Minor technical change. (reenacted and transferred from 372.0222)	379.2342		7/1/2008
Minor technical change. (reenacted and transferred from 370.1103)	379.2351		7/1/2008

Minor technical change. (reenacted and transferred from 370.27)	379.2352		7/1/2008
Minor technical change. (reenacted and transferred from 370.28)	379.2353		7/1/2008
Minor technical change. (transferred from 370.021(9))	379.236		7/1/2008
Minor technical change. (transferred from 370.021(10))	379.237		7/1/2008
Minor technical change. (reenacted and transferred from 370.025)	379.2401		7/1/2008
Minor technical change. (reenacted and transferred from 370.0607)	379.2402		7/1/2008
Minor technical change. (transferred from 370.101)	379.2411		7/1/2008
Minor technical change. (transferred from 370.102)	379.2412		7/1/2008
Minor technical change. (transferred from 370.11(1))	379.2413		7/1/2008
Minor technical change. (transferred from 370.08(1)-(4), (6), (7)(b), & (8))	379.2421		7/1/2008
Minor technical change. (transferred from 370.093)	379.2422		7/1/2008
Minor technical change. (transferred from 370.092)	379.2423		7/1/2008
Minor technical change. (transferred from 370.143(1))	379.2424		7/1/2008
Minor technical change. (reenacted and transferred from 370.172)	379.2425		7/1/2008
Minor technical change. (transferred from 370.12)	379.2431		7/1/2008
Minor technical change. (reenacted and transferred from 370.1201)	379.2432		7/1/2008
Minor technical change. (reenacted and transferred from 370.1202)	379.2433		7/1/2008
Minor technical change. (reenacted and transferred from 370.10)	379.244		7/1/2008
Minor technical change. (transferred from 370.1405)	379.245		7/1/2008
Minor technical change. (transferred from 370.151(2))	379.246		7/1/2008
Minor technical change. (transferred from 370.153)	379.247		7/1/2008
Minor technical change. (transferred from 370.17)	379.248		7/1/2008
Minor technical change. (transferred from 370.25)	379.249		7/1/2008
Minor technical change. (reenacted and transferred from 370.23)	379.25		7/1/2008
Minor technical change. (transferred from 370.1601)	379.2511		7/1/2008
Minor technical change. (reenacted and transferred from 370.161)	379.2512		7/1/2008
Minor technical change. (transferred from 370.027)	379.2521		7/1/2008
Minor technical change. (transferred from 370.1603)	379.2522		7/1/2008
Minor technical change. (transferred from 370.26)	379.2523		7/1/2008
Minor technical change. (reenacted and transferred from 370.31)	379.2524		7/1/2008

Minor technical change. (transferred from 370.16)	379.2525		7/1/2008
Minor technical change. (transferred from 370.081)	379.26		7/1/2008
Minor technical change. (transferred from 372.26)	379.28		7/1/2008
Minor technical change. (reenacted and transferred from 372.85)	379.29		7/1/2008
Minor technical change. (reenacted and transferred from 372.75)	379.295		7/1/2008
Minor technical change. (reenacted and transferred from 372.0025)	379.3001		7/1/2008
Minor technical change. (reenacted and transferred from 372.023)	379.3002		7/1/2008
Minor technical change. (transferred from 372.988)	379.3003		7/1/2008
Minor technical change. (transferred from 372.7016)	379.3004		7/1/2008
Minor technical change. (transferred from 372.6671)	379.3011		7/1/2008
Minor technical change. (reenacted and transferred from 372.6672)	379.3012		7/1/2008
Minor technical change. (reenacted and transferred from 372.6678)	379.3013		7/1/2008
Minor technical change. (transferred from 372.662)	379.3014		7/1/2008
Minor technical change. (reenacted and transferred from 372.664)	379.3015		7/1/2008
Minor technical change. (reenacted and transferred from 372.6645)	379.3016		7/1/2008
Minor technical change. (reenacted and transferred from 372.665)	379.3017		7/1/2008
Minor technical change. (transferred from 372.16)	379.302		7/1/2008
Minor technical change. (transferred from 372.922(3) & (4))	379.303		7/1/2008
Minor technical change. (transferred from 372.921(4)-(6), (9), & (10))	379.304		7/1/2008
Minor technical change. (transferred from 372.92)	379.305		7/1/2008
Minor technical change. (transferred from 370.028)	379.33		7/1/2008
Minor technical change. (reenacted and transferred from 372.07)	379.3311		7/1/2008
Minor technical change. (transferred from 372.071)	379.3312		7/1/2008
Minor technical change. (transferred from 370.021(8))	379.3313		7/1/2008
Minor technical change. (reenacted and transferred from 372.70)	379.332		7/1/2008
Minor technical change. (reenacted and transferred from 372.701)	379.333		7/1/2008
Minor technical change. (reenacted and transferred from 372.76)	379.334		7/1/2008
Minor technical change. (reenacted and transferred from 372.761)	379.335		7/1/2008
Minor technical change. (reenacted and transferred from 370.22)	379.336		7/1/2008
Minor technical change. (transferred from 370.061)	379.337		7/1/2008

Minor technical change. (transferred from 372.73)	379.338		7/1/2008
Minor technical change. (transferred from 372.9901)	379.339		7/1/2008
Minor technical change. (transferred from 372.9904)	379.3395		7/1/2008
Minor technical change. (reenacted and transferred from 372.99021)	379.341		7/1/2008
Minor technical change. (transferred from 372.9905)	379.342		7/1/2008
Minor technical change. (reenacted and transferred from 372.0715)	379.343		7/1/2008
Minor technical change. (reenacted and transferred from 372.5711)	379.35		7/1/2008
Minor technical change. (transferred from 372.571)	379.3501		7/1/2008
Minor technical change. (transferred from 372.59)	379.3502		7/1/2008
Minor technical change. (transferred from 372.58)	379.3503		7/1/2008
Minor technical change. (transferred from 372.581)	379.3504		7/1/2008
Minor technical change. (transferred from 372.574)	379.3511		7/1/2008
Minor technical change. (reenacted and transferred from 372.551)	379.3512		7/1/2008
Minor technical change. (transferred from 372.561)	379.352		7/1/2008
Minor technical change. (transferred from 372.562)	379.353		7/1/2008
Minor technical change. (transferred from 372.57)	379.354		7/1/2008
Minor technical change. (transferred from 370.063)	379.355		7/1/2008
Minor technical change. (reenacted and transferred from 372.5705)	379.356		7/1/2008
Minor technical change. (transferred from 372.5704)	379.357		7/1/2008
Minor technical change. (transferred from 372.5717)	379.3581		7/1/2008
Minor technical change. (transferred from 372.5718)	379.3582		7/1/2008
Minor technical change. (transferred from 370.06)	379.361		7/1/2008
Minor technical change. (transferred from 372.65)	379.363		7/1/2008
Minor technical change. (transferred from 372.651)	379.3635		7/1/2008
Minor technical change. (reenacted and transferred from 372.66)	379.364		7/1/2008
Minor technical change. (transferred from 370.13)	379.365		7/1/2008
Minor technical change. (transferred from 370.135)	379.366		7/1/2008
Minor technical change. (transferred from 370.14)	379.367		7/1/2008
Minor technical change. (transferred from 370.142)	379.3671		7/1/2008
Minor technical change. (transferred from 370.143)	379.368		7/1/2008

Minor technical change. (transferred from 370.1535(2)(c))	379.369		7/1/2008
Minor technical change. (transferred from 372.16(1), fee part only)	379.3711		7/2/2008
Minor technical change. (transferred from 372.661)	379.3712		7/1/2008
Minor technical change. (reenacted and transferred from 372.86)	379.372		7/1/2008
Minor technical change. (transferred from 372.87)	379.373		7/1/2008
Minor technical change. (transferred from 372.88)	379.374		7/1/2008
Minor technical change. (transferred from 6673)	379.3751		7/1/2008
Minor technical change. (transferred from 372.6674)	379.3752		7/1/2008
Minor technical change. (transferred from 372.921(1)-(3), (7), & (8))	379.3761		7/1/2008
Minor technical change. (transferred from 372.922(1),(2), & (5)-(7))	379.3762		7/1/2008
Minor technical change. (transferred from 372.653)	379.377		7/1/2008
Minor technical change. (transferred from 372.83)	379.401		7/1/2008
Minor technical change. (transferred from 372.935)	379.4015		7/1/2008
Minor technical change. (reenacted and transferred from 370.1107)	379.402		7/1/2008
Minor technical change. (transferred from 372.7015)	379.403		7/1/2008
Minor technical change. (transferred from 372.99)	379.404		7/1/2008
Minor technical change. (transferred from 372.99022)	379.405		7/1/2008
Minor technical change. (transferred from 372.9903)	379.406		7/1/2008
Minor technical change. (transferred from 370.021(1), (2)(a) & (b))	379.407		7/1/2008
Minor technical change. (transferred from 370.15(5) & (6)(b))	379.407		7/1/2008
Minor technical change. (transferred from 370.151(3))	379.407		7/1/2008
Minor technical change. (transferred from 370.021(2)(c) - (m), (3) - (6), (11), & (12))	379.407		7/1/2008
Minor technical change. (reenacted and transferred from 372.84)	379.408		7/1/2008
Minor technical change. (reenacted and transferred from 372.663)	379.409		7/1/2008
Minor technical change. (reenacted and transferred from 372.0725)	379.411		7/1/2008
Minor technical change. (transferred from 372.671)	379.4115		7/1/2008
Minor technical change. (transferred from 370.1121)	379.413		7/1/2008
Minor technical change. (transferred from 370.07(6)(b))	379.414		7/1/2008
Minor technical change.	380.05		7/1/2008
Minor technical change.	380.06		7/1/2008

Minor technical change.	380.0651		7/1/2008
Minor technical change.	380.23		7/1/2008
Minor technical change.	380.502		7/1/2008
Minor technical change.	380.503		7/1/2008
Minor technical change.	380.507		7/1/2008
Minor technical change.	380.508		7/1/2008
Minor technical change.	380.5115		7/1/2008
Minor technical change.	381.0065		7/1/2008
Minor technical change.	388.46		7/1/2008
Minor technical change.	403.031		7/1/2008
Minor technical change.	403.0623		7/1/2008
Minor technical change.	403.067		7/1/2008
Minor technical change.	403.085		7/1/2008
Minor technical change.	403.086		7/1/2008
Minor technical change.	403.087		7/1/2008
Minor technical change.	403.0872		7/1/2008
Minor technical change.	403.088		7/1/2008
Minor technical change.	403.1651		7/1/2008
Minor technical change.	403.1835		7/1/2008
Minor technical change.	403.201		7/1/2008
Minor technical change.	403.41315		7/1/2008
Minor technical change.	403.502		7/1/2008
Minor technical change.	403.503		7/1/2008
Minor technical change.	403.504		7/1/2008
Minor technical change.	403.506		7/1/2008
Minor technical change.	403.5064		7/1/2008
Minor technical change.	403.5065		7/1/2008
Minor technical change.	403.50663		7/1/2008
Minor technical change.	403.50665		7/1/2008
Minor technical change.	403.507		7/1/2008
Minor technical change.	403.508		7/1/2008
Minor technical change.	403.509		7/1/2008
Minor technical change.	403.511		7/1/2008

Minor technical change.	403.5112		7/1/2008
Minor technical change.	403.5113		7/1/2008
Minor technical change.	403.5115		7/1/2008
Minor technical change.	403.516		7/1/2008
Minor technical change.	403.517		7/1/2008
Minor technical change.	403.5175		7/1/2008
Minor technical change.	403.518		7/1/2008
Minor technical change.	403.519		7/1/2008
Minor technical change.	403.5252		7/1/2008
Minor technical change.	403.526		7/1/2008
Minor technical change.	403.527		7/1/2008
Minor technical change.	403.5271		7/1/2008
Minor technical change.	403.5272		7/1/2008
Minor technical change.	403.5312		7/1/2008
Minor technical change.	403.5363		7/1/2008
Minor technical change.	403.5365		7/1/2008
Minor technical change.	403.706		7/1/2008
Minor technical change.	403.707		7/1/2008
Minor technical change.	403.7095		7/1/2008
Minor technical change.	403.813		7/1/2008
Minor technical change.	403.814		7/1/2008
Minor technical change.	403.861		7/1/2008
Minor technical change.	403.862		7/1/2008
Minor technical change.	403.873		7/1/2008
Minor technical change.	403.874		7/1/2008
Minor technical change.	403.885		7/1/2008
Minor technical change.	403.89		7/1/2008
Minor technical change.	403.891		7/1/2008
Minor technical change.	403.8911		7/1/2008
Minor technical change.	403.973		7/1/2008
NO CHANGES:			
Florida Greenways and Trails Act	260		7/1/2008

Transporation Administration	334		7/1/2008
Soil and Water Conservation	582		7/1/2008
DELETED:			
Renumbered as Section 265.708, F.S. (not part of FCMP)		267.0619	7/1/2008
Renumbered as Section 265.707, F.S. (not part of FCMP)		267.072	7/1/2008
Repealed.		267.174	7/1/2008
Repealed.		288.039	7/1/2008
Repealed.		377.901	7/1/2008
Repealed.		403.08725	7/1/2008

Florida Fish and Wildlife Conservation Commission

Commissioners
Brian S. Yablonski
Chairman
Tallahassee

Aliese P. "Liesa" Priddy
Vice Chairman
Immokalee

Ronald M. Bergeron
Fort Lauderdale

Richard Hanas
Oviedo

Bo Rivard
Panama City

Charles W. Roberts III
Tallahassee

Robert A. Spottswood
Key West

Executive Staff
Nick Wiley
Executive Director

Eric Sutton
Assistant Executive Director

Jennifer Fitzwater
Chief of Staff

Office of the Executive Director
Nick Wiley
Executive Director

(850) 487-3796
(850) 921-5786 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street
Tallahassee, Florida
32399-1600
Voice: (850) 488-4676

Hearing/speech-impaired:
(800) 955-8771 (T)
(800) 955-8770 (V)

MyFWC.com

December 16, 2015

Chris Stahl
Interim Environmental Manager
Agency Contact and Coordinator (SCH)
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, MS 47
Tallahassee, FL 32399-3000
Chris.Stahl@dep.state.fl.us

Re: SAI #FL201510087461C, U.S. Army Corps of Engineers, Draft Environmental Impact Statement, Update of the Master Water Control Manual for the Apalachicola-Chattahoochee-Flint Rivers, Alabama, Florida, and Georgia and a Water Supply Assessment

Dear Mr. Stahl:

Florida Fish and Wildlife Conservation Commission (FWC) staff has reviewed the U.S. Army Corps of Engineers (USACE/Corps') Draft Environmental Impact Statement (DEIS) for the above-referenced project, and provides the following comments and recommendations for your consideration in accordance with Chapter 379, Florida Statutes (F.S.), and pursuant to the federal National Environmental Policy Act (NEPA), the federal Coastal Zone Management Act, and the State of Florida Coastal Management Program.

Proposed Project

The proposed action alternative (PAA) is Alternative 7H as described in the DEIS Section 5.2.9. It consists of the following:

- Water Management Alternative 7, which contains following measures:
  - Current guide curves,
  - Revised Level 1 action zones,
  - Drought operations:
    - Drought operations trigger-composite conservation storage Zone 3,
    - Drought operations suspension trigger-composite conservation storage Zone 1,
    - Extreme drought operations - current operations with inclusion of use of inactive storage to meet specific needs.
  - Seasonal flow at Peachtree Creek (750cfs [May–Oct] and 650 [Nov–Apr]),
  - Modified generation schedule with drought operations,
  - 4/5 month navigation (7-ft),
  - Current Basin Inflow Method,
  - Current fish spawn procedures,
  - Current fish passage procedures,
  - Listed species management:
    - Current ramping rates,
    - Suspension of ramping rates in drought,

- Suspension of ramping rates during prolonged low flow, and
- Current minimum flow provisions at the Chattahoochee, FL USGS gage on the Apalachicola River (2012 RIOP).

  - Water supply operations limited to 20 mgd for relocation contracts and 277 mgd for downstream withdrawal by Metro Atlanta (same as Water Management Alternative 1).

- Reallocation of storage in Lake Lanier sufficient to provide gross water supply withdrawals of 165 mgd;
- Constructing Glades Reservoir and providing 40 mgd to Hall County/Gainesville;
- Releases from Buford Dam to support downstream withdrawals of the estimated 2040 need of 408 mgd; and,
- Return rate to Lake Lanier of 40.4 percent.

Previous Coordination

At the outset, we note that the fish and wildlife resources in the Apalachicola River and Bay have been suffering significant harm as a result of ever increasing consumptive uses on both the Flint River and the Chattahoochee River. Now Georgia has asked the USACE to adjust its operations to facilitate supply and storage for increased Georgia consumption. USACE operations cannot prevent the severe harm that Georgia's consumptive water use is causing in the Apalachicola River and Bay—the USACE correctly acknowledges that it does not have authority to determine water rights within and among states. However, the USACE can and should reject this water supply and storage request that imperils fish and wildlife. Moreover, the USACE has an obligation to utilize reliable data and methodologies to evaluate the proposed action, to balance fish and wildlife project purposes rather than prioritizing upstream consumption, and to consider effects of its operations in the context of the cumulative impacts of upstream consumption. The FWC asserts that the USACE has not done this.

FWC staff's concerns for fish, wildlife, and habitat resources of the Apalachicola River and Bay have been communicated multiple times through multiple processes. There have been 12 formal comment letters or responses to the United States Fish and Wildlife Service (USFWS) and the USACE as part of the Endangered Species Act, Fish and Wildlife Coordination Act, and as part of the Scoping comments, including the most recent Florida Fish and Wildlife Conservation Commission's Comments on Draft Fish and Wildlife Coordination Act Report in June 2015.

The FWC staff has made numerous attempts to communicate how the data and methodology used to evaluate the proposed action favors other project purposes, including upstream water supply, over downstream fish, wildlife, and habitat resources of the Florida Apalachicola River and Bay. However, the DEIS Preferred Action Alternative does not appear to have changed since the USFWS submitted the Draft Fish and Wildlife Coordination Act Report (DFWCAR) on July 31, 2015. The USFWS developed the DFWCAR with input from the National Marine Fisheries Service, and the state fish and wildlife agencies of Alabama, Florida, and Georgia. The DFWCAR report states that the USFWS "does not fully support the Corps' adoption of the PAA for the following reasons:

Q

Response to ACF184 – Florida Department of Environmental Protection

Q. The purposes of the Master WCM update and WSSA (appendix B in the EIS) are to determine how the federal projects in the basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to assess the extent to which reservoir storage at Lake Lanier can be made available to meet current and future water supply needs for Metro Atlanta. In the WCM update process, balancing project operations to fulfill all authorized purposes, while evaluating impacts to the environment was a top priority. The analysis in the EIS demonstrates that the PAA would result in little to no change in flow and water quality conditions in the Apalachicola River and Bay and, consequently, that there would be little to no effect on biological and other resources in the river and bay. The authorized purposes of the federal ACF system do not include a specific directive to provide freshwater inflows to Apalachicola Bay to sustain the resources of the bay. The PAA also includes measures necessary to address the adverse effects of project operations on federally listed endangered or threatened species downstream of Jim Woodruff Lock and Dam. USACE consulted on the PAA and the results are presented in appendix J of the final EIS. In the biological opinion the USFWS concluded that effects to estuarine invertebrate production are insignificant because the PAA provides slightly beneficial effects from increasing the number of freshwater pulses and increasing the number of days greater than or equal to 16,200 cfs in the winter. USFWS also anticipate only minor changes in salinity regimes and estuarine habitat due to the WCM.

- the Corps' current alternatives selection process does not appear to accurately represent multiple project purposes, and does not appear to give fish and wildlife equal consideration (Service 2015; Appendix XV),
- a failure to adequately address conservation measures identified in the Service's PAL (Service 2010; Appendix V), PAL addendum (Service 2011; Appendix VI), and the Service's 2011 DFWCAR (Service 2011) and subsequently included in this report,
- modeling developed from limited consumptive use scenarios without sufficiently considering climate change and future increase in consumptive demands,
- inadequately assessed effects to riverine ecosystems and federally listed Gulf sturgeon,
- increased frequency of low flows causing negative impacts to federally listed mussels, and,
- increased storage resulting in lower magnitude releases and possibly slightly higher salinities to the Apalachicola River and East Bay. Based on model results provided by the Corps, the negative effects of the PAA on fish and wildlife resources are a consequence of reservoir system operation changes and increases in consumptive demands that are part of the PAA."

The USACE dismissed the above concerns in their response located in Appendix J of the DEIS, stating "that the PAA balances all authorized project purposes including fish and wildlife conservation. We [Corps] believe that the currently proposed alternative including the management of the water resources over which the Corps is responsible and for which the Corps has authority, would have little adverse impact to fish and wildlife resources compared to the existing condition."

FWC staff agrees with the USFWS position to withhold full support for adoption of the PAA, and asserts that the PAA, which would adjust USACE operations to facilitate supply and storage for increased Georgia consumption, will have adverse effects to the fish, wildlife, and habitat resources of the Apalachicola River and Bay.

NEPA Comments

The DEIS does not adequately comply with the requirements of 32 CFR §651 Appendix E (b)(7) in addressing the environmental and socioeconomic consequences of the proposed action alternative and in addressing the cumulative effects of the proposed action alternative (32 CFR §651 Appendix E (b)(7)(ix)). The following provides specific information that should have been considered in developing the PAA.

R

Habitat and Management Impacts

The volume of water available for USACE project purposes, including protection of downstream fish and wildlife resources, is constrained by Georgia's consumption. The PAA includes increased water storage and supply requested by Georgia and will result in significant fish, wildlife, and habitat effects to the Apalachicola River and Bay system more than the no action/current operations, which already includes upstream water use to the detriment of downstream fish and wildlife resources. The proposed flows would result in lower highs during the spring spawning months for multiple species on the

Response to ACF184 – Florida Department of Environmental Protection

R. The comment specifically refers to access to the floodplain during drought. It also mentions access to that area by aquatic organisms. In both cases, floodplain connectivity occurs during high water, not during droughts. USACE would have no mechanism to provide sufficient water to establish the necessary high flows during drought conditions.

The 11th Circuit Court of Appeals directed USACE to determine its authority for granting Georgia's 2000 water supply request. As a result of the 11th Circuit's remand, USACE has examined reallocating water storage in Lake Lanier for water supply. While there are localized adverse impacts as noted in section 6 of the EIS, overall impacts of the PAA are considered minor. As shown in the EIS, there are only minor differences in flow on the Apalachicola River between the NAA and the PAA.

River. Section 2.5.3.1.1 acknowledges that there has been a shift in flow conditions of the Apalachicola River from historic patterns, and future projections show further modification. Section 2.5.3.1.1 identifies important flow conditions needed to maintain the connection from the main river to the floodplain forest habitat via sloughs (Darst & Light 2008, Light et al. 1995, Light et al. 1998, Light et al. 2006) needed for a variety of wildlife species and fish communities (Burgess et al. 2012, Cailteux et al. 2007, Dutterer et al. 2012, Grabowski et al. 2012, Walsh et al. 2006). The increased water consumption facilitated in the PAA will further alter the flow regime, affecting the ability of FWC to manage public conservation lands adjacent to the Apalachicola River. A wet floodplain is needed as a natural fire break when prescribed fire is used for maintaining community structure per the area management plans (http://www.myfwc.com/conservation/terrestrial/management-plans/online-mps/; http://www.myfwc.com/viewing/recreation/name/). As identified in Darst & Light (2008), lower flows may be contributing toward saltwater intrusion into the tidal reaches of the Apalachicola River causing alteration of freshwater marshes and treelines. The PAA will likely result in a decrease of flows needed to support these important habitats and the ability of the FWC to manage public conservation lands in a manner to maintain the fish and wildlife and floodplain forest communities.

Listed Species

R

Since 2006, FWC has expressed concerns that low flows are inadequate to address the needs of the fish, wildlife, and habitat of the Apalachicola River and Bay system. The modifications that are proposed in ramping rates will contribute to stranding and mortality of listed mussel species and fish and fish spawning success, depending on month, as was observed between 2000 and 2013 (FWC fishery surveys, FWC-USFWS mussel surveys). The FWC disagrees with the DEIS's assumption that the 2012 Revised Interim Operations Plan will adequately protect the federally listed species that occur in the Apalachicola River. The expanded water consumption contemplated in the PAA will lead to increased low flows, which have demonstrated impacts on the species. Moreover, the DEIS did not address any of the federal species-at-risk, petitioned, or candidate species in the evaluation. The FWC has provided additional technical comments in Enclosure 1, which contains a partial list of these petitioned species and a weblink to state-listed species that should be included in the evaluation and as part of the NEPA assessment (32 CFR §651 Appendix E (b)(6) and (7)).

SOP Codification

The PAA codifies within the proposed Master Water Control Manual the South Atlantic Division Regulation (DR) PDS-O-1, *Project Operations, Lake Regulation and Coordination for Fish Management Purposes* (May 31, 2010) and draft *Reservoir Regulation and Coordination for Fish Spawn Management Purposes Standard Operating Procedure* (SOP), (USACE, Mobile District SOP 1130-2-9) February 2005. Florida has repeatedly objected, since 2004, during the annual interstate coordination meetings to implementation of this protocol since it places unequal importance of the reservoir fisheries over the Apalachicola River and Bay system during the spring spawning season (USACE Fish Spawn Coordination annual meetings, FWC May 23, 2011, letter to USFWS). Florida has documented the impacts of inadequate spring and summer flows to

Apalachicola River fish communities (Dutterer et al. 2012) which has not been demonstrated in the reservoir fisheries since these protocols went into effect.

Flow Effects

The PAA's increased water storage and supply for Georgia in combination with proposed changes to the drought management and "drought curve" will result in a significant increase in the frequency and duration of low flows in the Apalachicola River and Bay. Section 5.2.9.2.4 of the DEIS indicates that low flow or drought conditions from the PAA will occur 18.1% of the time. This is almost three times the existing conditions (6.7%) which rarely existed prior to 2006 and the current levels of consumption. These unprecedented low flows within the Apalachicola River will likely result in decreased year class strength for the fish community (Dutterer et al. 2012, Grabowski et al. 2012), mortality to Threatened and Endangered mussels and overall impacts to non-listed mussel communities (DFWCAR, 2015, Brim-Box & William, 2000), disconnection of flows from the main channel to the floodplain sloughs (Light et al. 1995, Light et al. 1998) and associated water quality impairments that are harmful to fish and aquatic life (ESA/PWA, 2013), and further drying of the floodplain forest community (Darst & Light 2008).

R

The PAA, including increased upstream water consumption, may also reduce high flows that are needed in the winter and spring with the corresponding reduction in salinity in order to flush oyster predators from the Bay and reduce oyster diseases in the Bay. These changes will also produce an unacceptable alteration of the salinity regime resulting in an increase in salinity of the Apalachicola Bay and Estuary. Severe impacts due to higher salinities for long durations will likely occur to oysters, blue crabs, shrimp, finfish, and other species of the Bay and Estuarine system. The need for these higher flows to support this important environmental function has been well documented by multiple studies (Craig et al. 1989; Edmiston, 2008; FWC-Fish and Wildlife Research Institute Fishery Independent Monitoring, Lewis et al. 1997; Livingston et al. 2000; Menzel et al. 1966; Petes et al. 2012; Wilber, 1992; Wilber, 1994).

Recreational Use

Much of the floodplain lands are under State ownership and managed for conservation of fish and wildlife resources and recreational use (http://www.myfwc.com/viewing/recreation/). The DEIS does not recognize or analyze the recreational usage within the Apalachicola River and Bay system. There are numerous boat ramps (public and private) that are used for fishing, hunting, and boating on the system. Frequent-use boat ramps that also have significant fishing tournaments throughout the year include those at Estiffanulga, Bristol, Neal Landing, Gaskin Park Landing, Dead Lakes Park, Henry Abercrombie, Bay City Lodge, and White City. The contribution of boater spending in the counties, surrounding the Apalachicola River, and the regional economy in 2007 had total effects of $207 million, $71 million in Labor income, $120 million in Value added, and 2,868 jobs (http://www.myfwc.com/media/1162807/Registered-BoaterSpending.pdf). However, many of the recreational boat ramps along the upper and middle Apalachicola River and in some of the major tributaries will be unusable or hazardous for use during low-flow conditions as was observed during the most recent drought operations. This will restrict and decrease recreational use for fishing, hunting, boating, and camping activities along

major portions of the Apalachicola River. Enclosure 1 provides additional information on boat ramps and their use. The DEIS did not consider the impacts to recreational boating and the economic impacts to the regional economy in the alternatives analysis as required by NEPA (32 CFR §651 Appendix E (b)(6) and (7)). The PAA, including increased upstream water consumption, will likely result in increased negative impacts to recreational boating on the Apalachicola system due to the lower flows and longer durations and frequencies of extreme low-flow conditions that have historically occurred.

In addition to boating activity, much of the public lands in the basin are used for other recreational purposes (kayaking, wildlife viewing, hiking, biking, horseback riding, primitive camping, and geocaching). As an example, the Apalachicola River Wildlife and Environmental Area (ARWEA), located in Gulf and Franklin counties, covers approximately 82,975 acres. ARWEA has averaged an estimated (by vehicle and pedestrian counters) 166,412 visitors per year with an estimated annual impact of $32 million to the state, region, and local economies as well as supporting an estimated 300 jobs. A study in 2000/2001 (Shrestha et al. 2007) showed that 47% of the visitors to the area were from out of state, 45% visited the area 12 or more times in the last 12 months, and 45% spent more than a day in the area. Fishing was the most satisfying recreation activity for 26% of the respondents. The total estimated annual economic impact to the region from visits to St. Vincent NWR, St. George Island State Park, Apalachicola National Forest, Tate's Hell State Forest, and ARWEA was over $282 million. ARWEA and the surrounding waters is the site of two federally recognized recreation destinations: the Big Bend Scenic Byway and the Apalachicola River Paddling Trail System. The Apalachicola River and associated wildlife and scenic resources are one of the major features and tourist draws for this byway. The Apalachicola River Paddling Trail System consists of 67 miles of marked routes and associated launches and campsites and is a designated National Recreational Trail. Enclosure 1 provides additional comments regarding recreational use in the Apalachicola River System. The DEIS did not identify or consider the impacts to the recreational uses on public lands or along the Apalachicola River system that are directly linked to river flow as required by NEPA (32 CFR §651 Appendix E(b)(6) and (7)). The PAA will adversely impact recreational use within the Apalachicola River Basin, and the USACE must disclose and evaluate these impacts.

R

NEPA Summary

As indicated above, the DEIS alternatives selection process does not adequately consider fish and wildlife resources in comparison to other project purposes, including increased water consumption (32 CFR §651 Appendix E (b)(5)). It also fails to consider recreation and the socioeconomic impacts within the Apalachicola River and Bay system. We recommend that the USACE re-evaluate the methodology used in the alternatives selection process to more accurately show potential impacts to the project purposes and fish, wildlife, and habitat resources. We recommend that the USACE remove from consideration any alternative that includes water storage and supply to meet Georgia's request and the proposed drought operations trigger which would occur at composite conservation storage Zone 3. The ACF system cannot sustain Georgia's increasing consumptive water use. Georgia's water use, in combination with the proposed drought operations trigger at composite conservation storage Zone 3, would increase the frequency and duration of extreme low flow events to the detriment of downstream resources. We also request that recreation and socioeconomic resources within the

Response to ACF184 – Florida Department of Environmental Protection

Apalachicola River and Bay system be included in the NEPA assessment and alternatives selection process.

Consistency Statement

FWC finds that the Draft Environmental Impact Statement for the *Update of the Master Water Control Manual for the Apalachicola-Chattahoochee-Flint Rivers, Alabama, Florida, and Georgia and a Water Supply Assessment* is inconsistent with FWC enforceable policies included in the federally approved State of Florida Coastal Management Program in accordance with the provisions of 15 C.F.R. 930, subpart C.

Basis for Determination

The following enforceable policies within the federally approved Florida Coastal Management Program provide the basis for FWC's objection:

S

379.1025 F.S. Powers, duties, and authority of commission; rules, regulations, and orders.—The Fish and Wildlife Conservation Commission may exercise the powers, duties, and authority granted by s. 9, Art. IV of the Constitution of Florida, and as otherwise authorized by the Legislature by the adoption of rules, regulations, and orders in accordance with chapter 120.

The PAA, as identified by the DEIS to include water supply and storage, facilitating increased upstream consumption of water, is inconsistent with this enforceable policy because it will adversely affect coastal resources of the Apalachicola River and its floodplain forest and Bay, and as such will interfere with the FWC's ability to exercise authority to manage, protect, and conserve wild animal life and fresh water and marine aquatic life in this area. Management of the fish and wildlife resources, riverine, floodplain, estuarine, and marine habitats and the protection and conservation of these coastal resources are dependent on adequate river flows.

379.104 F.S. Right to hunt and fish.—The Legislature recognizes that hunting, fishing, and the taking of game are a valued part of the cultural heritage of Florida and should be forever preserved for Floridians. The Legislature further recognizes that these activities play an important part in the state's economy and in the conservation, preservation, and management of the state's natural areas and resources. Therefore, the Legislature intends that the citizens of Florida have a right to hunt, fish, and take game, subject to the regulations and restrictions prescribed by general law and by s. 9, Art. IV of the State Constitution.

The PAA, as identified by the DEIS to include water supply and storage, facilitating increased upstream consumption of water, is inconsistent with this enforceable policy because decreased flows and increasing frequency and duration of extreme low-flow events will result in the significant limitation or elimination of the public's ability to hunt, fish, and take game, which are also recognized as an important part of conservation, preservation, and management of the state's natural areas and resources. FWC correspondence provided to USACE, through the previous coordination processes, documents the fisheries and wildlife and their habitats that may be affected in the

Response to ACF184 – Florida Department of Environmental Protection

S. The PAA will not adversely affect coastal resources because it will not result in a change in the freshwater inflows on the Apalachicola River, as indicated in section 6 of the EIS. The PAA will not limit in any way the "public's ability to hunt, fish, and take game." USACE disputes that there would be decreased flows on the river under the PAA, as demonstrated in section 6 of the EIS.
Citations have been checked and corrected as needed. That does not change the fact, however, that flow condition changes under the PAA are minimal compared to the NAA flow conditions and will have little adverse impact.
(1) The recommended revised basin inflow was evaluated as a management measure and was not eliminated. Captured in the draft EIS as revised basin inflow method 1, the measure passed the initial and second screening processes. Additionally, the measure is a component of water management alternative 4 (see Table ES-2 and Table 4.2-1 in the EIS). Section 4.2 states: "Water management alternatives were not formulated based on every conceivable combination of measures. Instead, the measures selected for inclusion in a water management alternative were those that USACE considered as potential refinements based on experience with current operations or those that were recommended by one or more stakeholders during the scoping process." (2) All authorized project purposes already have been balanced, as noted in the draft EIS. (3) All adverse impacts have been addressed. (4) USACE is not authorized by law to operate the ACF system specifically for the benefit of Apalachicola Bay. Instead, benefits to the Apalachicola Bay are a byproduct of the system being operated for authorized purposes. The 11th Circuit Court directed USACE to consider the Georgia water supply request as part of the Master WCM update, and USACE complied with the court's direction, considering Georgia's request as part of the process.

Apalachicola River and Bay. No mention of recreational usage (hunting, fishing, and other recreational uses) along the Apalachicola River and Bay was described in the DEIS. The full information from FWC's and Florida's previous comments were not included in the description of the affected environment of the Apalachicola River and Bay, were not considered in the alternatives development and the identification of the PAA, and were not adequately considered in the direct or cumulative effects of the PAA. The PAA will facilitate greater water supply and storage for Georgia, resulting in the following:

- Decreased flows needed to support the main channel, slough, and floodplain forest habitats which support a wide variety of fish and wildlife resources and the ability to manage public lands to meet the objectives needed to maintain the fish and wildlife and forest communities. Decreased flows have already been documented to cause impacts to fishery resources of the Apalachicola River and Bay (Burgess et al. 2012; Cailteux et al. 2007; Dutterer et al. 2012; FWC-Fish and Wildlife Research Institute Fishery Independent Monitoring; Grabowski et al. 2012; Lewis et al. 1997; Livingston et al. 2000; Walsh et al. 2006; Wilber, 1992; Wilber, 1994);
- Significant changes in the frequency and duration of low flows on the Apalachicola River and Bay due to increased water supply and storage for Georgia in conjunction with the proposed changes in the drought management and "drought curve". These extreme low flows would occur more often than the no action alternative/current levels of upstream consumption, which have been documented to result in effects to fishery resources as described above. Extreme low flows will also render many boat ramps unusable or hazardous for use thereby restricting and producing a loss of recreational use for fishing, hunting, boating, and camping activities along major portions of the Apalachicola River. S

379.2223 F.S. Control and management of state game lands.—
(1) The Fish and Wildlife Conservation Commission is authorized to make, adopt, promulgate, amend, repeal, and enforce all reasonable rules and regulations necessary for the protection, control, operation, management, or development of lands or waters owned by, leased by, or otherwise assigned to, the commission for fish or wildlife management purposes, including but not being limited to the right of ingress and egress. Before any such rule or regulation is adopted, other than one relating to wild animal life, marine life, or freshwater aquatic life, the commission shall obtain the consent and agreement, in writing, of the owner, in the case of privately owned lands or waters, or the owner or primary custodian, in the case of public lands or waters.

The PAA, as identified by the DEIS to include water supply and storage, facilitating increased upstream consumption of water, is inconsistent with this enforceable policy because it would undermine FWC's ability to implement adopted rules that provide for protection, control, operation, management, or development of public lands assigned to FWC for management. Management of the FWC lands for fish, wildlife, and floodplain habitats are dependent on adequate river flows. The development of alternatives and the selection of the PAA did not include a description or an assessment of recreational usage and socioeconomic impacts to the public managed areas. The PAA will result in decreased flows that will affect FWC-managed lands, such as the Apalachicola River Wildlife and Environmental Area (ARWEA) and others identified in the DEIS Table

2.5.6 *Wildlife Management Facilities in the ACF Basin* and the corrections noted in Enclosure 1. Specifically, decreased flows on the Apalachicola River will interfere with the following:

- The 50-year Board of Trustees' Lease Agreement Number 3584 with the FWC for ARWEA which directs the FWC to "manage the leased premises only for the conservation and protection of natural and historical resources and resource-based, public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 253.023(11), FS";
- FWC's ability to manage public lands to meet the approved objectives needed to maintain the fish and wildlife and forest communities (as described in Rule 68-1.004 Florida Administrative Code - Standards) further affecting maintaining fishery resources (Dutterer et al. 2012; Grabowski et al. 2012) and interfering with FWC's management objectives for reconnection of floodplain sloughs and other hydrologic restorations necessary for improving and maintaining the floodplain forest, saltmarsh habitat, and the associated fish and wildlife resources (Light et al. 1998; Light et al. 2006; Darst & Light 2008; Walsh et al. 2006);
- Increasd frequency and duration of low-flow and "drought" events that result in further drying of riverine and floodplain areas, will affect FWC's ability to:
  - manage for invasive species since they will expand into new areas during periods of extreme floodplain dryness,
  - provide for maintaining or improving natural community and wildlife habitat management via prescribed burning due to the lack of the natural wet floodplain fire break and unsafe conditions in the floodplain which could allow fire to enter and eliminate non-target species,
  - provide for restoration of hydrology in floodplain sloughs and marsh systems, and S
  - maintain the public's access for hunting, fishing, boating and other recreational purposes as identified in the State-approved Management Plans. Public access that is needed for hunting and fishing along the Apalachicola River will be reduced due to unusable or hazardous boat ramps or access points.

379.2401 Marine fisheries; policy and standards.—
(1) The Legislature hereby declares the policy of the state to be management and preservation of its renewable marine fishery resources, based upon the best available information, emphasizing protection and enhancement of the marine and estuarine environment in such a manner as to provide for optimum sustained benefits and use to all the people of this state for present and future generations.

This enforceable policy declares the policy of the State to be management and preservation of the State's renewable marine fishery resources, and is interpreted as follows:

- Actions must be taken to manage and preserve the State's renewable marine fishery resources,
- Actions taken must be based on the best available information,
- Actions taken must emphasize protection and enhancement of the marine and estuarine environment,

- Actions taken must accomplish management and preservation of the State's marine fishery resources in such a manner as to provide for optimum sustained benefits and use to all the people of this state for present and future generations.

The FWC adheres to this policy when managing the State's marine fishery resources for coastal uses, and because of the policy's inclusion in the federally approved Florida Coastal Management Program, this policy equally applies to the USACE when determining effects to State marine fishery resources and use of such resources for consistency purposes.

The PAA, as identified by the DEIS to include water supply and storage, facilitating increased upstream consumption of water, is inconsistent with this enforceable policy because it would result in adverse effects to coastal resources such as oysters, blue crabs, shrimp, finfish, and other species, and would therefore adversely affect coastal uses such as recreational and commercial fishing by not using the best available information. FWC correspondence, provided to USACE through previous coordination processes, stated that increased frequency and duration of low and extreme low-flow events as proposed by the PAA will result in an unacceptable level in the alteration of the salinity regime of the Apalachicola Bay and Estuary. Severe impacts due to higher salinities for long durations will likely occur to oysters, blue crabs, shrimp, finfish, and other species of the Bay and Estuarine system (Craig et al. 1989; Edmiston, 2008; FWC-Fish and Wildlife Research Institute Fishery Independent Monitoring, Lewis et al. 1997; Livingston et al. 2000; Menzel et al. 1966; Petes et al. 2012; Wilber, 1992; Wilber, 1994). The USFWS provided similar information regarding anticipated salinity impacts in the DFWCAR. Despite being provided this information, the DEIS maintains that the PAA will only result in an insignificant change to existing conditions, which clearly establishes that the best available information was not used to determine effects of the PAA to coastal resources. S

Since the best available information was not utilized in the development of the PAA, the PAA as proposed would also prohibit FWC from managing or preserving the State's renewable marine fishery resources and would not allow FWC to emphasize protection and preservation of the marine and estuarine environment in such a manner as to provide for optimum sustained benefits and use to all the people of the State of Florida for present and future generations.

379.2401 Marine fisheries; policy and standards.—
(3) All rules relating to saltwater fisheries adopted by the commission shall be consistent with the following standards:
(a) The paramount concern of conservation and management measures shall be the continuing health and abundance of the marine fisheries resources of this state.
(b) Conservation and management measures shall be based upon the best information available, including biological, sociological, economic, and other information deemed relevant by the commission.
(c) Conservation and management measures shall permit reasonable means and quantities of annual harvest, consistent with maximum practicable sustainable stock abundance on a continuing basis.
(d) When possible and practicable, stocks of fish shall be managed as a biological unit.

(e) Conservation and management measures shall assure proper quality control of marine resources that enter commerce.
(f) State marine fishery management plans shall be developed to implement management of important marine fishery resources.
(g) Conservation and management decisions shall be fair and equitable to all the people of this state and carried out in such a manner that no individual, corporation, or entity acquires an excessive share of such privileges.
(h) Federal fishery management plans and fishery management plans of other states or interstate commissions should be considered when developing state marine fishery management plans. Inconsistencies should be avoided unless it is determined that it is in the best interest of the fisheries or residents of this state to be inconsistent.

The PAA as identified by the DEIS to include water supply and storage, facilitating increased upstream consumption of water, is inconsistent with this enforceable policy because it would prevent the FWC from adopting rules that would provide for the continuing health and abundance of the marine fisheries resources of Apalachicola Bay adversely affecting coastal resources, and reasonable means and quantities of annual harvest from Apalachicola Bay, consistent with maximum practicable sustainable stock abundance on a continuing basis adversely affecting coastal uses. S

Additional Deficiency

In addition to the fact that the DEIS is inconsistent with FWC's enforceable policies, the USACE's consistency statement and statutory references in Appendix L, *Federal Agency Consistency Determination Under the Coastal Zone Management Act, Florida Coastal Management Program (FCMP),* used outdated statutes. FWC's authorities were consolidated into Chapter 379, F.S., in 2008 and were subsequently incorporated into the FCMP as Routine Program Changes in 2009. Therefore the consistency determination, as required by 15 CFR 930.35 and 15 CFR 930.37, is not valid. Florida previously provided the USACE the link to the DEP website http://www.dep.state.fl.us/cmp/federal/fedconsv.htm that contains the updated statutory authorities in the approved FCMP.

Alternative Measures

The following alternative measures are necessary in order for the FWC to determine the Draft Environmental Impact Statement is consistent with FWC enforceable policies included in the federally approved State of Florida Coastal Management Program in accordance with 15 C.F.R. § 930.43.

The alternative measures that the USACE will need to undertake are:

1. Use the Revised Basin Inflow calculation component in all potential alternatives analysis, as Florida has previously recommended,
2. Revise the alternatives analysis to improve the balance between fish, wildlife, and habitat resources and other project purposes as identified in the USFWS July 31, 2015, DFWCAR - Appendix XV, as well as, addressing the other issues identified in the DFWCAR (DFWCAR is provided in the DEIS Appendix J),
3. Revise the DEIS to address all the fish, wildlife, habitat, recreational, and socioeconomic resources of the Apalachicola River and Bay,

4. Fully evaluate effects of all alternatives with a new Preferred Action Alternative to fully address the resources of the Apalachicola River and Bay,
5. Complete the federal consistency evaluation using the current FCMP statutory authorities of the FWC, and,
6. Remove any alternatives from consideration which increase upstream consumption and the frequency and duration of low and extreme low-flow events that occur on the Apalachicola River and Bay.

Closing Remarks

We appreciate the opportunity to provide comments during the draft EIS for the Update of the Master Water Control Manual for the Apalachicola-Chattahoochee-Flint Rivers. We remain willing to work with the USACE to develop a Master Water Control Manual for the Apalachicola-Chattahoochee-Flint Rivers that is consistent with FWC's authorities within the Florida Coastal Management Program. If you have specific technical questions regarding the content of this letter, please contact Theodore Hoehn at (850) 488-8792 or by email at ted.hoehn@MyFWC.com.

Sincerely,

Nick Wiley
Executive Director

nw/th
ENV 1-3-2
ACF Water Control Manual Update_21997_121615
Enclosure 1 - Additional Technical Comments

Response to ACF184 – Florida Department of Environmental Protection

Citations:

Burgess, O.T., Pine, W.E., and Walsh, S.J. 2012. Importance of Floodplain Connectivity to Fish Populations in the Apalachicola River, Florida. River Research and Applications. DOI: 10.1002/rra.2567.

Cailteux, R., D.A. Dobbins, and P.A. Strickland. 2007. Impact of water level on sportfish and catfish year classes in the Apalachicola River. Florida Fish and Wildlife Conservation Commission Annual Report. Quincy, Florida.

Craig, A., E.N. Powell, R.R. Fay, and J.M. Brooks. 1989. Distribution of *Perkinsus marinus* in Gulf coast oyster populations. Estuaries 12, 82-91.

Darst, M.R., and H.M. Light. 2008. Drier Forest Composition Associated with Hydrologic Change in the Apalachicola River, Florida. Scientific Investigations Report 2008–5062. U.S. Geological Survey, Reston, VA.

Dutterer, A.C., C. Mesing, R. Cailteux, M.S. Allen, W.E. Pine, and P.A. Strickland. 2012. Fish recruitment is influenced by river flows and floodplain inundation at Apalachicola River, Florida. River Research and Applications. Published online in Wiley Online Library (wileyonlinelibrary.com) doi: 10.1002/rra.2604.

Edmiston, H. L. 2008. A river meets the bay: a characterization of the Apalachicola River and Bay system. Apalachicola National Estuarine Research Reserve. Florida Department of Environmental Protection.

Grabowski, T.B., S.P. Young, J.J. Isely, and P.C. Ely. 2012. Age, growth, and reproductive biology of three catostomids from the Apalachicola River, Florida. Journal of Fish and Wildlife Management 3(2):223–237; e1944-687X doi: 10.3996/012012-JFWM-008.

Lewis, F.G., G.C. Woodsum, R.J. Livingston, and X. Niu. 1997. The effects of river flow and other environmental factors on the abundance of organisms in Apalachicola Bay, Florida. In F.G. Lewis (ed.). Relationships of river flow and other environmental characteristics with the structure and function of biological communities in Apalachicola Bay, Florida. Draft Final Report to the ACF/ACT Comprehensive Study.

Light, H.M., M.R. Darst, and J.W. Grubbs. 1998. Aquatic Habitats in Relation to River Flow in the Apalachicola River Floodplain, Florida. USGS Professional Paper 1594. Prepared in cooperation with the Northwest Florida Water Management District. U.S. Geological Survey, Atlanta, GA.

Light, H.M., K.R. Vincent, M.R. Darst, and F.D. Price. 2006. Water-level Decline in the Apalachicola River, Florida, from 1954 to 2004, and Effects on the Floodplain Habitats. Scientific Investigations Report 2006-5173. U.S. Geological Survey, Tallahassee, FL.

Livingston, R.J., F.G. Lewis, G.C. Woodsum, X. Niu, B. Galperin, W. Huange, J.D. Christensen, M.E. Monaco, T.A. Battista, C.J. Klein, R.L.I. Howell, and G.L. Ray. 2000. Modelling Oyster Population Response to Variation in Freshwater Input. Estuarine, Coastal and Shelf Science 50, 655-672.

Menzel, R.W., N.C. Hulings, R.R. Hathaway. 1966. Oyster abundance in Apalachicola Bay, Florida in relation to biotic Associations Influenced by Salinity and Other Factors. Gulf Research Reports 2(2): 73-96.

Petes, L.E., A.J. Brown, and C.R. Knight. 2012. Impacts of upstream drought and water withdrawals on the health and survival of downstream estuarine oyster populations. Ecology and Evolution doi: 10.1002/ece3.291.

Walsh, S.J., W.B. Tate, and M.A. Burgess. 2006. Fishes of the Apalachicola River Floodplain: Role of habitat and hydrology to recruitment. Final report submitted March 31, 2006, to Florida Fish and Wildlife Conservation Commission. U.S. Geological Survey, Gainesville, Florida. 124 pp.

Wilber, D. H. 1992. Associations between freshwater inflows and oyster productivity in Apalachicola Bay, Florida. Estuarine, Coastal and Shelf Science 35: 179-190.

Wilber, D. H. 1994. The influence of Apalachicola River flows on blue crab, *Callinectes sapidus*, in north Florida. Fishery Bulletin 92: 180-188.

Enclosure 1 - Additional Technical Comments:

1. Section 2.1.1.2.4.5 Recreation:
This section fails to address recreation that occurs at Lake Seminole and below Jim Woodruff Dam on the Apalachicola River. A listing of boat ramps that occur within the Lake Seminole, Apalachicola-Chipola River, and Apalachicola Bay systems can be downloaded from the FWC website: http://www.myfwc.com/boating/boat-ramps-access. The Florida Boating Access Facilities Inventory and Economic Study, including a pilot study for Lee County (2009), is available at the FWC website: http://www.myfwc.com/about/overview/economics/. The following are public boat ramps that were known to be unusable or hazardous for use during the previous drought operations: Aspalaga Road, Sneads Park, Estiffanulga, Gaskin Park (Apalachicola River Wayside Park), Owl Creek, Kennedy Creek, and White Oak Landing.

T

As indicated, the Apalachicola River has two federally recognized recreation destinations: the Big Bend Scenic Byway and the Apalachicola River Paddling Trail System. National Scenic Byways designations recognize those roads across the country that exhibit one or more six core intrinsic qualities - scenic, natural, historic, recreational, archaeological, or cultural - contributing towards a unique travel experience. In addition, the byway must demonstrate strong community support and develop a corridor management plan that describes in detail the preservation, marketing, and improvement strategies for the byway. As of 2006, there are 126 roads from 44 states that are designated as either National Scenic Byways or All-American Roads. US Highway 65 is part of the Big Bend Scenic Byway and is one of only six nationally recognized byways in Florida. The National Trail System Act of 1968 (Public Law 90-543) authorized creation of a national trail system comprised of National Recreation Trails, National Scenic Trails, and National Historic Trails. National Recreation Trails may be designated by Congress, the Secretary of Interior, or the Secretary of Agriculture to recognize exemplary trails of local and regional significance in response to an application from the trail's managing agency or organization. Through designation, these trails are recognized as part of America's national system of trails.

2. 2.5.3.1.2 Subsystems with Unregulated Flow, page 2-200, line 8:
Bluestripe "*darter*" (*Cyprinella callitaenia*) should be bluestripe "*shiner*". The bluestripe darter (*Percina cymatotaenia*) is only found in the Missouri River system. Also note, the bluestripe shiner is also found in the upper reaches of the Apalachicola River and the shoal bass is found in the upper Apalachicola and is abundant in the Chipola River. Both species are not just found in the Flint River as indicated in the text.

U

3. Section 2.5.4 Protected Species Affected Environment:
This section addresses the federally listed species that occur within the basin. Candidate, petitioned, and species at risk were not included in the list. The following petitioned species, while not a complete list, should be considered in the evaluations: Southern elktoe (*Alasmidonta triangulate)*, Apalachicola floater (*Anodonta heardi*), delicate spike (*Elliptio arctata*), brother spike (*Elliptio fraternal*), Barbour's map turtle, (*Graptemys barbouri*).

V

Response to ACF184 – Florida Department of Environmental Protection

T. The final EIS includes appropriate updates

U. The final EIS includes appropriate updates

V. The final EIS includes appropriate updates

Several state-listed species occur within the basin that could be affected by the proposed action alternative and should be evaluated. The species list can be found in Florida's Endangered and Threatened Species document dated September 2015 which is available at FWC's website: http://www.myfwc.com/media/1515251/threatened_endangered_species.pdf. Please note that Florida's listed species review process is undergoing significant changes. A revised list is anticipated in April 2016 which will change the status of many of the species that occur within the Apalachicola River and Bay system. An example of an aquatic dependent species whose status will change and will be affected by the proposed action alternative is the Barbour's map turtle, (*Graptemys barbouri*). Barbour's map turtle is currently a Species of Special Concern (SSC) as listed in Rule 68A-27.005 Florida Administrative Code (F.A.C.). As an SSC, the Barbour's map turtle is protected from take, including taking, attempting to take, pursuing hunting, molesting, capturing, or killing wildlife or their nests or eggs. A peer reviewed status assessment (FWC, 2011) found that the species met the criteria for listing as a state-designated Threatened species, and a Species Action Plan (FWC, 2013) was developed. This plan, and the status assessment, both identify water quantity and quality as potential threats to the species. Change in status from the SSC to state-designated Threatened species is scheduled to occur in April 2016. When this status change occurs, take for the Barbour's map turtle will include harm, as defined in Rule 68A-27.001(4) F.A.C., to include significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including feeding, breeding, and sheltering. Changing water levels may impact access of the Barbour's map turtle to overhanging branches and downed woody debris, both of which are critical components of sheltering. Additionally, lower water levels could expose eggs and nests to increased predation, and increase the difficulty in navigating steep banks to lay eggs, leading to impairment of breeding patterns.

V

The tables within the Florida's Endangered and Threatened Species document should also be used to correct the missing information in Table 2.5-5. *Federally Protected Species Occurring in the ACF Basin* under the "Florida status" column. We also recommend that each state's listed species be incorporated into another table and evaluated for impacts. Appendix H-ACF Basin Species Lists should be updated based upon the September 2015 document. FWC has available an Excel spreadsheet that identifies the fish species that has been collected in the Apalachicola-Chipola system to update Table H-5.

Florida Fish and Wildlife Conservation Commission. 2011. Biological Status Review for the Barbour's map turtle (*Graptemys barbouri*). Tallahassee, FL. http://www.myfwc.com/media/2273256/Barbours-Map-Turtle-BSR.pdf.

Florida Fish and Wildlife Conservation Commission. 2013. A species action plan for the for the Barbour's map turtle (*Graptemys barbouri*). Tallahassee, FL. http://www.myfwc.com/media/2738250/Barbours-Map-Turtle-Species-Action-Plan-Final-Draft.pdf.

Response to ACF184 – Florida Department of Environmental Protection

4. Section 2.5.5 Fish and Wildlife Management Facilities Affected Environment, Table 2.5.6 *Wildlife Management Facilities in the ACF Basin*:
There are several errors on this table. The following are corrections that we recommend for the table.
   - The Apalachicola River Wildlife Environmental Area (ARWEA), St. Vincent National Wildlife Refuge, and most or all of the Apalachicola River Water Management Area (WMA) is within the boundary of Apalachicola National Estuarine Research Reserve (246,000 acres) but management is addressed by multiple agencies.
   - The area listed as Apalachicola WMA (Jackson Co.) is Apalachee WMA (7,952 acres).
   - Apalachicola WMA (Apalachicola National Forest) is not even listed and adjoins the Apalachicola River around Ft. Gadsden historic site (SW corner of the forest). It is ~581,290 acres.
   - ARWEA (~82,975 acres) – FWC is lead management for 63,257 acres and the remaining acreage of the management area is managed by Northwest Florida Water Management District, Department of Environmental Protection, and Florida Forest Service.
   - G.V. Perker WMA, which we believe was G.U. Parker WMA, no longer exists as a WMA.
   - Beaverdam Creek WMA is missing Liberty Co., 1,317 acres (a fairly new WMA).
   - Tate's Hell WMA is 185,041 acres not including the Womack Creek Unit (13,754 acres). The total acres for Tate's Hell State Forest is listed as about 202,437 acres.
   - Box-R WMA is missing Franklin Co., 11,216 acres.
   - Upper Chipola River WMA is now called Chipola River WMA, Jackson and Calhoun Counties, 9,094 acres.

   The following FWC website contains the adopted management plans for the Wildlife Management Areas that FWC has primary management authority.
   http://www.myfwc.com/conservation/terrestrial/management-plans/online-mps/

W

5. Section 2.6.4.4 Oyster Industry of Apalachicola Bay:
The DEIS does not explain how it came up with the figures it presents for "sales revenue of oysters in Franklin County." We were unable to recreate the dollar values that are identified in this paragraph using the Florida Department of Agriculture and Consumer Services (FDACS) and U.S. Department of Agriculture (USDA) 2012 reports. While the information is likely from the USDA, it is not clear if the data cited in the paragraph is from cultured species, wild species, or both. It is not clear if the dollar value is what is realized by the fishermen, processor, or retailer. The FWC Fishery Dependent Monitoring (FWDM) provides data for dollar value of meats to the fishermen. The FWC FWDM data is for wild oyster harvest. Based upon FWC FWDM data, the concluding statement is incorrect in that the revenue to oyster fishermen increased in 2012 from 2007. The citations for the FDACS and USDA reports are identified below.

X

Response to ACF184 – Florida Department of Environmental Protection

W. The final EIS includes appropriate updates

X. The final EIS includes appropriate updates

Table 2.6-16 comments:

- Column 2, Pounds (meats) are for wild oyster harvested as reported by Franklin County Wholesale Dealers.
- Column 3, Number of trips reported, is the number of trips for wild oyster harvest as reported by Franklin County Wholesale Dealers.
- Columns 4, AB oyster harvesting licenses, is from the FDACS report. The report cites FDACS data on the number of Apalachicola Bay Oyster Harvesting Licenses issued by FDACS. This FDACS license is required for wild oyster harvest in the Apalachicola Bay System, but may not be an accurate reflection of license use. Perhaps a better approximation of licenses actually used in harvesting would be the FWC-issued Saltwater Products Licenses. These were reported by the FWC FWDM data to have actually sold oysters to Wholesale Dealers in Franklin County.
- Column 5, Bags/trips, is from the FDACS report. The report presumably uses the FWC FWDM conversion factors to convert pounds of oyster meats to bags of oysters. The FWC FWDM data is for wild oyster harvest. Using the FWC FWDM conversion factors, we calculated an average of about 2 Bags/Trip lower than reported by FDACS for all years, although the ranking for all years was virtually the same as what was presented in the FDACS report.

Florida Department of Agriculture and Consumer Services. 2012. Oyster Resource Assessment Report Apalachicola Bay. Florida Department of Agriculture and Consumer Services, Division of Aquaculture, Tallahassee, FL.

U.S. Department of Agriculture. 2012. National Agricultural Statistics Service. 2012 Agricultural Census. Accessed July 2014. http:/quickstats.nass.usda.gov/.

6

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

December 15, 2015

Chris Stahl
Coordinator, Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, MS 47
Tallahassee, FL 32399-3300
Chris.Stahl@dep.state.fl.us

Re: DHR Project Review File Number 2015-5793
SAI# FL201510087461C
Draft Environmental Impact Statement, Updated Master Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin

Mr. Stahl:

The Division of Historical Resources reviewed the referenced Draft Environmental Impact Statement (DEIS) in accordance with Section 267.061, Florida Statutes, as part of a federal consistency review pursuant to the Coastal Zone Management Act, and pursuant to the federal National Environmental Policy Act (NEPA). The proposed federal action evaluated in the DEIS includes changes in the water level management to facilitate increased water storage and water supply requested by the State of Georgia. We previously submitted these comments directly to the Corps of Engineers pursuant to our agency's responsibilities under Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800.3-13). As we noted, the DEIS did not provide adequate information to identify historic properties or evaluate effects to those properties resulting from the proposed federal action. In fact, it does not appear that the DEIS at all considered the potential impact on eligible Traditional Cultural Properties (TCPs). The DEIS then is inconsistent with Section 267.061(2)(a), Florida Statutes, which requires that agencies "consider the effect of the undertaking on *any* historic property that is included in, or eligible for inclusion in, the National Register of Historic Places." *Id.* (emphasis supplied). Furthermore, the DEIS's failure to evaluate potential impacts on historic properties of increased storage and water supply for Georgia falls short of the Corps' NEPA obligation to assess the impact on historical resources and alternatives to the proposed action.

Y

The DEIS references two phases of a cultural resources study of the ACF Basin. According to the DEIS, these studies present an archaeological site predictive model and sensitivity model, and an analysis of potential effects to sites based on changes in water level management and increased upstream consumption. Although the DEIS summarizes the results of the reports, this summary does not provide site names, numbers, other identification information, or details of the methodology

Z

Division of Historical Resources
R.A. Gray Building • 500 South Bronough Street• Tallahassee, Florida 32399
850.245.6300 • 850.245.6436 (Fax) flheritage.com
Promoting Florida's History and Culture **VivaFlorida.org**

VIVA FLORIDA

Historical Resources
www.flheritage.com

Response to ACF184 – Florida Department of Environmental Protection

Y. USACE concurs with the comment. Additional consultation was conducted for the final EIS under section 106 of the National Historic Preservation Act as outlined. The results are reflected in section 6.7 of the final EIS.

Z. It is customary not to provide specific site location data in environmental documents that are available to the general public to prevent potentially eligible sites from being vandalized or looted. USACE would be happy, however, to provide the sites evaluated for the Master WCM update directly to the Florida State Historic Preservation Office (SHPO).
- The data set was collected in 2009 by Brockington and Associates, Inc. upon request by and under contract to USACE, Mobile District as a follow-up to the 1998 study with the same goals. The SHPOs with sites in the study had the opportunity to comment on each of the studies, and concurrence letters regarding their methodologies and results are on file with the district.
- Fifteen sites were selected by Brockington to evaluate both past and possible future impacts from proposed changes in water level. The sites were selected based on their lakeshore or riverbank locations to represent an accurate sample of sites periodically affected by water. Attempts were made to select two sites from each USACE lake project in the ACF Basin (i.e., Lake Lanier, West Point Lake, Lake Walter F. George, Lake Andrews, and Lake Seminole) in addition to a few other sites throughout the ACF Basin. Although Brockington identified past, present, and possible future effects from erosion and established a geomorphologic baseline, questions still remained about site exposure to human impacts—particularly looting.
- The most recent study conducted by USACE in 2014 addressed impacts from water management and site exposure. The data set was built using the data from the previous Brockington studies and evaluated using geographic information systems technology.

utilized to obtain the results. It is therefore not possible for us to concur with the Corps' proposed summary of effects to cultural resources/historic properties at this time. The Corps should forward hard copies, and electronic copies, of the study to us so that we may continue our review.

Additionally, changes in water level management and increased upstream consumption have the potential to effect the Apalachicola Historic District (8FR350) and several properties contributing to the district's significance. These resources have recently been proposed TCPs by the U.S. Coast Guard in the MC252 (Gulf of Mexico Oil Spill) TCP Inventory. These properties include (but may not be limited to) the Wharf and Mill Pond TCP, the Lafayette Park TCP, and the Battery Park TCP. The study also identified the Apalachicola Bay as contributing to the significance of the Apalachicola Fishing Community Cultural Landscape. The proposed action, and alternatives, presented in the DEIS have the potential to effect these historic properties/cultural resources, as changes in water level management and increased upstream consumption could affect the traditional fishing and cultural practices of the Apalachicola fishing community, which defines the character of Apalachicola Bay and the larger cultural landscape of which it is a part. Furthermore, there may be other unidentified TCPs along the Apalachicola-Chattahoochee-Flint River system that could be effected by the proposed action.

AA

Because the DEIS failed to consider the proposed undertaking's effect on a whole category of "historic property," namely TCPs, despite Section 267.061(2)(a)'s requirement that it do so, we cannot concur at this time with the Corps' proposed summary of effects on historic properties in the DEIS. Until the Corps of Engineers considers potential TCPs and Cultural Landscapes as part of its identification of historic properties responsibilities outlined in 36 CFR 800.4, the DEIS in its current form is contrary to applicable law. If necessary, we can provide guidance and documentation related to the identification and evaluation of Traditional Cultural Properties. We would also welcome the opportunity to discuss the potential effects of the proposed action alternatives in a meeting or conference call.

Sincerely,

Robert F. Bendus
State Historic Preservation Officer and Director
of Historical Resources

Response to ACF184 – Florida Department of Environmental Protection

AA. Public involvement during the Master WCM update process has been rigorous and ongoing since 2008. A detailed summary is included in section 1.4 of the EIS.

USACE appreciates the information provided on newly recommended traditional cultural properties (TCPs) in the ACF Basin; however, based on the nature of the TCPs and projected environmental impacts of the PAA, USACE has determined that the PAA will have no effect on those TCPs.

Specifically, the USACE PAA would have little to no effect on flow and water quality conditions in the Apalachicola River downstream of Jim Woodruff Lock and Dam compared to the NAA (current reservoir operations). The PAA is not expected to cause a change in Apalachicola Bay ecological or socioeconomic resources compared to current operations, thus no direct or indirect impacts to the TCPs mentioned are expected.

The PAA is not expected to result in a change to conditions that currently exist for the commercial fishing industry—including oysters—in Apalachicola Bay compared to current reservoir operations (NAA). Physical and ecological conditions that affect the overall abundance or extent of occurrence of commercial species are not expected to change under the PAA. Section 6.5.5 of the EIS addresses the effects of the various WCM update alternatives on the Apalachicola Bay oyster industry, concluding that no direct or indirect impacts to the TCPs mentioned are expected.

7

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

MEMORANDUM

TO: Chris Stahl, Coordinator, Florida State Clearinghouse, Department of Environmental Protection

FROM: Graham Lewis, Environmental Scientist IV

THROUGH: Guy Gowens, Assistant Executive Director
Nick Wooten, Director, Resource Management Division

DATE: December 15, 2015

SUBJECT: Department of the Army, Mobile District Corps of Engineers – Draft Environmental Impact Statement, Updated Master Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida and Georgia and Water Supply Storage Assessment. SAI # FL201510087461C

Northwest Florida Water Management District staff have reviewed the referenced Draft Environmental Impact Statement, Updated Master Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida, and Georgia and a Water Supply Storage Assessment dated October 2015, hereinafter referred to as the DEIS. The DEIS develops and evaluates a series of proposed strategies for operation of the federal facilities in the Apalachicola-Chattahoochee-Flint (ACF) River Basin and provides the preferred alternative for adoption into the Master Water Control Manual. District staff provide the following comments in accordance with the National Environmental Policy Act, the Coastal Zone Management Act/Florida Coastal Management Program (CZMA/FCMP), and Chapter 373, Florida Statutes.

The mission of the Northwest Florida Water Management District (District) is to implement the provisions of Chapter 373, Water Resources, Florida Statutes, in a manner that best ensures the continued welfare of the residents and water resources of Northwest Florida. To do so, the District, in compliance with the applicable statutes and rules, implements a comprehensive approach, including regulatory and non-regulatory programs, directed toward: (1) ensuring a clean and adequate supply of water for the people and natural resources of the regions, (2) protecting, maintaining, and improving the quality of water resources across the panhandle, (3) promoting flood protection through non-structural techniques, and (4) protecting and improving natural systems in Northwest Florida through land acquisition, management, and ecosystem restoration activities.

In accordance with our mission and responsibilities, District staff has reviewed the DEIS and provide the following comments.

From the onset, the DEIS ignores Florida's prior comments made over many years that Georgia's increasing upstream consumption is depriving Florida of critical flows to support fish

Response to ACF184 – Florida Department of Environmental Protection

and wildlife resources and curtailing downstream releases to the detriment of downstream users and ecosystems. This results in continuing significant impacts to Florida's water and related resources, diminishes public uses, and causes adverse effects on the State's coastal resources and associated public benefits. The U.S. Army Corps of Engineers' (Corps') Preferred Action Alternative (PAA) proposes to increase these unacceptable downstream impacts by utilizing a variety of methods to increase storage, facilitating even greater upstream consumption. Throughout the DEIS, the Corps has failed to meaningfully consider any alternative consistent with more sustainable and appropriate upstream withdrawals.

AB

In fact, the Corps acknowledges that the objective of this update is to "Consider, along with operations for all authorized purposes, an *expanded* range of water supply alternatives associated with the Buford Dam/Lake Lanier project, including current levels of water supply withdrawals and additional amounts that Georgia, in 2013, requested from Lake Lanier and downstream at Atlanta" (p. 4-1, DEIS; emphasis added). This approach does not properly recognize the equities of the State of Florida, which clearly entitle the State to a portion of the water in the Georgia portion of the basin. It is apparent that while other aspects of the project were considered in the DEIS, the primary assumption underlying the revision was to accommodate Georgia's entire water demands. No attempt was made to consider reductions in this demand to restore and protect critical downstream environmental resources.

The apparent bias toward meeting Georgia water demands at the expense of downstream environmental needs is evident throughout the development of the DEIS including the initial organization of alternatives, the choice of baseline conditions, the screening and ranking methodologies, and the final decision on the PAA. Many of the concerns associated with the methodologies and choice of alternatives were presented by the U.S. Fish and Wildlife Service (FWS) in its Draft Fish and Wildlife Coordination Act Report of July 2015; these comments echo many of the District's concerns. Unfortunately, most of these comments were summarily dismissed by the Corps in its response (DEIS Appendix J). From the District's perspective, several issues raised by FWS warrant reiteration and should be addressed in the DEIS:

- The PAA, which would increase water supply and storage as Georgia requested, will increase the frequency and duration of low-flow events resulting in a significantly greater percent of time in drought operations.
- Inadequate assessment of downstream environmental consequences was made, particularly with respect to the impacts to the Apalachicola River and floodplain and Apalachicola Bay.
- Biased screening/ranking methods were used.
- Future water supply modeling only accounted for increased metro Atlanta demands; all other demands were held to 2007 levels resulting in an inaccurate picture of total system operations with a bias toward Atlanta's water supply request.
- None of the FWS recommended conservations measures, especially those related to flow alternatives, floodplain inundation, downstream fish and wildlife, threatened and endangered species, Apalachicola Bay salinity and communities, and drought triggers, to cite a few, were addressed.

Response to ACF184 – Florida Department of Environmental Protection

AB. See response to comment Q above

The resulting effects will significantly obstruct the District's ability to fulfill its responsibilities to appropriately protect and manage watershed resources, benefits, and functions as required under sections 373.451-453, F.S., and to ensure the sufficiency of surface water flows needed to avoid significant harm to the region's water resources and ecology (sections 373.036 and 373.042, F.S.).

Critical Flaws in the Corps' DEIS Analysis

Ranking Methodology

In addition to the flaws in the screening/ranking methodology pointed out by the FWS, it is unclear how the various alternatives were constructed. There does not appear to be any rationale regarding how the Corps combined various operations into any particular alternative. For example, a version of Florida's recommended revised basin inflow calculation (presented in Florida's 2013 Scoping Letter) was relegated to Alternative 4 along with a number of other operations in a seemingly arbitrary fashion. These combined operations were ranked poorly under the Corps' flawed methodology and thus all dismissed with no further consideration of any of the individual operational components. Individual operations were thus eliminated without any explanation. While the Corps cannot test all combinations of suggested operations, a better method than that used should be devised and implemented to assess potential alternative activities. Specific operational components recommended by Florida and FWS warrant further consideration in the DEIS.

AC

Future Demands

The failure to consider basinwide projected water demands beyond 2007 precludes an accurate assessment of the effects of the PAA, which includes increased water supply and storage for Georgia. This is particularly problematic for demands in the Flint basin which is heavily dominated by water-intensive agricultural use. While there are no federal impoundments on the Flint River, the Corps does rely, in part, on the volume of Flint River flows to determine releases that culminate in the Apalachicola River. Underestimating Flint River basin demands obscures the true impacts of the PAA, which includes increased water supply and storage from Chattahoochee River facilities. The Corps must evaluate projected water demands throughout the basin to meaningfully assess the potential impacts of the PAA.

AD

Unimpaired Flow Data

The Corps has continued to use the Unimpaired Flow (UIF) data set as the basis for its modeling efforts with no revisions despite the acknowledged need by the Corps and others for modifications. When the District provided the Corps with the updated consumptive use for the Florida portion of the basin, we reiterated the need to revise the UIF data to accurately depict flows in the system rather than just extending the data set. Our recommendations regarding the UIF data set, as well as those from Alabama and others, appear to have been dismissed without consideration. These concerns should be addressed and corrected, and a new version of the UIF data distributed to the States and others for their use in modeling.

AE

Baseline for Comparison

The choice of the 2012 Revised Interim Operating Plan (RIOP) as a baseline for alternative comparison precludes a meaningful evaluation of potential impacts on Florida. The baseline

Response to ACF184 – Florida Department of Environmental Protection

AC. USACE used a straightforward and transparent ranking methodology. As a result of public and agency comments, USACE reviewed the methodology it used to rank performance of the water management alternatives and considered other methodologies. The Agency determined that other methodologies would not improve on the methodology employed. Section 4 of the final EIS has been revised to better explain the ranking process.

AD. The NAA is the baseline against which all other alternatives are compared in the draft EIS. As explained in section 4.1.2.9 of the EIS, for modeling purposes, a fixed demand was identified to allow for effective comparison of alternatives. The highest levels of basinwide water supply withdrawals occurred in 2007, during the 2006–2008 drought. Although basinwide withdrawals since 2007 have been lower overall, 2007 was selected as representative of "current" demand because using the highest recent figure provides the most conservative estimate of the storage available for all purposes, assuming the highest reasonably forecasted water supply demand, including during times of drought.

AE. The unimpaired flow data set has continued to expand since its initial development and release in 1997 to support USACE's *ACT/ACF Comprehensive Water Resources Study*. Limitations of the data usage are included in the Unimpaired Flow Report in Volume I, Surface Water Availability, of the 1997 Water Resources Study. The unimpaired flow data set has been updated for the period 1939–2011, and documentation has been included in appendix O of the final EIS. With every update to the data set, USACE shared the data with the three states—Alabama, Florida and Georgia—for review and input. The data set was developed to provide modeling support for the impacts analysis of proposed water management alternatives. USACE will continue working with the states to improve the unimpaired flow data set for the intended purpose. An important distinction: The unimpaired flow data set was never intended to represent natural flow conditions.

should clearly represent a more natural flow hydrograph. Data comprising a more natural hydrograph was recommended in Florida's 2013 Scoping Letter but was not incorporated in the DEIS. While Florida acknowledged in the scoping letter that "upstream consumption and related depletions have rendered a complete return to the pre-dam hydrograph infeasible," a baseline should be chosen that represents some minimum departure from natural flows. Choice of a proper baseline has been discussed on numerous occasions by Florida and other stakeholders. At the very least, the baseline should represent demands and operations as accounted for in the previously adopted Water Control Manual. The 2012 RIOP (current operations) should be an alternative but it cannot be considered the baseline. It is clear from the recently documented drying of the Apalachicola River floodplain and the collapse of the Apalachicola Bay oyster fishery (to cite but two examples of environmental impact) that the current levels of upstream consumption are too high and, coupled with existing Corps operations, have contributed to the observed catastrophic demise of downstream ecosystems. To use the 2012 RIOP and existing upstream consumption as the No Action Alternative (NAA) is to start with unacceptable environmental degradation from the beginning. The Corps' choice of the PAA, which grants increased water supply and storage to Georgia, only further exacerbates downstream effects. To objectively evaluate the downstream effects of upstream operations and consumptive demands, a different baseline must be used to compare alternatives.

AF

Return Rates

Chattahoochee River return rates presented in the DEIS coupled with the 2013 metro Atlanta withdrawal information appear unrealistically high, and instead should be more consistent with the return rates for Lake Lanier withdrawals. An 80-90% return rate is unlikely, especially given the DEIS's return estimate of 117% when facilities are working at maximum capacity. A more realistic estimate of return rates is necessary to evaluate overall system functionality, without which the effects of Georgia's consumptive demands cannot be assessed properly.

AG

Drought Operations

The Drought Plan proposed in the PAA is unacceptable as it further exacerbates the downstream consequences of the existing upstream consumption by modifying the "trigger" to initiate drought operations when composite conservation storage of the basin falls below the bottom of Zone 2 into Zone 3. Under current conditions, drought operations are not "triggered" until composite storage falls below the bottom of Zone 3 into Zone 4. Under both options, downstream flows are reduced to 5,000 cfs and remain at this low level until composite storage increases back into Zone 1. The volume of water in composite storage is directly impacted by Georgia's withdrawal and consumption. The increased water supply in the PAA (and projected increase in Flint River consumption) in conjunction with the modified drought "trigger" will increase the percentage of time in Drought Operations from 6.7% to 18.1% of the time. That is a nearly three-fold increase in "drought" operations and results in a greater frequency and longer duration of low flows downstream (i.e., flows equal to or less than 5,000 cfs). Consequently, the change would significantly obstruct the District's ability to fulfill its responsibility under sections 373.016, 373.036, and 373.042, F.S., to ensure sufficient water flows for surface water courses and to avoid significant harm to water resources and ecology. FWS recommended that the Corps "[c]onsider other options" rather than changing the drought trigger to Zone 3 and postponing suspension of the drought to Zone 1. Florida similarly recommended an alternative to the

AH

Response to ACF184 – Florida Department of Environmental Protection

AF. An environmental assessment and finding of no significant impact were prepared for the May 2012 revised interim operating plan (RIOP) for threatened and endangered species and is available in the document library of the Master WCM update Web page of the USACE, Mobile District Web site. USACE has been operating the ACF system in accordance with the 2012 RIOP since 2012. Council on Environmental Quality regulations for implementing NEPA define "no action" as "no change" from the current management direction or level of management intensity. Accordingly, the May 2012 RIOP is included as part of the NAA considered in the draft EIS.

AG. The EIS has been revised to better explain return rates used in considering Georgia's 2015 request. The return rates used in the water supply analysis considered the withdrawals of multiple water supply providers and the returns of multiple wastewater treatment facilities discharging either into Lake Lanier or the downstream reaches of the Chattahoochee River. The return rates used for Metro Atlanta include interbasin transfer so that discharges from wastewater treatment plants exceed the amount of water withdrawn. Regulating the return rates of wastewater treatment plants is a local or state responsibility, not USACE. Water Supply Storage Agreements do not contain provisions requiring or giving credit for return flows. Regulation of irrigation uses of water in the ACF Basin is a local or state responsibility, not USACE.

AH. There appears to be a misunderstanding regarding "drought" as compared to reservoir "drought operations." Droughts are a function of hydrologic conditions across the basin, not how the USACE ACF Basin projects are managed. The NAA includes a drought contingency plan developed in the 1980s. That plan was included as part of the revised interim operating plan in consultation with the USFWS under section 7 of the Endangered Species Act. The PAA includes a more robust drought contingency plan than the NAA under which drought operations are triggered more often because the drought trigger has been revised to promote faster recovery of the reservoirs and less severe impacts throughout the basin. The analysis presented in the EIS does not indicate that droughts will occur at twice the current level under the PAA. Section 2.1.1.1.1.2 of the EIS discusses three drought periods before 1957 and five drought periods since construction of Jim Woodruff Lock and Dam. The streamflows associated with those droughts are included in the unimpaired flow data set used for HEC-ResSim modeling. The effects associated with drought operations are discussed in section 6.1.1.3 of the EIS. Drought operations would be triggered more frequently under the PAA compared to the NAA, but that fact does not mean that droughts would be occurring more frequently. Under the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe in order to conserve storage to enable the projects to continue to fulfill all authorized project purposes and needs in the basin until drought conditions improve and to promote faster recovery of the reservoirs.

drought operations in the 2013 Scoping Letter. These recommended alternatives, which were excluded from the DEIS, warrant further evaluation.

CZMA Comments

Reservation of Water

In the scoping letter, Florida indicated that "[e]xisting projects should be evaluated and reported in accordance with ER 1130-2-334, and those found incompatible with state standards (or which otherwise are not meeting their potential to best serve downstream water quality needs) should be studied in detail to determine the justification for upgrading release and to establish an appropriate course of action." (p. 7, Scoping Letter, Beason, January 14, 2013). In 2006, the Northwest Florida Water Management District Governing Board adopted Rule 40A-2.223, Florida Administrative Code (F.A.C.), Reservation of Water. Section (1) states "At U.S. Geological Survey gauging station No. 02358000, Apalachicola River at Chattahoochee, the magnitude, duration and frequency of observed flows are reserved for the protection of fish and wildlife of the river, floodplain and Apalachicola Bay." While pertaining primarily to "consumptive withdrawals from the surface water from the main stem of the Apalachicola River" (Rule 40A-2.223 (5), F.A.C.), this rule conveys the intent that actions that significantly diminish flows in the river system are not in the public interest and should be avoided. This also implies that upstream consumptive losses are clearly not in Florida's interest and should be minimized through any newly instituted actions or operations upstream. At no point in the DEIS was the Reservation of Water, Rule 40A-2.223, F.A.C., stated or acknowledged. No alternatives were evaluated to minimize adverse impacts from upstream consumption or manage operations to provide higher downstream flows.

AI

Conclusions

Based on these findings, the District strongly opposes the choice of the PAA and urges the Corps to revise its DEIS to meaningfully evaluate alternative operations that will minimize upstream consumptive use and provide a more natural downstream hydrograph. Furthermore, the District finds implementation of the PAA, granting increased water supply and storage to Georgia, will hinder our ability to fulfill the District's responsibilities to appropriately manage water and related resources; to ensure the availability of sufficient water for natural resources, including fish and wildlife; and to otherwise promote the health, safety, and general welfare of the people of Florida. These responsibilities are established under Chapter 373, F.S., including sections 373.016, 373.036, 373.042, 373.199, and 373.451-453, and as such are encompassed within Florida's federally approved Coastal Management Program. Suggested alternatives have been provided by both the FWS and the State of Florida during the scoping process but these alternatives have not been adequately examined.

District staff appreciate the opportunity to review this document. If there are any questions concerning this review, please do not hesitate to contact me at (850)539-5999.

Response to ACF184 – Florida Department of Environmental Protection

AI. See response to comment G above.

MEMORANDUM

TO: Colonel Jon J. Chytka
Commander, Mobile District
U.S. Army Corps of Engineers

FROM: Jim Thornton, Mayor of LaGrange
Bill Stankiewicz, Mayor of Hogansville
Patrick Crews, Chairman of Troup County Commission
Page Estes, President, LaGrange-Troup County Chamber
James Emery, Chairman, West Point Lake Advisory Council

DATE: January 28, 2016

RE: ATTN: PD-EI (ACF-DEIS)

Please accept my sincere appreciation for the effort put forth by the US Army Corps of Engineers to analyze closely the operations of the ACF basin, its flows and its impacts on reservoirs such as West Point Lake. In response to your request to the draft Water Control Manual and Environmental Impact Statement, please accept these comments as part of your review and edit process.

First, West Point Lake is a 25,684 acre mainstream Chattahoochee River impoundment that was identified by the US Congress as a ***recreational demonstration project*** and has been in existence since 1974. The Lake was authorized by Congress for five purposes: 1) flood control, 2) general recreation, 3) sport fishing and wildlife development 4) hydroelectric power and 5) navigation. ***These five authorizations should be weighted heavily in the Corps operation of the ACF system.*** A

The recreational impact level of West Point Lake is 632.5. As indicated in the PAA of your proposed manual, West Point Lake would be expected to be at or above 632.5 elevation only 40% of a given year. More likely, West Point Lake would be expected to be at Zone 2 or even Zone 3. This means West Point Lake would not be able to meet its authorized purposes for at least 60% of the year. In 1989, the Corps raised the winter pool rule curve from 625 to 628 which indicates the Corps' authority to make another similar change. Therefore, I strongly ***recommend the Corps raise the winter pool rule curve from 628 to 632.5.*** B

In contrast, Lake Lanier is projected (by your operational manual) to fall below its recreational impact level only 27% for any given period of time. In the PAA, the Corps has proposed the minimum elevation of Lake Lanier will be 1050 even during the most extreme drought events. At this level, there remains 15 feet of active storage in the conservation pool. ***Logically, the Corps should also adopt the same standard for West Point Lake*** (626.5) even in extreme drought. While I understand the water supply of metropolitan Atlanta is critical, this focus is placed ahead of all other authorized purposes, stakeholder needs, and competing uses - even ahead of environmental needs of the basin. To further reinforce the WSSA importance, the Corps not only evaluates the current water supply needs and criteria but also expands their analysis to include the water supply demands as far into the future as 2040. No other authorized C

Response to ACF185 – West Point Lake advocates – local government and business

A. According to the Master Plan for West Point Lake, dated April 1981, West Point Lake was identified in November 1973 by the Chief of Engineers for development as a recreation demonstration project. The Master Plan also states that this designation meant that a wider variety of recreational facilities and opportunities were made available to the public than was normally provided at USACE reservoir projects. The Master Plan recognizes that the reservoir levels would vary on a seasonal basis in accordance with the project's guide curve. The USACE projects in the ACF Basin, including West Point Dam and Lake, are operated to fulfill all federally authorized purposes in a balanced manner. This comment, however, does not include all of the authorized purposes for the project.

B. The draft EIS considered raising the winter guide curve at West Point Lake as described in section 4.1.3.1.1. An analysis of the effects of raising the winter guide curve concluded that such a change would likely increase the flood risk downstream of the project. Accordingly, the options for changing the guide curve for West Point Lake were eliminated from further consideration.

C. The Buford Dam's entire conservation pool from elevation 1,035 ft to 1,071 ft is available to fulfill authorized project purposes. There is no intent to limit the reservoir drawdown to elevation 1,050 ft. Modeling of the 73-year historic hydrologic period indicated that the reservoir would be drawn down to approximately 1,050 ft, but under more severe drought conditions the reservoir elevation will likely be lower. USACE took into account that West Point and Walter F. George lakes are more likely to refill each year than is Lake Lanier because of reservoir inflow and precipitation. The watershed area that contributes to West Point and Walter F. George lakes is greater than the area contributing to Lake Lanier. The amount of annual precipitation also is greater in the more southerly portions of the ACF Basin. The revised action zones achieve the objectives of putting the greater burden of the system demands on the lower two reservoirs when in the upper action zones and on Lake Lanier when the system reaches drought operation. During extreme droughts similar to those in 2007–2009, there are times when system demands will be met exclusively by storage releases from the Buford Dam.

The purpose of the EIS is to support the update to the WCMs in determining how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to implement those operations through updated water control plans and manuals. Because of the 11th Circuit Court ruling of June 2011 and the USACE legal opinion in 2012, updating the water control plans and manuals includes making a decision on Georgia's water supply request. Accordingly, this EIS considers not only operations for all authorized purposes, but also an expanded range of water supply alternatives associated with the Buford Dam/Lake Lanier project, including cur-rent levels of water supply withdrawals and additional amounts that Georgia in 2015 requested from Lake Lanier and downstream for Metro Atlanta. Forecasting water demands for parts of the ACF Basin other than Metro Atlanta is outside the scope of Master WCM update process and this EIS.

West Point Lake Comments
Page Two
January 28, 2016

purpose, stakeholder need or environmental impact is evaluated with this timeframe in mind. ***This defies the stated collective intent to "balance all of the resources" in the basin.***

The stakeholders from West Point Lake, Lake Lanier and others across the states of Alabama, Florida and Georgia were able to balance the needs of the system through the work of the ACF Stakeholders. Beginning in 2009, the ACF Stakeholders came to consensus with a set a recommendations that weighs all of the needs and wants throughout the system. As noted in the recommendations, the increased storage of water in West Point Lake was viewed as a necessary action, especially during periods of drought. ***I strongly recommend the Corps review and adopt the Sustainable Water Management Plan of the ACF Stakeholders.*** D

Lastly, in regards to West Point Lake's authorization for flood control, I appreciate the efforts of the Corps to mitigate flood events in the City of West Point and other downstream communities, even during historic floods of record (September 2009). Our community's scientific modeling of your operations since physical changes to the City's landscape were made have shown that releases of 50,000 cfs or below will cause little or no damage downstream. However, the draft manual references releases of only 40,000 cfs in the river below the dam and does not account for early release of water in anticipation of significant rain events. Proposed raised winter pool rule curve of West Point Lake will not subject the City of West Point or other downstream communities to any additional flood risk provided that the Corps continues to ***release water at 50,000 cfs or below and adapts to anticipated inflow.*** E

In conclusion, I respectfully request the US Army Corps of Engineers revise the proposed Water Control Manual and Draft Environmental Impact Statement as follows: 1) prioritize original Congressionally authorized purposes ahead of all other stakeholder needs, 2) raise the winter pool rule curve of West Point Lake from 628 to 632.5; 3) adopt the same drought management standards for West Point Lake as set for Lake Lanier to balance the water across the system; 4) review and incorporate the recommendations in the Sustainable Water Management Plan of the ACF Stakeholders, and 5) mitigate the flood risk to the City of West Point and other downstream communities through the release of no more than 50,000 cfs below West Point Dam and adapt to anticipated inflow. F

cc: U.S. Senator David Perdue
U.S. Senator Johnny Isakson
U.S. Congressman Lynn Westmoreland
Governor Nathan Deal
Kris Mullin, USACE, Mobile District
Senator Josh McKoon
Senator Mike Crane
Rep. Bob Trammell
Rep. Randy Nix
Rep. John Pezold

Response to ACF185 – West Point Lake advocates – local government and business

D. The ACF Stakeholder's sustainable water management plan (SWMP) was received by USACE in early June 2015. USACE received the report and its recommendations too late to be fully evaluated and considered in the draft EIS. Further, the SWMP, as initially submitted to USACE, did not include the necessary supporting technical documentation and underlying assumptions to fully evaluate the recommended management measures. The SWMP recommendations were considered to the extent possible in the final EIS.

E. Flood risk management operations at West Point Dam are described in section 7-05 of the WCM for West Point Dam and Lake (appendix E to appendix A of the EIS). The prime objective of the operations at the West Point project is to reduce peak flows at West Point, Georgia, based on the downstream U.S. Geological Survey (USGS) gage—Chattahoochee River at West Point, Georgia (no. 02339500). That objective is achieved by regulating releases to maintain the USGS gage within the nondamaging bankfull flow of 40,000 cfs until the induced surcharge schedule calls for greater release. Releases are then made to maintain flows within the bankfull capacity of 40,000 cfs until the induced surcharge schedule calls for an increase in the releases. Releases made under induced surcharge operations could result in downstream flows in excess of 40,000 cfs, depending in the rate of inflow. The induced surcharge operation can cause a damage-inducing release, but it is designed to maximize the flood benefit as much as possible while giving consideration to the integrity of the dam. There should never be an induced surcharge release greater than the current 3-hour average inflow. The West Point project was designed to provide protection from small-to-moderate-sized floods. In the event of an extreme flood, West Point Lake would exhaust its flood storage and pass all inflows as prescribed in the induced surcharge schedule.

F. See responses to comments A through E.

CHATTAHOOCHEE RIVERKEEPER®

Keeping Watch Over Our Waters

VIA EMAIL

Colonel John J. Chytka
U.S. Army Corps of Engineers
Mobile District
Attn: PD- EI (ACF-DEIS)

RE: CRK Comments on the Draft Environmental Impact Statement: Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin (Oct. 2015)

Dear Colonel Chytka:

Chattahoochee Riverkeeper, Inc. (CRK) and the Southern Environmental Law Center (SELC) offer the following comments on the Draft Environmental Impact Statement (DEIS) for the proposed Apalachicola-Chattahoochee-Flint (ACF) *Water Control Manual* (WCM or Manual) update. CRK is a non-profit, environmental advocacy organization consisting of more than 7,000 members dedicated solely to the protection and restoration of the Chattahoochee River to ensure we have enough clean water for people and wildlife. SELC is a regional non-profit legal environmental advocacy organization whose mission is to protect the natural resources and special places in the Southeast.

These comments are supplemental to and incorporate written comments submitted by CRK, SELC, and Georgia River Network during the EIS scoping process; those comments include the following:

1. Letter from S. Bethea, G. Rogers, & A. Ingle to Colonel B. Jorns, Re: Scope of Environmental Impact Statement (EIS) for the Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint (ACF) River Basin in Georgia, Florida, and Alabama (Nov. 21, 2008);

2. Letter from L. Hartt to Tetra Tech, Inc. & Colonel B. Jorns, Re: Notice of Intent to Revise Scope of Draft Environmental Impact Statement (EIS) for Updating the Water Control Manual for the Apalachicola-Chattahoochee-Flint (ACF) River Basin to Account for Federal District Court Ruling (Dec. 23, 2009);

3. Letter from S. Bethea to Tetra Tech, Inc., Re: Notice of Intent to Revise Scope of Draft Environmental Impact Statement for Updating the Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin to Account for the U.S. Court of Appeals for the Eleventh Circuit Ruling and a June 2012 Legal Opinion of the Corps' Chief Counsel Regarding Authority to Accommodate Municipal and Industrial Water Supply from the Buford Dam/Lake Lanier Project (Fed. Reg. Notice 77(198): 62224 (Oct. 12, 2012) (submitted Jan. 11, 2013).

In our comments below, we identify several shortcomings in the DEIS that require greater attention under the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321, *et seq.* A careful review of the document reveals that essential data and analyses were not included for consideration in the DEIS. The scope of the alternatives considered has been so narrowly construed that only a few, nearly identical alternative plans have been considered. Further, the baseline employed by the Corps for comparing the alternatives incorporates obsolete data. Many of these flaws are identified in the External Peer Review Report commissioned by the Corps.[1]

Most of the nine (9) proposed alternative plans will result in degraded water quality, including the preferred action alterative (PAA). Throughout, the Corps fails to meaningfully explore direct, indirect and cumulative impacts resulting from its proposed alternatives. There is no consideration of mitigation, which is required by NEPA and in this case necessary to address the impacts to water quality, biological resources and recreation, among other uses. The DEIS and proposed alterations to the Corps' management of the ACF Basin are disproportionately focused on addressing water supply—particularly in the Metropolitan Atlanta region—to the detriment of most of the remaining authorized purposes for which the agency is required to operate its projects across the system. The inclusion of and overreliance on the proposed Glades Reservoir as a key component of many alternatives, including the PAA, illustrates the deficiencies in the DEIS' approach to addressing water supply and the insufficient range of alternatives included. In other ways, the Corps has prioritized certain authorized purposes without any consideration of how changes in that purpose will impact the others. For example, the agency failed to adequately align the proposed higher flows for navigation with other authorized purposes and federal obligations, including peak hydropower demand, floodplain connectivity, sturgeon spawning habitat, or Apalachicola Bay salinity levels. Meanwhile, recreation in the rivers is almost completely disregarded.

A

As a result of these and other legal deficiencies, it is necessary to prepare and issue a supplemental DEIS that considers all relevant information in order to allow the public a meaningful opportunity to comment before the U.S. Army Corps of Engineers (Corps) moves forward with a final EIS and Record of Decision for the ACF WCM update. We appreciate the opportunity to comment on the DEIS at this time and look forward to the opportunity to provide additional comments as necessary.

[1] Battelle Memorial Institute, Final Independent External Peer Review Report: Apalachicola-Chattahoochee-Flint River Water Control Manual, Environmental Impact Statement, and Water Supply Storage Assessment Report (Prepared for the Corps, Contract No. W912HQ-10-D-0002, Sept. 4, 2015).

Response to ACF186 – Chattahoochee RiverKeeper

A. As stated in section 1.2, the draft EIS considers not only operations for all authorized purposes, but also an expanded range of water supply alternatives associated with the Buford Dam/Lake Lanier project, including current levels of water supply withdrawals and additional amounts from Lake Lanier and downstream for Metro Atlanta that Georgia requested in 2015. Several of the operations that the commenter mentions in the comment are not authorized purposes for the ACF system, such as improving the Apalachicola Bay salinity levels. USACE reiterates that the Master WCM update is not a study and is only a change to operation of existing constructed projects. The final EIS removes Glades Reservoir as reasonably foreseeable because of the updated population projections and Georgia's decision to withdraw the certificate of need. The environmental impacts of most of the alternatives analyzed in the final EIS, including the PAA are less than in the draft EIS, in part, because Glades was removed.

I. BACKGROUND

The Corps is updating the WCM in full for the first time since 1958. This update is crucial for all water users and interests from the headwaters of the Chattahoochee and Flint Rivers to Apalachicola Bay. Unfortunately, the Corps' proposed changes to its protocol for managing this important and complex system amount to essentially redistributing water supply to satisfy the demands from Georgia for more water supply for Metro Atlanta. The Corps must use this rare opportunity to do more than redistribute water supply in this way, and instead fully consider the range of possible water management measures for the entire ACF Basin that would meet congressionally authorized purposes while complying with other federal requirements. The authorized purposes for the Corps' ACF projects include flood risk management, hydropower, navigation, recreation, water quality, water supply, and fish and wildlife conservation.[2] Other federal requirements include compliance with the Clean Water Act, Endangered Species Act, Fish and Wildlife Coordination Act, Coastal Zone Management Act, and Magnuson-Stevens Fishery Conservation and Management Act. The Corps did make technical updates in the 1970s and 1980s, but has not revised the Manual to reflect operations as they have evolved from the 1950s to the present date. The Corps here is updating the Manual to reflect the many significant additions to its ACF projects made since 1958 which are not reflected in the current document, including West Point Dam, Walter F. George Lock and Dam, and George W. Andrews Lock and Dam project—but in order to comply with NEPA the Corps must also consider new and alternative management measures that reasonably meet the ACF project's multiple authorized purposes while satisfying other federal requirements.

WCMs dictate how the Corps regulates reservoir and dam projects. The WCMs typically include background information on the project, water storage and release schedules (through guide curves and action zones), and drought contingency operations. The ACF WCM governs Corps management of its projects in the ACF Basin, covering 19,573 square miles in Alabama, Florida, and Georgia. The Corps' proposed action for purpose of its NEPA analysis includes updating the Master Manual and updating five project-level WCMs, included as appendices to the Master Manual.

The Corp operates five reservoir projects in the basin: Buford Dam and Lake Lanier; West Point Dam and Lake; Walter F. George Lock, Dam, and Lake; George W. Andrews Lock, Dam and Lake; and Jim Woodruff Lock and Dam and Lake Seminole. All of the Corps' projects are on the Chattahoochee River arm of the ACF Basin except for the Jim Woodruff Lock and Dam, which is immediately downstream of the confluence of the Chattahoochee and Flint Rivers and marks the upstream extent of the Apalachicola River. In addition to the five USACE projects, nine non-USACE reservoir projects are on the main stems of the Chattahoochee and Flint rivers in the ACF Basin. Those non-USACE projects are operated by the Georgia Power Company and Crisp County Power Commission.

In 2000, the Governor of the State of Georgia issued a formal request to the Assistant Secretary of the Army (Civil Works) to adjust the operation of Lake Lanier, the uppermost Corps project on the Chattahoochee River, to provide increased water supply to Georgia, particularly Metro Atlanta. In 2002 that request was denied. A 2011 decision of the 11th Circuit Court of

B

[2] *See* U.S. Army Corps of Engineers, Draft Environmental Impact Statement (DEIS) (2015), Vol. 1 at ES-1.

Response to ACF186 – Chattahoochee RiverKeeper

B. In December 2015, the State of Georgia submitted additional information regarding the water supply needs in Metro Atlanta. Among other things, it provided revised water supply needs for Metro Atlanta and indicated that the certificate of need for Glades Reservoir has been rescinded. Accordingly, the final EIS considers additional alternatives based on the updated information provided by GAEPD and others in commenting on the draft EIS and does not include Glades Reservoir as a reasonably foreseeable action.

Appeals ordered the Corps to reconsider whether it has the legal authority to operate the Buford Project to accommodate Georgia's request. The Corps determined that it could accommodate Georgia's request for increases in water supply withdrawals from Lake Lanier. Subsequently, Georgia on January 11, 2013, submitted a supplemental request for additional water to meet 2040 future water supply needs. That request was based on outdated data from 2000 estimating population growth, economic growth, and assumptions about sustained water savings through myriad conservation measures. Significantly, since the 2013 request, the State of Georgia's estimates for population growth and the Metropolitan North Georgia Water Planning District's estimates of future water demand have been updated, resulting in a decrease of at least 25 percent future water demand.[3] This more current data casts doubt on the state's 2013 request for 705 million gallons per day (mgd) to meet Georgia's future water needs from Lake Lanier and the Chattahoochee River, and requires the Corps to revisit this issue, which is foundational to the Corps' proposed management of the system.

II. NEPA PURPOSE AND NEED

NEPA requires a federal agency to create an environmental impact statement (EIS) for any major federal action or project significantly affecting the quality of the human environment.[4] NEPA requires federal agencies to take a "hard look" at their proposed actions and projects in order to assess environmental and other impacts, evaluate and select alternatives, and identify mitigation measures that may alleviate adverse impacts prior to proceeding.

The "Purpose and Need" section of an EIS briefly defines "the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."[5] "Agencies are afforded considerable, although not unlimited, discretion to define the purpose and need of a project."[6]

The Corps' stated purpose and need for the ACF Manual is to "determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable law, and to implement those operations through updated water control plans and manuals."[7] Beyond its general statement of purpose and need, the Corps outlines additional reasons the Manual update is needed, including but not limited to addressing environmental objectives for water quality, federally listed threatened and endangered species, and fish management.

However, as described below, the Preferred Action Alternative (PAA)—which is the Corps' proposed model for future management of the ACF Basin—substantially undermines this broad, inclusive statement of purpose and need. In particular, the Corps' PAA is squarely and myopically focused on maximizing water supply for north Georgia to the detriment of downstream needs. In fact, the PAA would further induce adverse impacts to water quality in the

C

[3] *See* "Metro Water District Issues Long-Range Water Demand Forecast" (http://northgeorgiawater.org/metro-water-district-issues-long-range-water-demand-forecast/), last visited January 26, 2016.
[4] NEPA § 102(C), 42 U.S.C. § 4332(c).
[5] 40 C.F.R. § 1502.13.
[6] Nw. Ecosystem Alliance v. Rey, 380 F. Supp. 2d 1175, 1185 (W.D. Wash 2005).
[7] *See* DEIS, Vol. 1 at 1-3.

Response to ACF186 – Chattahoochee RiverKeeper

C. The GAEPD, not USACE, manages Clean Water Act compliance for the State of Georgia and is responsible for establishing minimum flow requirements. GAEPD requested that the minimum flow at Peachtree Creek be reduced to 650 cfs during drought periods. In response to that request, USACE investigated reducing the minimum flow value to 650 cfs from November through April. USACE conducted an environmental assessment in 2008 and concluded that reducing the minimum flow requirement at Peachtree Creek to 650 cfs during that period would have no significant adverse effects on water quality. Over the past decade, USACE has reduced the minimum flow seasonally at Peachtree Creek several times. Monitoring data is available from GAEPD during those periods. Additional information regarding impacts to dissolved oxygen and other water quality parameters is included in the final EIS. GAEPD has indicated its intention to ensure that water quality standards are met at all flows based on revisions in their 2013 triennial review (GAEPD 2014). As shown by Figure 6.1-30 in the final EIS, flows at Peachtree Creek exceed 750 cfs over 70 percent of the time. The Master WCM update is not a study and is only a change to operation of existing constructed projects. Accordingly, the considered changes in water management or water supply are within USACE's authority to implement. In December 2015, the State of Georgia submitted additional information regarding the water supply needs in Metro Atlanta. Among other things, it provided revised water supply needs for Metro Atlanta and indicated that the certificate of need for Glades Reservoir has been rescinded. Accordingly, the final EIS considers additional alternatives based on the updated information provided by GAEPD and others in commenting on the draft EIS and does not include Glades Reservoir as a reasonably foreseeable action. Phase 1 of the formulation process, as described in section 4 of the draft EIS, considered seven water management alternatives addressing all authorized project purposes other than water supply. The evaluation of the water management alternatives is discussed in section 4.2 of the draft EIS. Alternatives addressing water supply needs in Metro Atlanta were addressed in the phase 2 formulation process described in section 5 of the draft EIS. A detailed evaluation of those alternatives is presented in section 6 of the draft EIS.

basin.[8] For example, the WCM update expressly incorporates a totally new scheme for minimum flows in the Chattahoochee River downstream of Buford Dam, despite the fact that this new scheme has not been formally proposed, vetted or implemented by any state or federal agency with authority over Clean Water Act implementation and compliance. For the past 40 years, Buford Dam has been operated to deliver a minimum flow of 750 cubic feet per second (cfs) year-round, as measured at the Chattahoochee River's confluence with Peachtree Creek. The 750 cfs minimum flow is needed to protect water quality for fishing, swimming, and drinking while ensuring an adequate volume of water to assimilate the dozens of industrial wastewater and sanitary sewer discharges from Metro Atlanta. The PAA proposes a new seasonal flow scheme that will deliver a minimum flow of 750 cfs from May through October but drop to 650 cfs from November through April.[9]

We can find no discussion in the DEIS as to how this premature proposal to reduce minimum flows in the Chattahoochee is related to or serves the Corps' stated purpose and need. In fact, even if we set water quality concerns aside, the Corps has offered no evidence that adjusting operations by reducing flows seasonally in the Chattahoochee to preserve more storage in Lanier actually provides significant water supply benefits, let alone supports any other authorized purposes while complying with other federal requirements. Nor has the Corps demonstrated that the risks posed to public health and safety, as well as the diminished fish, wildlife, and recreational benefits resulting from chronic lower flows, would be outweighed by any supposed water supply benefits.

Furthermore, the Corps has prematurely excluded from consideration alternative management measures that could reasonably meet the Corps' stated purpose of determining how federal projects in the ACF Basin should be operated in light of current conditions in the basin and the applicable law. For example, the Corps too readily dismisses some alternatives as beyond its authority, e.g., raising Lake Lanier's full pool or reducing consumption losses through water conservation. Yet, on the other hand, the Corps expressly relies on a highly speculative, poorly defined and incompatible project under the jurisdiction of a sister district, the proposed Glades Reservoir, to fulfill its water-supply-dominated PAA. Indeed, *all* the considered alternatives focus almost exclusively on water supply, while ignoring other authorized purposes and federal responsibilities including those that safeguard the environment. We discuss these and other issues further below.

III. SCOPE OF THE DEIS

NEPA requires the Corps to take a broad, objective view of the scope of the project, its purpose and its impacts. Agencies must define the scope so that they can consider all "reasonable alternatives" to the proposed action.[10] This is known as the "rule of reason."[11] Courts have interpreted this [reasonableness] requirement to preclude agencies from defining the objectives of their actions in terms so unreasonably narrow they can be accomplished by only one

D

[8] *See* DEIS, Vol. 1, Tables 6.1-15, 6.1-16 and 6.1-18.
[9] *See* DEIS, Vol. 2 at 7-12.
[10] *See, e.g.*, 40 C.F.R. § 1502.14.
[11] Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 195 (D.C. Cir. 1991).

Response to ACF186 – Chattahoochee RiverKeeper

D. As concluded by the 11th Circuit Court of Appeals, USACE is authorized to make releases from Buford Dam to meet the water supply needs of Metro Atlanta. Furthermore, the 11th Circuit directed USACE to look at its authority to meet Georgia's water supply request. USACE complied with this direction and included examination of Georgia's request in the notice of intent. It is important to reiterate that the Master WCM update is not a study and is only a change to operation of existing constructed projects. Accordingly, the considered changes in water management or water supply are within USACE's authority to implement. Increasing the level of flood risk management in one or more reservoirs is an appropriate subject for a feasibility study, not a WCM update. USACE is required to operate the system to fulfill all authorized purposes; therefore, the provision that an alternative had to address those authorized purposes is legally sound. Also, as commented, USACE is obligated to comply with the Endangered Species Act (ESA). Thus, the screening criterion to eliminate any measure that would violate the ESA is entirely appropriate.

alternative.[12] Through this lens, the Corps' current scope of the ACF WCM is too narrow. Rather than taking a "broad and independent view" of the scope of its WCM update, the Corps' narrow focus on operating the system to meet primarily water supply needs results in the exclusion of several reasonable action alternatives that have been raised by CRK, SELC, and various other stakeholders to address all of the system's needs.

During initial screening conducted to narrow project scope, the Corps used eight arbitrary criteria, all given equal weight, in order to confine the scope and exclude a number of important management measures from consideration under the DEIS.[13] One screening criterion prioritized alternatives that met the "purpose and need" of the proposed federal action. As noted above, purpose and need was defined so narrowly that any alternative that did not prioritize water supply first were eliminated because they did not satisfy the Corps' stated purpose and need. Consider the Corps statement on the matter: "[T]his EIS will consider, along with operations for all authorized purposes, an expanded range of water supply alternatives associated with the Buford Dam/Lake Lanier project, including current levels of water supply withdrawals and additional amounts that Georgia in 2013 requested from Lake Lanier and downstream at Atlanta."[14] Another screening criterion requires alternatives to "address one or more of the congressionally authorized purposes." This is akin to weighting water supply twice as important as all other authorized purposes combined. As another example, consider the authorized purpose of flood control. The Corps chooses another criterion that requires maintenance of the "current level of flood risk management," when in fact given climate change concerns and land use changes that intensify stormwater impacts, the Corps ought to aim for improved flood control operations. With respect to fish and wildlife purposes, the only initial environmental screening criterion used was elimination of alternatives that would violate the Endangered Species Act, which the Corps is legally obligated to do anyway.[15]

Most notably, the Corps has done little to address myriad concerns raised by state and federal natural resource management agencies. *See, e.g.,* DEIS, Vol. 3, Appendix J, USFWS Coordination Report. Appendix J reveals several attempts on the part of the U.S. Fish & Wildlife Service (USFWS) to get the Corps to adhere to its fish and wildlife responsibilities. These efforts culminated in a July 31, 2015, letter from D. Imms, USFWS, to Colonel J. Chytka, Corps, which states that the "problems with the methodology that the Corps used to select alternatives, detailed in Appendix XV, are considered significant by the Service." Clearly, USFWS considers the Corps' methodology flawed, stating that "[c]urrently, the Service does not fully support the Corps' proposed alternative."

E

The scope is also improperly defined because the Corps relies on outdated and grossly inaccurate population and water demand data to craft and evaluate the alternatives in the DEIS. As CRK has noted on multiple occasions[16]—and the Corps and the Metropolitan North Georgia

[12] Colo. Envtl. Coal. V. Dombeck, 185 F.3d. 1162, 1174 (10th Cir. 1999).
[13] *See* DEIS, Vol. 1 at ES-6.
[14] *Id.* at ES-4.
[15] *Id.* at ES-6.
[16] *See* prior CRK correspondence referenced above, pages 1-2.

Response to ACF186 – Chattahoochee RiverKeeper

E. USACE has worked with USFWS to address concerns regarding the evaluation of the effects on fish and wildlife resources in the final EIS in accordance with USACE authorities. Discussion of those concerns can be found in the 2015 draft Fish and Wildlife Coordination Act report in appendix J of the EIS. Some recommendations to alternatives made by USFWS are outside USACE authorities and could not be addressed. USACE has considered all comments received on the draft EIS. Section 6.4 of the final EIS has been updated to address the effects of USACE operations on fish and wildlife resources in the ACF Basin.

Water Planning District (MNGWPD) themselves acknowledge[17]—Georgia's *future* water demands are significantly lower than those on which the Corps relies in the DEIS. In fact, new 2050 water demand and population projections were released in August 2015, but were not submitted to the Corps in time to be incorporated into the DEIS.[18] For this reason alone, the DEIS is fundamentally flawed, and the Corps must conduct a supplemental EIS that uses the current, more accurate projections. A supplemental DEIS would give the Corps and the public an opportunity to reassess the future conditions of the basin. Our critique is affirmed by the independent external peer review panel commissioned by the Corps itself: "…the Panel determined that there was a lack of information on the future water demand requirements, which are the basis for assessing the impacts of the alternatives on M&I water supply."[19]

F

Furthermore, the Corps' recreational use analysis is virtually devoid of discussion of river and riparian recreation benefits and impacts, choosing instead to focus exclusively on lake recreation.[20] This flaw is elaborated upon below regarding the recreational value of the Chattahoochee River National Recreation Area, downstream of Buford Dam. Many of our points and concerns have also been raised prior to the DEIS being issued, namely, in the Jan. 14, 2013, letter from G. Wissinger, NPS, to Colonel S. Roemhildt, Corps.

G

Elsewhere in the DEIS, the Corps improperly asserts it need not concern itself with the Clean Water Act. *See, e.g.*, DEIS Vol. 1 at 4-7 ("Setting minimum flow targets to ensure compliance with water quality standards is the responsibility of the states, not [the Corps]."). This view conflicts with the U.S. Environmental Protection Agency's position, outlined in its Jan. 14, 2013, letter to the Corps:

H

> "The revised WCM should be consistent with state water quality standards, and provide for the attainment and maintenance of all downstream uses (40 C.F.R. § 131.10 (b)), including drinking water, recreation, fishing, swimming, shellfish harvesting and aquatic life protection. This should include ensuring compliance with physical parameters (pH, temperature, conductivity and dissolved oxygen), biological criteria, chemical parameters (including decreases in assimilative capacity for point and non-point sources), nutrient loadings (including lake nitrogen, phosphorus and chlorophyll standards) and *providing the flows necessary for the protection of aquatic life*."[21] (Emphasis added.)

Finally, the Corps' rather cursory consideration of climate change impacts (*see, e.g.*, DEIS, Vol 3, Appendix N, USACE Institute for Water Resources: ACF Climate Change Support

[17] *See* "Metro Water District Issues Long-Range Water Demand Forecast" (http://northgeorgiawater.org/metro-water-district-issues-long-range-water-demand-forecast/), last visited January 26, 2016.
[18] *See Attachment A*, MNGWPD 2016 Water Demand and Population Forecasts, August 2015.
[19] Battelle Memorial Institute, Final Independent External Peer Review Report: Apalachicola-Chattahoochee-Flint River Water Control Manual, Environmental Impact Statement, and Water Supply Storage Assessment Report at vi (Prepared for the Corps, Contract No. W912HQ-10-D-0002, Sept. 4, 2015).
[20] *See* DEIS, Vol. 3, Appendix M, Apalachicola-Chattahoochee-Flint River Basin Environmental Impact Statement for Water Control Manual Update: Recreation Analysis Summary Memorandum (Aug. 2015).
[21] *See* Letter from H. Mueller, EPA, to B. Zettle, Corps, Re: EPA Scoping Comments on the Notice of Intent for the Water Control Manual Update and the Environmental Impact Statement (EIS) for the Apalachicola-Chattahoochee-Flint River (ACF) Basin (Jan. 14, 2013).

Response to ACF186 – Chattahoochee RiverKeeper

F. In December 2015, the State of Georgia submitted additional information regarding the water supply needs in Metro Atlanta. Among other things, it provided revised water supply needs for Metro Atlanta and indicated that the certificate of need for Glades Reservoir has been rescinded. Accordingly, the final EIS considers additional alternatives based on the updated information provided by GAEPD and others in commenting on the draft EIS and does not include Glades Reservoir as a reasonably foreseeable action.

G. Optimum flow regimes for the Chattahoochee River National Recreation Area are displayed in Table 6.1-10 of the final EIS. Those flow regimes were developed as part of the MAAWRS in the 1980s. In 2000, CH2M Hill developed a recreational flow preference for the NPS that was similar to the previous effort. Riverine flows are evaluated in various reaches between Buford Dam and West Point Dam and also in the middle and lower Chattahoochee River. Figure 6.1-24 in the EIS displays flows of the NAA and PAA below Buford Dam. Flows exceeded 1,000 cfs approximately 75 percent of the time under the NAA compared to 73 percent of the time under the PAA. For higher flows that would support kayaking (6,000 cfs), there was a negligible difference between the NAA and the PAA over the period of record. Refer to the detailed response to comment S below.

H. Refer to the specific responses to comments 16.12, 16.13, and 16.14.

Analysis) is focused primarily on lake levels and stormwater nutrient inputs and does not address effects on future water supply availability, assimilative capacity, and flood control, much less potential adverse cumulative impacts on fish, wildlife, and recreation. Notably, the Corps ignores the impact of large storm events on operations under the PAA in the event that the Glades Reservoir, which is proposed for construction within Lanier's floodplain, is built. The risk to downstream communities is too great for the Corps not to take a more rigorous look at the climate change implications of the PAA and other alternatives. I

All of these problems translate to an improperly truncated scope of NEPA analysis. Given the ramifications of the WCM on the health of the entire basin, it is essential that the Corps supplement the DEIS to account for all of these concerns before it can make an informed decision about system management. As it stands, the DEIS's narrow scope frustrates the purpose of NEPA.

IV. AFFECTED ENVIRONMENT & BASELINE

Any NEPA analysis should establish the magnitude and significance of impacts to the human environment by comparing the environment in its naturally occurring state with the expected impacts of other actions. Use of a baseline for comparing predicted effects of the proposed action and its reasonable alternatives is an essential part of the NEPA process. A description of the baseline condition should address "…how conditions have changed over time and how they are likely to change in the future without the proposed action." If unable to establish a "naturally occurring" condition, a description of a modified but ecologically sustainable condition can be used instead. "Ecologically sustainable" means the artificial system supports biological processes, maintains its level of biological productivity, functions with minimal external management, and repairs itself when stressed. *See* EPA, 1999, Consideration of Cumulative Impacts in EPA Review of NEPA Documents, 315-R-99-002. J

The Corps must ensure that any baseline data used to evaluate impacts or select action alternatives is based on the most recent and scientifically-credible data and other information available. As CRK noted above, new 2050 population and future water demand projections are significantly lower than the numbers on which the Corps has relied in the DEIS.[22, 23] As such, the DEIS is built upon a flawed foundation that does not accurately reflect Metro Atlanta's actual future water supply needs. A supplemental DEIS is essential to ensure that the agency is drawing upon accurate information as it determines ACF Basin operations for the next 50 years or more.

Moreover, the Corps uses 2007 as the baseline year for estimating *current* consumptive use. The choice of 2007 is problematic because projections from that year invariably overestimate consumptive use in terms of water supply. The year 2007 predates the economic downturn of 2008-2009, the 2010 U.S. Census and subsequent population updates on which demand data is based, as well as implementation of water conservation measures by the MNGWPD (2009, 2010) and by the state of Georgia (2011). CRK has documented this issue in

[22] *See* "Metro Water District Issues Long-Range Water Demand Forecast" (http://northgeorgiawater.org/metro-water-district-issues-long-range-water-demand-forecast/), last visited January 26, 2016.
[23] *See Attachment A,* MNGWPD 2016 Water Demand and Population Forecasts, August 2015.

Response to ACF186 – Chattahoochee RiverKeeper

I. The PAA has been evaluated for adaptation to climate change in compliance with current USACE regulations. Many of the suggested effects analyses are beyond the scope of updating the WCM. Glades Reservoir is no longer reasonably foreseeable and has been deleted from the HEC-ResSim modeling and analyses contained in the final EIS.

J. The NAA is the baseline against which all other alternatives are compared in the draft EIS. The NAA does not include Glades Reservoir but does include the 2012 revised interim operating plan. As explained in section 4.1.2.9 of the EIS, for modeling purposes, a fixed demand was identified to allow for effective comparison of alternatives. The highest levels of basinwide water supply withdrawals occurred in 2007, during the 2006–2008 drought. Although basinwide withdrawals since 2007 have been lower overall, 2007 was selected as representative of "current" demand because using the highest recent figure provides the most conservative estimate of the storage available for all purposes, assuming the highest reasonably forecasted water supply demand, including during times of drought.

its 2011 and 2012 reports, "Filling the Water Gap: Conservation Successes and Missed Opportunities in Metro Atlanta."[24]

Finally, the Corps' DEIS relies on a degraded environmental baseline as the standard against which it assesses environmental impacts. Simply put, the Corps has decided that because Chattahoochee River water quality and Apalachicola River and Bay fish and wildlife habitat have already deteriorated due in part to past and present Corps operations, any further deterioration in ecosystem health is acceptable.[25] In other words, the ecosystem is already significantly impacted, so the Corps excuses itself from any further consideration of environmentally preferred alternatives or even mitigation measures that could alleviate water quality or fish and wildlife habitat impacts. This is unacceptable and must be corrected in order to comply with NEPA.

K

V. CONSIDERATION OF ALTERNATIVES

Because the Corps has too narrowly limited the scope of its DEIS, as detailed above, the Corps' alternatives analysis likewise is too narrow. The Corps should broaden its alternatives analysis, which is "the heart of the environmental impact statement."[26] The alternatives analysis is meant to offer "a clear basis for choice among options by the decisionmaker and the public."[27] In its alternatives analysis, the Corps should "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."[28] The agency must include a thorough discussion of available alternatives to a project that fulfill the project's underlying purpose and need, including "reasonable alternatives not within the jurisdiction of the lead agency."[29]

L

The nine (9) alternatives brought forth by the Corps do not represent the true scope of reasonable alternatives to be considered. After the No Action Alternative (1A), there is little variation between most of the other eight (8) alternatives, e.g. Alternative Plans 7A, 7C, 7D, 7E, 7F and 7H (PAA). This is particularly apparent in the Environmental Consequences portion of the DEIS, where the analyses of impacts are the same or very similar for the Alternative Plans. Alternative Plans 7D, 7E, 7F are virtually identical. The PAA likewise is very similar to Alternative plans 7D, E and F.[30]

The alternatives included in the DEIS represent an inadequate range of reasonable options. While the agency states it has not prioritized one project purpose over others, we again note the Corps' excessive focus on water supply in choosing which alternatives to emphasize, ignoring other authorized purposes and authorities.

[24] *See* https://chattahoochee.org/media/publications/updated-report-filling-the-water-gap/, last visited January 26, 2016.
[25] *See* DEIS, Table ES-6. Note "slightly adverse," "adverse," and "substantially adverse" findings repeatedly for flow conditions, dissolved oxygen, total phosphorus, total nitrogen, land use, riverine fish and aquatic resources, protected species, and recreation effects when comparing other alternatives to the no action alternative.
[26] 40 C.F.R. § 1502.14.
[27] *Id.*
[28] *Id.*
[29] *Id.*
[30] *See* DEIS, Vol. 1, 5-21 – 5-24.

Response to ACF186 – Chattahoochee RiverKeeper

K. Council on Environmental Quality (CEQ) regulations for implementing the National Environmental Policy Act (NEPA) require consideration of the No Action Alternative (NAA) (40 CFR section 1502.14). In the CEQ's memorandum of March 23, 1981, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, question no. 3 addresses how the NAA is defined depending on the nature of the specific federal action. The response to question no. 3 states, in part:

> The first situation might involve an action ... where ongoing programs initiated under existing legislation and regulations will continue, even as new plans are developed. In these cases, "no action" is "no change" from the current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed.

Consequently, for purposes of the Master WCM update process, the NAA reflects current reservoir operations as they have evolved over time in response to laws, regulations, policy, and new technical information. Basing the NAA for the ACF Basin on a pre-NEPA 1958 WCM or on a predam condition to assess the effects of alternative WCM update plans would neither accurately reflect current baseline operations nor be consistent with "no action" as defined in the referenced CEQ memorandum.

L. As stated in section 1.2, the draft EIS considers not only operations for all authorized purposes, but also an expanded range of water supply alternatives associated with the Buford Dam/Lake Lanier project, including current levels of water supply withdrawals and additional amounts from Lake Lanier and downstream for Metro Atlanta that Georgia requested in 2015. Section 4.1.2 details the numerous operational measures considered, and section 4.2 describes the water management operational alternatives. Water management alternatives were not formulated based on every conceivable combination of measures. Instead, the measures selected for inclusion in a water management alternative were those that USACE considered as potential refinements based on experience with current operations or those that were recommended by one or more stakeholders during the scoping process. Through a ranking process, USACE identified the water management alternative that best satisfied the objectives of the Master WCM update. The WCM update is not a study and is only a change to operation of existing constructed projects. The final EIS considers additional alternatives based on information provided by GAEPD and others in commenting on the draft EIS.

Use of Flawed Criteria during Screening to select Management Alternatives

During the Corps' second screening to identify the PAA, the Corps again chose to prioritize water supply over all other authorized purposes and federal responsibilities:

> "In the second phase of alternatives formulation[,] measures for addressing the Georgia 2013 request for water supply from Lake Lanier and for downstream withdrawers were identified and screened to develop the set of water supply options to be considered. For this phase, Water Management Alternative 1 and the Water Management Proposed Action Alternative (e.g., Water Management Alternative 7) were combined with water supply options to form alternatives that were evaluated and compared. The result of this formulation phase was the identification of a Proposed Action Alternative (PAA).[31]

M

Additionally, in the second screening, the Corps relies on an overly simplistic approach to rank the various alternatives in terms of environmental impacts. For example, the Corps gives equal weight to six somewhat redundant and insufficient indicators to determine the degree to which a management alternative satisfies the fish and wildlife project purpose: [1] percent of years with days below discrete minimum flow values; [2] median number of days per year below discrete minimum flow values; [3] median consecutive days per year below discrete minimum flow values; [4] annual maximum 30-day growing season floodplain connectivity (in acres); [5] median fall rates; and [6] maximum fall rate.[32] The external peer review panel similarly noted there is "no evidence to support equal weighting for each water availability and water quality parameter/indicator used to evaluate effects on fish and wildlife resources."[33] In fact, the appropriate use of screening criteria entails "evaluating the relative significance of each parameter/indicator, and giving more weight to those parameters/indicators that are more important to fish and wildlife resources."[34]

The Corps states in the DEIS that all authorized project purposes were considered equally when making water management decisions and that any measure recommending prioritization of project purposes was not carried forward.[35] However, the screening criteria and PAA flatly contradict this statement, clearly prioritizing water supply over all other authorized purposes. The Corps should reconsider the application of its "screening criteria" for purposes of the DEIS scoping and instead perform an analysis that evaluates each authorized purpose and federal responsibility in turn, determining which alternative(s) best meet(s) the needs of a given purpose or responsibility in order to reach an optimal PAA. The Corps should give particular attention to several management measures that were either completely ignored or prematurely excluded under the Corps' "screening criteria."

[31] *See* DEIS, Vol. 1, at 4-1.
[32] *Id.* at 4-67.
[33] Battelle Memorial Institute, Final Independent External Peer Review Report: Apalachicola-Chattahoochee-Flint River Water Control Manual, Environmental Impact Statement, and Water Supply Storage Assessment Report at vi (Prepared for the Corps, Contract No. W912HQ-10-D-0002, Sept. 4, 2015).
[34] *Id.*
[35] *See* DEIS, Vol. 1 at 4-6, 4-7.

Response to ACF186 – Chattahoochee RiverKeeper

M. Addressing the water supply storage at Lake Lanier has been an issue in the ACF Basin for many years and the focus of much of the past litigation. USACE is considering Georgia's request in response to the June 28, 2011, opinion of the 11th Circuit Court of Appeals that set aside the Army's 2002 decision to deny Georgia's 2000 request and ordered a remand to USACE to reconsider whether it has the legal authority to operate the Buford project to accommodate Georgia's request, in light of the legal authority conferred by Congress in the River and Harbor Act of 1946; Public Law 84-841 (July 30, 1956) (1956 Act); and the Water Supply Act of 1958 (WSA). USACE prepared a legal opinion in 2012 that concluded that USACE has discretion under the WSA to accommodate additional net withdrawals of 170 mgd from Lake Lanier (including withdrawals of 277 mgd and returns of 107 mgd to the reservoir), because accommodating those withdrawals and returns would not fundamentally depart from congressional intent for the Buford project and the ACF system. Therefore, USACE proposed and evaluated water management measures and alternatives that balance across all authorized project purposes, while considering Georgia's water supply storage request as directed by the 11th Circuit Court of Appeals. A two-phased approach is necessary for the effort. USACE developed water management measures and then considered additional water supply storage pursuant to the WSA. After overlaying the additional water supply storage in the alternative, USACE reexamined the water management measures to determine if any modifications or improvements would reduce impacts or help operate the system for all authorized purposes in a balanced manner.

Failure to Consider U.S. Fish and Wildlife Service Alternatives

As reflected in Appendix J of the DEIS, the USFWS has suggested in numerous Planning Aid Letters a number of management alternatives that presumably are more protective of the environment yet capable of satisfying ACF project purposes. Without an adequate explanation, the Corps ignores the alternatives proposed by USFWS. Moreover, USFWS will have to conduct a formal biological consultation to determine whether the proposed federal action is likely to jeopardize federally protected species or adversely modify or destroy critical habitat. Undoubtedly, the USFWS will expect, as do we, the Corps to take its partner agency's input more seriously moving forward and respond to its proffered alternatives in full.

N

Improper Inclusion of Glades Reservoir in the Preferred Action Alternative

The PAA calls for withdrawals from Lake Lanier totaling 185 MGD, with an additional 40 MGD in withdrawals coming from the proposed Glades Reservoir, with releases from Buford Dam sufficient to meet the projected 2040 need for downstream withdrawals of 408 mgd by Atlanta. Apart from concerns raised above about the accuracy of Atlanta's water needs and the Corps' elevation of water supply over other project purposes, the inclusion of the Glades Reservoir proposed for Hall County in the PAA and other alternatives is premature and unnecessary.

O

Embedded in the PAA is a dangerous assumption that the Glades Reservoir will in fact be needed, permitted, and constructed. This is by no means a certainty, with the project being substantially reconfigured based on updated water demand and population projects. The Glades project has changed multiple times in terms of need, purpose, yield, and configuration over the past decade. Indeed, the Glades project contemplated in the Section 404 permit application currently before the Corps' Savannah District is substantially different from the project contemplated by the Mobile District in this DEIS. The Corps cannot base the future management of the ACF Basin, which provides water to three states, on a misplaced hope that a boondoggle reservoir is permitted, funded and completed at some point in the indeterminate future.

If the Corps believes it appropriate to consider Glades Reservoir, the Corps at the very least must consider other more reasonable alternatives, such as water allocation directly out of Lake Lanier to serve Hall County and other counties, raising Lanier's pool level, or implementing enhanced conservation measures. As it stands, the Corps fails to justify the inclusion of Glades as a fundamental piece of the management of the ACF Basin. The decision to make an unpermitted, proposed reservoir a centerpiece to future management of the basin is arbitrary and capricious, as is the agency's simultaneous refusal to adequately consider the proposed alternative measures discussed above.

VI. EVALUATION OF DIRECT, INDIRECT AND CUMULATIVE IMPACTS

The environmental consequences section of the DEIS "forms the scientific and analytic basis for the comparisons" of the alternatives included the proposed action.[36] "Agencies shall … identify any methodologies used and shall make explicit reference by footnote to the scientific

[36] 40 C.F.R. § 1502.16.

Response to ACF186 – Chattahoochee RiverKeeper

N. USACE consulted with the USFWS under section 7 of the Endangered Species Act, and the results of the consultation are documented in appendix J of the final EIS. During coordination with the USFWS in accordance with the Fish and Wildlife Coordination Act, USFWS suggested specific water management alternatives and provided USACE with recommendations, including evaluations and analyses, intended to inform the development of alternatives and to address the impacts of the PAA. Those suggestions and USACE's responses also are documented in appendix J of the EIS.

O. USACE completed the update to the WCMs for the ACF Basin in May 2015. During that process, USACE determined that it was appropriate to consider potential new reservoirs in the system for which reservoir permit applications had been submitted because the reservoirs were reasonably foreseeable. Designating those reservoirs as reasonably foreseeable is not endorsement of their permitting or construction. In compliance with NEPA and Council on Environmental Quality guidance, USACE determined it was appropriate to include those reasonably foreseeable projects to capture all potential impacts. In the ACF Basin update, USACE committed to analyzing Georgia's water supply request. Because the request included Glades Reservoir, USACE included analysis of the reservoir in its draft EIS. If the reservoir projects are not built, which will result in less impact to the ACF Basin. Under NEPA, that is acceptable. In accordance with the GAEPD letter dated January 29, 2016, Hall County's certification of need for water supply from Glades Reservoir has been rescinded. Accordingly, USACE revised the water supply options presented in the final EIS to exclude Glades Reservoir as a reasonably foreseeable action with regard to water supply. To provide the public with information on all potential impacts, USACE also intends to analyze the impacts of the entire amount of Georgia's water supply request coming out of Lake Lanier. USACE believes that the draft EIS fully evaluates the consequences of the PAA. The final EIS, however, includes additional analysis of impacts. Further, the permit application for the Bear Creek Reservoir project was withdrawn by the applicant by letter dated September 8, 2015. Bear Creek Reservoir has been deleted from the HEC-ResSim model for the analysis presented in the final EIS.

and other sources relied upon for conclusions in this statement.[37] This section must also, among other requirements, include "[m]eans to mitigate adverse environmental impacts" if not addressed in the alternatives analysis.[38] Council on Environmental Quality regulations require that an EIS include "a full and fair discussion of significant environmental impacts" which should be "discussed in proportion to their significance."[39] As noted above, the DEIS's discussion of impacts in this case is infected by the Corps' unreasonably narrow constraint of project purpose and its improper exclusion of alternatives.

Direct and Indirect Impacts

CEQ regulations require federal agencies to consider both direct and indirect effects of a proposed action. Direct impacts are defined as those impacts which are "caused by the action and occur at the same time and place."[40] Indirect effects are defined as effects "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable."[41] Importantly, where the agency lacks relevant and adequate evidence or scientific information, courts have required that the agency note the lack of information in the DEIS and further seek and include such additional evidence or scientific information if it is essential to the analysis, and if the costs of obtaining the additional information are not exorbitant.[42]

Water Quality

The Georgia Board of the Department of Natural Resources (DNR), at the recommendation of the Georgia Environmental Protection Division, voted in August 2015 to remove the longstanding minimum flow provision for the Chattahoochee River from Georgia's Rules & Regulations for Water Quality Control. This important provision ensured that there was always a minimum flow of 750 cubic feet per second (cfs) released from Buford Dam as measured on the river at its juncture with Peachtree Creek. Now, the state has unofficially indicated that it wants to move to seasonally variable flows, where a lower minimum flow is guaranteed throughout the colder months. In the PAA, the Corps proposes to seasonally vary flows in the Chattahoochee River at Peachtree Creek, even before any such flow reduction has been officially approved by EPA as part of Georgia's 2013 Triennial Review or before the state itself has enacted such a scheme. The concern over reduced flows is magnified by Georgia's increasing water supply requests for Metro Atlanta.

P

The assurance of minimum flow is vital to the health of the river as it moves through Metro Atlanta and communities downstream, continuing all the way to Apalachicola Bay. Approximately 40 years ago, Georgia determined that a minimum flow of 750 cfs was required through Metro Atlanta in order to ensure enough volume of water to adequately assimilate treated sewage discharges from the approximately one dozen municipal and county wastewater

[37] 40 C.F.R. § 1502.24.
[38] *Id.*
[39] 40 C.F.R. §§ 1502.1, 1502.2(b)
[40] 40 C.F.R. § 1508.8(a)
[41] 40 C.F.R. § 1508.8(b)
[42] *See* 40 C.F.R. § 1502.22; Alaska v. Andrus, 580 F.2d 465 (D.C. Cir. 1978, rev'd on other grounds, W. Oil & Gas Ass'n v. Alaska, 439 U.S. 922 (1978).

Response to ACF186 – Chattahoochee RiverKeeper

P. GAEPD requested that the minimum flow at Peachtree Creek be reduced to 650 cfs during drought periods. In response to that request, USACE investigated reducing the minimum flow value to 650 cfs from November through April. USACE conducted an environmental assessment in 2008 and concluded that reducing the minimum flow requirement at Peachtree Creek to 650 cfs during that period would not have significant adverse effects on water quality. Over the past decade, USACE has reduced the minimum flow seasonally at Peachtree Creek several times. Monitoring data is available from GAEPD during those periods. The State of Georgia has the responsibility for establishing and regulating water quality standards and should conduct any further analysis that might be required. NEPA requires that USACE capture the impacts to the human environment of any change from the NAA. USACE captured any impacts from the change to a season-varying flow at Peachtree Creek.

Additional information regarding impacts to dissolved oxygen and other water quality parameters is included in the final EIS. GAEPD has indicated its intention to ensure that water quality standards are met at all flows based on revisions in their 2013 triennial review (GAEPD 2014).

treatment plants that release into this stretch of the river. A minimum flow of 750 cfs was deemed to be the lowest acceptable level of flows necessary to dilute all of the treated sewage flowing into the river across Metro Atlanta to ensure clean water downstream. Based on DNR's rule revision and the content of the DEIS, we anticipate that flows will routinely fall well below what was once deemed the absolute minimum threshold of safety.

During public hearings and in written comments to DNR, CRK, other environmental organizations, businesses, the National Park Service, and many private landowners and other citizens opposed Georgia's decision to lower the minimum flow requirement in the Chattahoochee River at Peachtree Creek, with no study and no articulation of alternative protections; many of these same stakeholders convened meetings with EPD and EPA to discuss the potential impacts of this change. In particular, stakeholders stressed to all government agencies that this change will directly impact the wastewater discharge permits and treatment levels at each of the municipal and county treatment plants on the Chattahoochee in Metro Atlanta. Each facility must calculate the impact its discharges will have on the river. To do so, the facility assumes a certain minimum flow in the river that will always be present to dilute its pollution. Every wastewater treatment plant in Metro Atlanta has used a minimum flow of 750 cfs to calculate the level of treatment that must be done to ensure its discharges do not violate their NPDES permit limits, state water quality laws or the requirements of the Clean Water Act.

Facilities in fact continue to use 750 cfs to calculate their impacts to the river even though the state has moved to eliminate the minimum flow standard. Currently, the City of Atlanta's NPDES permit for its three sanitary sewer treatment plants is being revised and reviewed by EPD. The permit, like the permits for many other facilities in the watershed, explicitly relies on a minimum flow of 750 cfs, using that assumed minimum flow as the baseline for waste load allocation calculations. If all of the approximately one dozen facilities continue to operate their plants under the faulty assumption that the river will always provide 750 cfs, there is a high likelihood that their discharges will impair water quality in the river during the periods when flows fall below that level.

P

The Corps was premature to blindly adopt this new scheme without fully and objectively analyzing the impacts it will have on water quality in the ACF Basin. Though DNR approved the removal of the 750 cfs minimum flow standard from its water quality rules and regulations in August 2015, it has not yet submitted the revisions (of which the flow standard removal is a part) stemming from the 2013 triennial review to EPA for the federal agency's approval. Currently, the State of Georgia has not officially eliminated the minimum flow standard, nor has it adopted the seasonal flow scheme it has informally circulated as its preferred course of operations in the future. As it stands, the Corps has provided no data to support the flow reduction or assure users that the reduction will not degrade water quality. **Further, the Corps has failed to make an adequate showing that the lower minimum flow of 650 cfs will have any net positive impact on management of the river system for authorized purposes, particularly in terms of translating to any meaningful increase in storage for water supply.** As future demand increases, there will be increased wastewater discharges and increased assimilative capacity needs; the Corps has not demonstrated that the lower minimum flow is sufficient to meet those future needs.

Additionally, we are concerned about dissolved oxygen levels in the tailwaters of Buford Dam, which is the same stretch of river through which the Corps and State of Georgia are currently proposing to establish lower minimum flows. The Chattahoochee River downstream of Buford Dam to the confluence with Peachtree Creek is classified as secondary trout water. DNR sets standards for dissolved oxygen (DO) in trout waters. The minimum allowable concentration for DO is 6.0 mg/l and water quality data has shown that this standard has not been met for extensive periods of time in the tailwaters below Buford Dam, especially during the fall period each year.

Autoventing turbines (turbine modifications) were installed at Buford Dam in 2003 and 2004 with the goal of enhancing DO in the water entering the Chattahoochee River tailwater from Buford Dam below Lake Lanier. Georgia DNR Wildlife Resources Division (WRD) water quality data taken at the boat ramp at the Lower Pool Park from 1992 through 2009 was evaluated by EPD and suggests the turbine modifications do not effectively enhance DO at low/minimum releases and are marginally effective at higher/peak generation flows.

Q

From 1992 to 2009, during low/minimum flows from Buford Dam, DO levels have been less than 5.0 mg/l for extended periods in the fall, except during 2004. Since the turbine modifications, DO has fallen and remained below 3.0 mg/l during the fall of every subsequent year of study (2005-2009).

On the other hand, during 2004, the #3 turbine, which supplies low flow releases to meet minimum flows, was out of service. To meet minimum flow standards, low flows were supplied through sluicing rather than through the #3 turbine. All DO data points for 2004 exceeded 9.0 mg/l, suggesting sluicing is an effective method for enhancing DO in low flows from Buford Dam.

Reduced DO in trout streams has been associated with decreased fish health and lower angler success. Other aquatic organisms that rely on DO are also negatively impacted by low DOs. This impacts the overall health of the river, recreational opportunities and the associated economic benefits that anglers contribute to the local economy. We are seeking cooperative and practical methods to improve DO water quality in the river between Buford and Morgan Falls Dams. Sluicing is an effective method for enhancing DO during the fall months and deserves a thorough evaluation. The Corps should consider this method among its alternative management scenarios.

Reduced flows aside, the DEIS inadequately addresses direct and indirect impacts to water quality because the PAA explicitly results in degraded water quality in the river downstream of Atlanta. Indisputably, the Corp's preferred management scheme will result in adverse impacts to Dissolved Oxygen (DO), Phosphorous and Nitrogen concentrations in the river and lakes in the basin. For example, according to the Corps, the PAA will result in "substantially adverse" impacts to Total Phosphorous concentrations for stretches of the Chattahoochee from Atlanta to West Point Lake and from West Point Lake to Walter F. George Lake. These impacts are downgraded to "slightly adverse" in West Point Lake itself and in the river upstream from Buford Dam to Atlanta.[43]

R

[43] *See* DEIS, Vol. 1 at 6-121, Table 6.1-17 and at 6-131 - 132.

Response to ACF186 – Chattahoochee RiverKeeper

Q. Before the installation of the new turbines as part of the Buford plant major rehabilitation, sluice gates were frequently opened when low dissolved oxygen (DO) conditions were encountered at the state's trout hatchery located just below the dam. Water released through the sluice gates still results in less than optimal DO due to the location of the gates at the bottom of the dam. The sluice gates also were regularly opened during "turnover" in the fall. Since replacement of the turbines, the sluice gates are no longer operated under those conditions because the new turbines address DO to the maximum extent practical. Also, the trout hatchery installed aeration equipment and has not requested additional flows for DO support.

Currently, the sluice gate is opened for the following reasons:

- To provide minimum flow when the small unit is out of service.
- To evacuate flood storage if one of the main units is out of service.
- To support special events downstream with occasional short-time releases after coordination with Mobile District Water Management (e.g., the annual children's fishing event with local stakeholders).

R. Changes to the water management operations will not cause state water quality standards to be exceeded between water management alternatives (Alternative 1 and Alternative 7); instead state water quality standards will be exceeded by wastewater dischargers as documented in the effects between different water supply options (Alt7I, Alt7J, Alt7K, Alt7L, and Alt7M). USACE recommends that EPA contact GAEPD, the designated authority in Georgia that oversees part of the Clean Water Act, to ensure that the NPDES permits are revised.

The PAA will also have negative impacts on Nitrogen concentrations, with "adverse" impacts to the Chattahoochee River from Atlanta to West Point Lake, and "slightly adverse" impacts in Lake Lanier and West Point Lake, and in the river from Lake Lanier all the way down to Walter F. George Lake.[44] This example of water quality degradation is concerning, particularly because West Point Lake has been damaged by and slowly recovering from heavy loadings of nitrogen since 1987-1988. After reviewing chlorophyll-a data for those years, "Georgia DNR determined that algal productivity in the upper portion of West Point Lake was excessive and nutrient reductions were necessary."[45]

Finally, the Corps admits that the PAA will result in "slightly adverse" impacts to DO concentrations in the Chattahoochee River from Buford Dam to Atlanta and from Atlanta to West Point Lake.[46] Based on the above-referenced studies of DO below Buford Dam, we believe that any additional declines in DO in the river constitute substantially adverse, potentially even catastrophic impacts on water quality.

The DEIS fails to justify these impacts to water quality, and does not attempt any true analysis of how the degraded water quality will otherwise impact the ACF Basin. Instead, the Corps repeatedly asserts that it is under no obligation to manage the system for water quality. The agency's position is contradictory to the defined scope of its authority of its operations. The agency made plain the scope of its authority on the first page of the DEIS: "USACE operates and manages the ACF Basin projects as one system to meet the following authorized purposes: flood risk management, hydropower, navigation, fish and wildlife conservation, recreation, **water quality**, and water supply."[47] (Emphasis added.) The Corps' failure to adequately analyze and consider address impacts to water quality is arbitrary and capricious. More importantly, selecting a PAA that explicitly degrades water quality is improper, and the Corps must issue a supplemental DEIS including alternatives which do not devastate water quality across the basin.

Recreation

The CRNRA has approximately 3 million annual visitors, which create approximately $240 million in annual revenue. The Corps operations at Buford Dam heavily influence river flows throughout the CRNRA and have impacts on the recreational experience of its millions of visitors. These impacts must be fully evaluated and understood prior to selecting a preferred alternative.

S

The Columbus Whitewater Course is a 2.5-mile course located in downtown Columbus and was named as one of the top 12 Man-Made Adventures in the world by USA Today. Corps dam operations along the Chattahoochee River can have tremendous impacts on the recreational opportunities on this course and those impacts should be thoroughly evaluated.

[44] *Id.* at 6-133, Table 6.1-18 and at 6-141.
[45] Kamps, David. "West Point Lake Water Quality Studies: 1987 – 1990." Georgia DNR Environmental Protection Division, Water Quality Management Program, 7 Martin Luther King Jr. Drive, SW, Room 643, Atlanta, Georgia 30334.
[46] *See* DEIS, Vol. 1. At 6-107, Table 6.1-15.
[47] *Id.* at ES-1.

Response to ACF186 – Chattahoochee RiverKeeper

S. Optimum flow regimes for the Chattahoochee River National Recreation Area are displayed in Table 6.1-7 of the final EIS. Those flow regimes were developed as part of the MAAWRS in the 1980s. In 2000, CH2M Hill developed a recreational flow preference for the NPS that was similar to the previous effort. Riverine flows are evaluated in various reaches between Buford Dam and West Point Dam and also in the middle and lower Chattahoochee River. Figure 6.1-24 in the EIS displays flows of the NAA and PAA below Buford Dam. Flows exceeded 1,000 cfs approximately 75 percent of the time under the NAA compared to 73 percent of the time under the PAA. For higher flows that would support kayaking (6,000 cfs), there was a negligible difference between the NAA and the PAA over the period of record.

The importance of recreational access to the Chattahoochee River and ACF Basin at large cannot be overstated. Meanwhile, the DEIS fails to consider at all the economic impacts the PAA may have on the CRNRA or other recreation hot spots in the river system, from Columbus to Apalachicola Bay. The DEIS utterly fails to consider the impacts the PAA will have on this important use, dedicating less than two pages in the approximately 800-page document to recreation.

The DEIS in particular fails to adequately consider the impacts the adoption of the inadequate seasonal minimum flow scheme will have on recreation in the CRNRA. The National Park Service, which operates the CRNRA, has noted in scoping comments in 2010 and 2013 that it needs baseline flows of 1,000 cfs to support basic recreational use of the CRNRA.[48] Flows below this threshold not only impede but also restrict the ability of law enforcement and emergency personnel to use the river for patrol and rescue operations.[49]

Despite this, the PAA adopts Georgia's proposed seasonal minimum flow scheme which only ensures flows of 750 cfs (May-October) or 650 cfs (November-April). The DEIS fails to evaluate the recreational impacts of the proposed seasonal minimum flow regime within the PAA. The impacts of the seasonal reduction of the target flow level at Peachtree Creek from 750 cfs to 650 cfs must be fully evaluated, and the Corps should revise its PAA to avoid adverse effects on recreation including fishing, paddling, motor boating, and sightseeing.

In addition to base flows, the USACE must evaluate the impacts of peak flow releases on recreation as well as river safety downstream of all USACE controlled dams.

In addition to adverse recreational impacts within the CRNRA, the PAA also results in adverse impacts on recreation in Lake Lanier and Walter F. George Lake.[50] Though the DEIS does not address it, we believe adverse impacts to recreation on West Point Lake also are highly likely, particularly due to the water quality impacts discussed above. However, the DEIS fails to consider a multitude of recreational impacts to the hundreds of miles of rivers and tributaries that flow into and out of the federal facilities and lakes within the basin. The Corps must engage in supplemental analysis of impacts to recreational uses on the rivers, as well as conduct closer review of impacts to West Point Lake and other federal projects.

Drought Management

In its PAA, the Corps revises its current interim drought operations in order to further preserve storage in Lake Lanier following the end of a drought.[51] The DEIS does not demonstrate how the revised drought operations translate to anything other than reduced river flows. In other words, do either the revised RIOP (revised interim operation plan) or the PAA operations during times of drought recovery actually translate to any meaningful increase in lake levels in Lanier or other federal reservoirs? Further, the agency must analyze the impacts the new

T

[48] *See* DEIS, Vol. 1 at 6-37.
[49] *Id.*
[50] *Id.* at 6-199, Table 6.5-7.
[51] *Id.* at 5-29 – 5-31.

Response to ACF186 – Chattahoochee RiverKeeper

T. Coinciding the initiation of drought operations with the initial onset of reduced basin inflow is the intent of revising drought operations. This typically occurs during periods of sustained rainfall deficit. Droughts are typically slow to develop in the ACF Basin but historically last approximately 6 months to 3 years. The drought operation trigger changed from Composite Zone 4 in the NAA to the higher Composite Zone 3 in the PAA. A more conservative operation is initiated sooner by slowly reducing the flow requirement from Jim Woodruff Dam. Gradually reducing releases from the storage mimics the slowly developing nature of drought conditions. Initiating drought operations in Composite Zone 4 has a tendency to lag behind the presence of drought conditions. Section 6 of the EIS, Environmental Consequences, describes the environmental and socioeconomic effects of the PAA, which includes the revised drought operation plan. The analysis includes the cumulative effect of all proposed updates to ACF water management operations.

drought operations will have on water quality (particularly as it relates to the proposed seasonal flow reduction in the Chattahoochee River at Peachtree Creek), downstream water supply needs, fish, wildlife, recreation, hydropower, navigation and other uses. As it stands, the Corps has failed in the DEIS to adequately explore the impacts from the revised drought management operations.

Flood Control & Climate Change

Under the PAA, flood risk management operations would remain unchanged. However, the DEIS fails to evaluate adequately the impacts from climate change, particularly with regard to more frequent and larger rain events likely to occur as climate change continues. The Corps also fails to consider the impact on flood management operations from the proposed Glades Reservoir, which will directly impact flood control because the dam forming the reservoir would be constructed within Lanier's flood plain.

U

Hydroelectric Power Generation

The DEIS fails to consider the impacts of reducing hydropower generation due to the need to replace that lost energy with fossil fuels or other energy sources. Potential adverse impacts include increases in greenhouse gas emissions and thermal pollution.

V

Navigation

Although the Corps has now decided to provide flows to accommodate commercial navigation as an authorized purpose, the agency makes no effort to align higher flows for navigation with other authorized purposes and federal obligations, including peak hydropower demand, floodplain connectivity, sturgeon spawning habitat, or Apalachicola Bay salinity levels. Moreover, it appears that those flow recommendations are not adequate even to support commercial navigation. We view this as a missed opportunity. The Corps should evaluate navigational flow needs in conjunction with other system needs to see if there are mutual benefits obtained by increasing flows year round as well as seasonally in the lower Chattahoochee.

W

Cumulative Impacts

Cumulative impacts result from the "incremental impacts on the environment from an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-Federal) or person undertakes such actions."[52] These impacts can arise from "individually minor but collectively significant actions taking place over a period of time."[53] Cumulative impacts are particularly significant in a highly regulated system such as the ACF Basin. The cumulative impacts section should assess:

1. the area in which effects of the proposed project will be felt

[52] 40 C.F.R. § 1508.7
[53] *Id.*

Response to ACF186 – Chattahoochee RiverKeeper

U. The climate change analysis presented in section 6.9 of the EIS concluded that the extreme high and low climate change-affected values (both water quantity and water quality) would fall within the range of those that have been historically experienced in the ACF Basin. Future updates of the WCM will enable USACE to consider adjusting project operations to adapt to the effects of climate change as they emerge over time. Flood risk management considerations specifically associated with Glades Reservoir are being addressed in the section 404 permit process for that project. The flood storage capacity that would be occupied by the proposed Glades Reservoir, however, would be relatively minor compared to the total flood storage capacity of Lake Lanier, and the overall effect on flood risk management in the basin would be negligible.

V. The reduction in hydropower generation among the alternative plans compared to the NAA was relatively small. The EIS has been updated to discuss the potential greenhouse gas emission effects associated with the PAA (section 6.5).

W. The PAA provides an opportunity for navigation to occur in the January–May timeframe each year. That opportunity is limited by physical and regulatory constraints on the ACF system.

Navigation is one of several project purposes for which Congress has authorized the ACF projects. USACE considers that purpose along with all other authorized purposes when making operational decisions

2. the impacts that are expected in that area from the proposed project;

3. other actions—past, present, and reasonably foreseeable—that have had or are expected to have impacts in the same area;

4. the impacts or expected impacts from these other actions; and

5. the overall impact that can be expected if the individual impacts are allowed to accumulate.[54]

"The duty to discuss cumulative impacts in an EIS is mandatory."[55] Ongoing and future Corps operations within the ACF Basin have potentially significant cumulative impacts on the human environment, including changes in water quality, fish habitat, recreational opportunities and water supply. These impacts will be further exacerbated by proposed reservoirs, prolonged periods of drought, rapidly increasing population, development and climate change.

Proposed Reservoirs

In its DEIS, the Corps has failed to conduct this mandatory cumulative impact review. The DEIS acknowledges that Georgia, the MNGWPD and many affected counties have undertaken various actions to meet projected future demands for water supply, including some conservation measures and pursuing "new sources" of water.[56] Such potential projects include the Glades Reservoir in Hall County; the problems with this reservoir have been detailed above. While the Corps summarily states that such "new sources" of water supply have an inconsequential effect on water quantity, it utterly fails to explore and consider the cumulative impacts these proposed new sources of water supply may have on water quality, fish, wildlife, or recreation. Further, the agency fails to consider whether the proposed new reservoirs included in the DEIS are "new" sources of water at all, or are simply efforts to redistribute existing water supply. Moreover, there is no consideration of how these projects may negatively impact and even deplete water supplies through increased evaporative loss or other consequences.

X

The Corps admits that one effect of dams is "the decline or loss of river-dependent species of freshwater fishes, mussels, and snails" and that any new dams "would replicate many of those effects elsewhere in the tributary streams and add to the cumulative alteration of natural flow regimes and habitat fragmentation."[57]

The Corps goes so far as to acknowledge that, "[d]epending on the location, size, and operating modes," the proposed dams possibly jeopardize the continued existence of some aquatic species along with other, undiscussed adverse impacts.[58] However, the Corps fails to go beyond this superficial analysis even though it includes in the alternatives a Glades Reservoir for

[54] Fritiofson v. Alexander, 772 F.2d 1225, 1245 (5th Cir. 1985), abrogated on other grounds, Sabine River Authority v. U.S. Dep't of Interior, 951 F.2d 669 (5th Cir. 1992).
[55] City of Carmel-By-The-Sea v. U.S. Dep't of Transp., 123 F.3d 1142, 1160 (9th Cir. 1997).
[56] *See* DEIS, Vol. 1 at 6-209.
[57] *Id.*
[58] *Id.*

Response to ACF186 – Chattahoochee RiverKeeper

X. USACE performed a cumulative analysis on all reservoirs in the ACF Basin with pending permit applications and valid certifications of need. The certification of need for Glades Reservoir, however, has been withdrawn by the State of Georgia and the 404 permit application has been withdrawn by Hall County. Also, the 404 permit application for Bear Creek Reservoir has been withdrawn. Accordingly, those two reservoirs are no longer reasonably foreseeable and have been deleted from the HEC-ResSim modeling and analyses contained in the final EIS.

which it knows the location, size and operating mode. We find little to no evaluation of the actual hydrological impact of Glades on Lake Lanier and wider ACF operations, either in terms of basin inflows, evaporative losses, or release rates. Moreover, even if we accept the future water demands as submitted by Georgia in 2013, the Corps utterly fails to consider in the alternative to Glades an allocation out of Lanier equivalent to the Glades yield. Such an allocation from Lanier clearly would be less environmentally destructive, well within flood control limits, and more cost-effective. The Corps must conduct meaningful review of the cumulative impacts of the proposed Glades Reservoir before issuing the final EIS.

Similarly, the Corps fails to consider the potential impact of the proposed Bear Creek Reservoir in South Fulton, when there is data from permit applications upon which the Corps could base a searching analysis of potential impacts on the basin. It is essential that the agency engage in a full and thorough review of the cumulative impacts that may stem from these proposed reservoirs, because by the Corps' own admission the reservoirs could have significant effect on myriad elements within the ACF Basin, from water quality to aquatic life.

We also note that the ACF Stakeholders, of which CRK is a member, recently proposed a sustainable water management plan for the basin.[59] The sustainable water management plan maintained minimum flows of 750 cfs and assumed greater future water demands than the significantly reduced demands released in 2015, and still concluded that no new reservoirs were needed to satisfy future water demands. We strongly urge the Corps to take a look at the management alternatives outlined in that document and incorporate this study into a revised and supplemented DEIS.

Water Supply Demands

The DEIS recognizes the steadily increasing demands for public water supply and agricultural water supply in the ACF Basin over the past 40 years, and that demand is expected to increase in the future.[60] By the Corps' own admission, however, future water demands for the region are not nearly as excessive as previously forecasted. In fact, Metro Atlanta's demand is projected 25 percent lower than what Georgia requested in its 2013 supplemental water supply request to the Corps.[61] That 2013 request also alleges a need for Glades Reservoir in order to meet the future water supply needs of counties not included within the MNGWPD and not mentioned in the Clean Water Act Section 404 permit application that went to the Corps' Savannah District.

Y

Population Growth and Development

Likewise, the Corps has an obligation to consider population density, growth trends and development within the ACF Basin, and then analyze what impact those factors will have. As the

[59] ACF Stakeholders, Sustainable Water Management Plan (May 15, 2015), available at http://acfstakeholders.org/wp-content/uploads/2015/05/ACFS-Sustainable-Water-Management-Plan-For-Release.pdf

[60] *See* DEIS, Vol. 1 at 6-210.

[61] *See* "Metro Water District Issues Long-Range Water Demand Forecast" (http://northgeorgiawater.org/metro-water-district-issues-long-range-water-demand-forecast/), last visited January 26, 2016.

Response to ACF186 – Chattahoochee RiverKeeper

Y. Refer to the response to comment F above.

population increases, often there are corresponding degradations to water quality in heavily populated areas. As Metro Atlanta and other urban communities in the basin grow, there will be new strains on the river system. While the Corps admits that as population grows, "ecosystems and wetlands adjacent to water bodies in the ACF Basin are expected to become more degraded," there is no real analysis within the DEIS of the impacts to water quality, aquatic life, recreation or water supply.[62] We again note that reducing wastewater assimilative flows in the Chattahoochee River at Peachtree Creek will further stress the system as the region grows.

Z

The failure to adequately consider the cumulative impacts from increased demand and population growth is unacceptable. However, any such analysis in this DEIS would be based on outdated projections, so the Corps should use updated water demand and population growth projects as it moves this process forward. In light of these omissions and the existence of more accurate, timely projects, it is imperative that the Corps conduct a supplemental DEIS to fully analyze cumulative impacts.

Mitigation

The Corps is required by CEQ regulations to consider and discuss mitigation in the scope of the EIS, in the alternatives analysis and in its final decision.[63] According to CEQ regulations,

"Mitigation" includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or provided substitute resources or environments.[64]

As the Corps has noted in its DEIS, mitigation can include "measures to avoid, reduce, minimize, or compensate for adverse impacts that could result from a selected course of action; in this case, the update of the Master Manual."[65] Mitigation is construed liberally for purposes of NEPA, and mitigation does not necessarily need to affect the particular action in question; instead it can take the form of a separate action that would offset environmental impacts.

[62] *See* DEIS, Vol. 1 at 6-210.
[63] 40 C.F.R. §§ 1508.25, 1502.14.
[64] 40 C.F.R. § 1508.20.
[65] *See* DEIS, Vol. 1 at 6-212.

Response to ACF186 – Chattahoochee RiverKeeper

Z. The purpose of the EIS is to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to implement those operations through updated water control plans and manuals. Because of the 11th Circuit Court ruling of June 2011 and the 2012 USACE legal opinion, updating the water control plans and manuals includes making a decision on Georgia's water supply request. Accordingly, this EIS considers not only operations for all authorized purposes, but also an expanded range of water supply alternatives associated with the Buford Dam/Lake Lanier project, including current levels of water supply withdrawals and additional amounts from Lake Lanier and downstream for Metro Atlanta that Georgia requested in 2015. Forecasting future changes in water quality resulting from population changes in parts of the ACF Basin other than the Metro Atlanta area is outside the scope of the Master WCM update process and this EIS. Ensuring compliance with water quality standards in the future is a responsibility of the states, not USACE.

The Corps in the DEIS notes that a number of the alternatives considered, including the PAA, use model assumptions provided by the State of Georgia and will result in an "increase in treated wastewater discharges into the Chattahoochee River from Metro Atlanta," with as much as 100 to 160 mgd of additional treated wastewater discharges to the river expected under these alternatives.[66] As a result, these proposed management alternatives will result in adverse effects on water quality from Atlanta to West Point Lake in the form of increased Total Phosphorous and Total Nitrogen loads.[67] Despite these findings, the Corps refuses to meet its minimum obligations under NEPA and instead states in its purported mitigation analysis that "[s]pecific compensatory mitigation measures would not be required based on the analysis of the PAA and other atlernatives[SIC]."[68] The agency failed to consider or discuss mitigation at all in its alternatives analysis, at DEIS, Vol. 1, Sections 4.1-4.3. **In fact, in the DEIS the Corps does not consider or discuss mitigation in any capacity whatsoever, specifically refusing to incorporate any specific mitigation commitments in the PAA or other alternatives.**[69]

AA

The Corps dedicates less than a page among the thousands that comprise the DEIS to its mitigations discussion, and provides no evidence to support its conclusion. Said conclusion is obviously inconsistent with its earlier statement that adverse impacts on water quality are foreseeable environmental consequences of the PAA and other alternative operations. Much of the space in Section 6.10, Mitigation Considerations, is dedicated to the Corps' discussion of adverse effects that might occur due to unforeseen conditions, and the unknown actions the Corps may take in response.[70] This conversation regarding unknown measures to respond to unforeseen effects has no place in the Corps' mitigation considerations. The Corps has an obligation to address the foreseeable and expected impacts emanating from its alternatives under consideration, and it has utterly failed to do so in this document. In refusing to consider any mitigation commitments, the Corps has totally abdicated a mandatory requirement of the NEPA process and has deprived the public the opportunity to provide meaningful feedback.

We further note that our critique is consistent with that submitted by the external peer review panel commissioned by the Corps:

> "The Panel also noted that the conclusion that specific compensatory mitigation measures would not be required for the PAA in resource areas where substantial adverse effects and slightly adverse effects were identified is not supported by the documentation provided. Discussion of the need for mitigation specifically for each resource area where adverse effects were determined would strengthen the documents."[71]

[66] *Id.*
[67] *Id.*
[68] *Id.* at 6-213.
[69] *Id.*
[70] *See, e.g.,* DEIS, Vol. 1 at 6-213, lines 6-22.
[71] Battelle Memorial Institute, Final Independent External Peer Review Report: Apalachicola-Chattahoochee-Flint River Water Control Manual, Environmental Impact Statement, and Water Supply Storage Assessment Report at vi (Prepared for the Corps, Contract No. W912HQ-10-D-0002, Sept. 4, 2015).

Response to ACF186 – Chattahoochee RiverKeeper

AA. As concluded by the 11th Circuit Court of Appeals, USACE is authorized to make releases from Buford Dam to meet the water supply needs of Metro Atlanta. GAEPD, not USACE, however, is the designated authority responsible for regulating discharges of treated wastewater by Metro Atlanta utilities into the Chattahoochee River. In accordance with applicable NEPA regulations, the final EIS displays the impacts of the anticipated future water supply withdrawals by the Metro Atlanta water supply providers and associated discharges of treated wastewater.

VII. CONCLUSION

The Corps has not updated its Master Manual for the ACF Basin since 1958. The Corps has the resources and opportunity, as it reasonably notes in its statement of purpose and need, to determine how its projects in the ACF Basin *should* be managed. In hopes that the Corps intends to meaningfully achieve its objective, we urge the Corps to fully consider the appropriateness of the scope of its DEIS, the range of reasonable alternatives considered, the available relevant information, and the full impacts of those alternatives. The Corps should improve the scope and depth of its analysis before this EIS is finalized, pursuant to NEPA's requirements, and should publish a supplemental DEIS.

We look forward to participating in the NEPA process as it moves forward. Thank you for consideration of these comments. Please do not hesitate to contact is if you have any questions.

Sincerely,

JASON ULSETH

Jason Ulseth
Riverkeeper

GILBERT B. ROGERS BXP JU

Gilbert B. Rogers
Senior Attorney, SELC

CC: USFWS, NPS, EPA, USACE – Savannah District

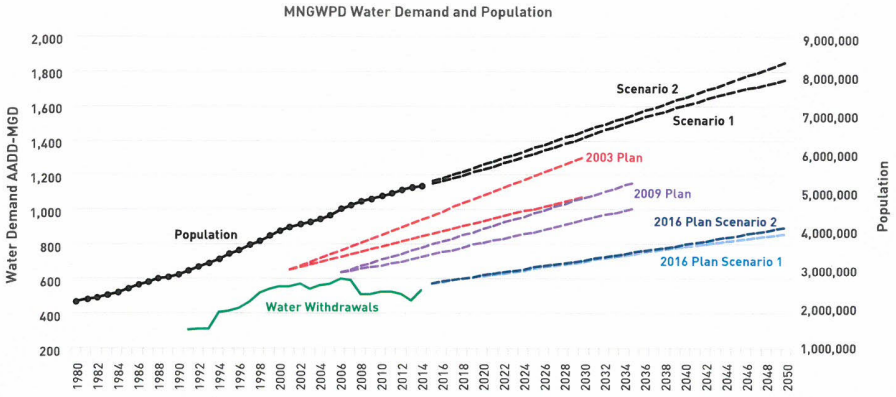
Attachment A

Metro Atlanta: Responsible and Efficient Stewards of Our Water Resources

The Metropolitan North Georgia Water Planning District is responsible for water supply and water conservation planning within the 15 county metropolitan Atlanta area which includes Bartow, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Hall, Henry, Paulding and Rockdale Counties.

The District will release an updated water supply and water conservation plan in 2016. As part of this effort, the District has developed water demand forecasts for its planning area out to 2050. The forecasts incorporate economic and population projections as well as water utility billing data to estimate future residential and non-residential water needs.

Water Demand Forecasts



This chart shows the demand projections that were included in the original 2003 Plan, the 2009 Plan Update and the two new scenarios for forecasted demands. This chart demonstrates how our robust water conservation and efficiency program, both at the state and District level, have helped to significantly lower demands for our growing population.

2016 District Plan Update Facts

15 counties and 92 cities

There are 15 counties and 92 cities in the Metro Water District.

5,129,926

According to 2014 Census estimates, there are 5,129,926 people living in the District.

6 river basins

The District lies within six distinct river basins.

2 federal reservoirs

Two federal reservoirs and 22 locally operated reservoirs are contained within the 15-county area.

2 Demand Scenarios

Scenario 1

The District projections show that in 2050 there will be 7,874,632 people with water demands at 862 MGD

Scenario 2

The District projections show that in 2050 there will be 8,345,677 people with demands at 898 MGD

25% reduction in projected water demands

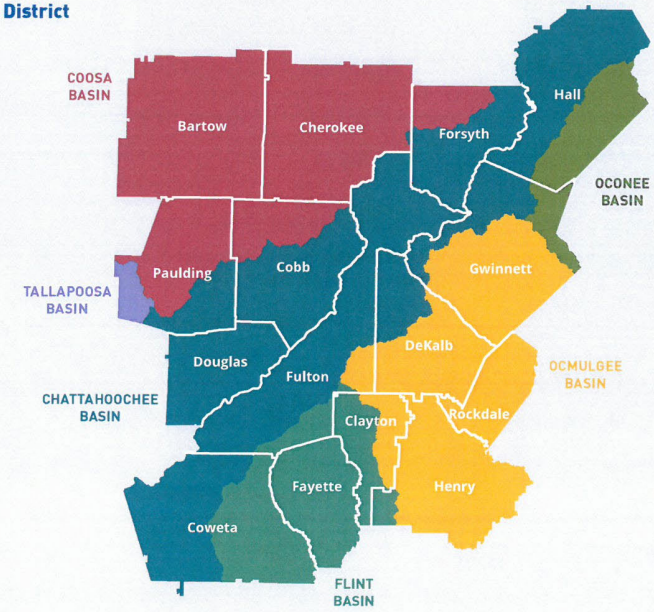
The 2016 Update projects an approximate 25 percent decrease in 2050 water demands compared to the District's 2009 Plan.

Summary of 2050 Water Demand Forecasts by County (Average Annual Day in Million Gallons per Day)

County	Base Demand (2014)	2009 Plan - 2050 (extrapolated)	2016 Plan - 2050 Scenario 1	2016 Plan - 2050 Scenario 2
Bartow	27	74	52	40
Cherokee	19	54	35	39
Clayton	24	44	38	34
Cobb	70	119	98	96
Coweta	13	33	24	23
DeKalb	71	120	95	83
Douglas	13	31	20	22
Fayette	11	27	17	14
Forsyth	22	78	48	60
Fulton	139	284	186	227
Gwinnett	82	156	132	145
Hall	20	57	34	31
Henry	23	54	39	42
Paulding	12	51	23	24
Rockdale	13	20	21	18
Total	**560**	**1,202**	**862**	**898**

Demands for Scenario 1 and 2 were calculated based on the most recent 3-5 years of actual billing data. These forecasts include the impacts of current plumbing codes and a factor to account for uncertainty in demand projections.

Map of the District



Metropolitan North Georgia Water Planning District | 40 Courtland Street, NE | Atlanta, GA 30303 | www.northgeorgiawater.com

APALACHICOLA RIVERKEEPER®
SAVING AN AMERICAN TREASURE

Response to ACF187 – Apalachicola RiverKeeper

January 28, 2016

Colonel Jon Chytka
District Commander
US Army Corps of Engineers - Mobile District

RE: Update to the Water Control Manual (WCM) and Environmental Impact Statement (DEIS) for the Apalachicola-Chattahoochee-Flint River Basin

Dear Colonel Chytka:

On behalf of our Board of Directors and over 1,500+ members and supporters across the United States, ***Apalachicola Riverkeeper*** has reviewed the referenced documents and submits the following comments on the referenced Water Control Manual (WCM) DEIS. The document's length (over 4,700 pages) and complexity speaks to the unenviable task the Corps faces in meeting the myriad objectives specified through legislation and other federal guidance, and made far more difficult by the competing interests in the basin. However, with all due respect, we believe the Corps can and must do better to recognize and respect the conservation of fish and wildlife in the Apalachicola portion of the basin. To do otherwise, as in the current version of the document, risks the loss of an ecosystem and culture that are widely recognized as significant economic and ecological resources.

Our comments proceed as follows:

PART A outlines an alternative proposed action for consideration by the Corps based on the comments, data, and other information in the sections following and/or included in the documents attached to these comments. PART B. Sections 1-7 address short comings, flaws and additional information needs in the DEIS as follows: Section 1 contains our most fundamental objection: the scope of the DEIS is fatally flawed, in that it fails to consider the interests of, and impacts in, the Apalachicola River, Floodplain, Estuary, and Bay. Section 2 describes the ecological relationships and interactions that are omitted from the DEIS as a result of the too-narrow scope. Section 3 focuses specifically on issues related to low-flow conditions, which will become more frequent and more severe if the PAA is adopted. Section 4 discusses the failure to consider Conjunctive Uses of flow, which may serve many needs and objectives simultaneously. Section 5 discusses technical failures and shortcomings of the DEIS, such as the failure to use the best available scientific knowledge and data. Section 6 delineates the Environmental Justice issues that arise from the concentration of the negative impacts upon culturally-distinct low-income communities. Section 7 offers our conclusions. Attachments are included on the flash drive accompanying this document or on dropbox upon email request to Dan Tonsmeire.

A NON-PROFIT ORGANIZATION DEDICATED TO THE PROTECTION AND STEWARDSHIP OF THE APALACHICOLA RIVER & BAY

Response to ACF187 – Apalachicola RiverKeeper

PART A. Alternative Proposed Action and Approach

As requested by the Corps, in PART A we present an alternative to addressing the needs of the Fish and Wildlife Conservation authorized purposes which have been sorely neglected in the DEIS. That alternative includes metrics, data, methods and actions to help the Corps make the DEIS acceptable and improve the operations to a point that the Fish and Wildlife Conservation purposes are better served in the short term and can be further improved using an adaptive management approach as more information is acquired and understood.

Metrics for flowing sections of the river and estuary:

Flows provided by releases from the reservoirs should mimic natural flows (pre-dam flows using the 1939-1957 USGS observed flow data set) to the greatest extent possible. More detailed descriptions of natural flows and how to mimic natural flows are provided in ***Attachment 3a***, the **ACF Stakeholders Sustainable Water Management Plan** (SWMP) in ***Appendix B - Stakeholder Perspectives*** under two separate sections. In the section under the ***Apalachicola Sub-basin*** (page 100 – 104) the concept of ***Preserving Natural Flow Variability*** and ***Measuring the Health and Productivity of the Sub-basin: Critical Flow Needs*** are explained. Additional explanation and guidance is provided in the section of ***Appendix B - Environment and Conservation - Principles of Sustainable Water Management*** (Page 126-129) referred to as "The Natural Flow Paradigm".

A

The selected metrics are described below at the nodes and data collection points known to exist and used by the Corps. The Corps will need to become familiar with and understand the ecosystem functions that are integral to the Apalachicola portion of the ACF Basin in order to recover and sustain the services provided by the flow regime for fish and wildlife and humans. These functions are described in detail in the comments following PART A. Metrics we have provided are:

Chattahoochee River below Peachtree Creek metric: Maintain a minimum flow of 750 cfs to maintain safe and reliable recreational use and water quality. Other considerations:

1. Develop a method to make releases from Buford occur in a more gradual rise and fall of the river to reduce risk of injury and/or loss of life, provide better ecological habitat, and reduce erosion of banks and habitat loss.
2. No new reservoirs are added within the ACF Basin.
3. Additional storage may be added by increasing the conservation pool of Lake Lanier, but is not required as part of this proposal.

Apalachicola River USGS Chattahoochee gage at Chattahoochee, FL metric: Flow should mimic natural flows to restrain aquatic habitat loss to no greater than an overall 13% for dry year flows. Habitat loss is determined by developing a relationship between the number of acres inundated at a certain flow regime that would sustain all but 13% of the aquatic habitat. This can be achieved with a reduction no greater than 6% from the baseline flow described below. This will sustain floodplain inundation at levels, frequency, timing, and duration using the flow/inundation relationship described in Darst 2008, Light 2006, and Light 1998. Development of the desired baseline flow regime is described below:

A. The authorized purposes of the federal ACF system do not include a specific directive to provide freshwater inflows to Apalachicola Bay to sustain the resources of the bay. The PAA was selected to maintain the health of the ACF Basin within USACE's authorities. The scope of USACE's authorities to manage projects in the ACF Basin limits the Agency's ability to mimic natural flows to the Chattahoochee and Apalachicola rivers. Its authorities include the responsibility to produce peaking hydropower, operate for flood damage reduction, and release minimum flows from Jim Woodruff Dam for threatened and endangered species to comply with the terms and conditions in the biological opinion presented in appendix J of the final EIS. In the biological opinion the USFWS concluded that effects to estuarine invertebrate production are insignificant because the PAA provides slightly beneficial effects from increasing the number of freshwater pulses and increasing the number of days greater than or equal to 16,200 cfs in the winter. USFWS also anticipate only minor changes in salinity regimes and estuarine habitat due to the WCM.

The plan proposed by the ACF stakeholders is evaluated in section 4 of the final EIS to the extent that information was available

Use UIF median monthly flows of pre-dam dry years (for example, the three driest years from 1939-1957) to develop and bracket the lower end of low flows for comparing alternatives. This metric is set to limit aquatic habitat loss to an overall maximum of 13% by maintaining acres of inundated aquatic habitat of the river and floodplain for a duration that all aquatic habitat will be sustained during dry years. Using this metric for dry years equates to a maximum 6% reduction in flow from the UIF. In the current conditions run and the subsequent water management runs, these flows will serve to help bracket and be a reference line for meeting or exceeding this dry year metric. The resultant hydrograph represents the performance metric line for dry year flows, and should not be used for normal and wet years. Maintaining the 6% reduction in flow below UIF flows for comparable years is necessary in order to avoid creating drought conditions during normal years.

For convenience, these same flows should also be expressed in cfs at the Blountstown and Sumatra gages. Minimize the times flows during drought conditions go below 16,000 cfs between April thru June and minimize the times flows go below 8,000 cfs for the months of July thru November. This may be accomplished by instituting pulses that would achieve pre-dam flows for some or all of these time periods.

To the extent possible under modeled conditions during non-drought years, maintain monthly flows at the Blountstown gage fluctuating between 18,000 – 20,000 cfs for the months of February thru May, then between 10,000 – 16,000 cfs the remainder of the year. This may be accomplished by instituting pulses that would achieve pre-dam flows for these time periods. During normal and dry (but not drought) times a spring pulse during mid-April thru mid-June and a mid-summer pulse in July may be needed to achieve pre-dam flows as much as possible.

A

Apalachicola River USGS gage at Sumatra, FL metric: Use the flow and habitat loss methodology to provide the flows at the Sumatra gage as the input to be run thru the Bay Assessment hydrodynamic model to determine salinity in the Bay under the resultant conditions.

Apalachicola Bay metric – Using a Sumatra gage flow/bay salinity relationship established using the hydrodynamic model and cumulative frequency distribution/occurrence salinity plots, to the extent possible, maintain salinities in an optimal range for oysters between 10-24 PPT (for explanation see Attachment 3a - SWMP page 57-58). During May thru October (during the spawning, reproduction, and recruitment season), salinity should be maintained in the desirable range a minimum of 50-55% of the year at locations throughout the Bay. During late fall and winter (primary growth season) months November, December, and January thru April, salinities should be maintained in the desirable range a minimum of 75-80 % of the year at locations throughout the Bay.

This concept of seeking to maintain salinities which will help sustain the health of the oyster populations in Apalachicola Bay was used by the USFWS and to develop the Apalachicola Bay Assessment tables presented in the ACFS SWMP. In the bottom line of Table 5-3 on page 61 of the main SWMP report, in which eight scenarios were modeled for the drought year of 2007, **the salinity regime in the Bay was improved over the RIOP with current consumptive uses (Scenario 3) and USGS observed flows (Scenario 1)**. The basis for the desirable salinity values is to sustain a range of salinities in the Bay for oyster reproduction, recruitment and growth during dry periods as much as possible and to minimize high salinities which are detrimental to oysters. It has been explained in Attachment 4c by Doug Barr that prolonged low flow and high salinities experienced during droughts lowers dissolved oxygen (DO) along the estuary bottom. Low DO is not conducive to improved oyster production or other marine species.

For these suggested metrics and pulse flows, 12,000 cfs flow is recommended to be the beginning point for modeling and serve as an example of an alternative management scenario the Corps could consider during late May/early June and again in late July for a two week period each time. The basis for that selected flow is the benefits that would be achieved by such a flow, including but not limited to: flushing flows in the larger slough systems of the floodplain improving water quality and fish habitat; a pulse of nutrients would be supplied to the delta and estuary; an increase in DO and an estimated 3-4 ppt decrease in salinity of the Bay at Cat Point for a period of time; a 5 foot depth for a navigation channel without dredging; and increased water availability for hydropower, low-consumption/high return rate industry, recreation, and fish and wildlife conservation between Buford Dam and Jim Woodruff Dam. Modeling will provide information on the capacity of the ACF system to meet these flows and estimate impacts to reservoir levels throughout the system.

The following assumptions and considerations are provided to help further understand the basis for the metrics developed above:

A

1) The Chattahoochee River metric will enhance recreational opportunities, shoal bass population and ecological and environmental quality of the Chattahoochee River flowing sections, particularly below Peach Tree Creek, by using recommended patterns of flow at National Recreational Area, both above and below Morgan Falls. A stream rating curve is needed to allow for a forecast of habitat change differences between 650 minimum flow, and 750 minimum flow to demonstrate the benefits.
2) No new reservoirs can be allowed due to increased evaporation and changes in timing of flows to downstream portions of the system. The cumulative impacts of the Glades Reservoir project and other potential projects (e.g., Bear Creek Reservoir, South Fulton) on ACF operations were not evaluated. For example, Glades will impede basin inflow into Lanier and increase evaporative losses in the watershed. The DEIS fails to explain how the hydrology of the ACF system will change in response to the inclusion of Glades and how the hydrological changes will impact ACF operations and subsequently the downstream ecosystem and communities.
3) A thorough discussion of the interactions and effects of changes to rainfall/flow and the relationship between the two with forecasted climate change is necessary and should be accomplished at the earliest possible time. Appropriate adjustments to the UIF, basin inflows, and baseline flows discussed in Section 5 should be carried out.

4) During dry periods, it is possible to allow for pulses of elevated flow to accommodate increase inundation in the floodplain, lower salinity levels in the Bay, and improved water quality in the floodplain and bay.
5) The NAA/Existing condition (current operations) should use pre-2007 changes, or earlier, instead of RIOP 2012 condition for comparison with proposed and preferred alternatives. Impacts would be identified if the baseline being considered was prior to 2006, instead of the current baseline condition (2012). These differences may require mitigation for those cumulative impacts. There is adequate data available to make this comparison (operations, inflow, consumption, etc.). A
6) An over-riding commitment to an Adaptive Management approach to scheduling water releases to meet conservation needs, including climate change issues is required from the starting point recommended. Vigilance for opportunities to improve wetland function and associated ecological services is necessary.
7) Using these metrics for guiding operations could diminish impacts from the PPA and will improve the proposed operations.

Using the metrics presented above, modeling using a hydrologic and hydrodynamic model with the data sets referenced and provided in this document should allow a reasonable evaluation of the fish and wildlife conservation freshwater flow needs below Jim Woodruff Dam on the Apalachicola River.

Modeling and Analysis considerations:

Dr. Aris Georgakakos of the Georgia Water Resources Institute (GWRI) has well established hydrologic and hydrodynamic models to carry out modeling of the recommended metrics to evaluate the impacts on floodplain inundation and salinities. GWRI models were used to evaluate alternatives by the ACFS. Those modeling results for floodplain inundation and the salinity criteria were analyzed by Atkins Global. The DEIS analysis should further investigate the modeling and analysis of pulse flows to maximize the benefits for appropriate levels of inundation and salinity based on timing, frequency, and duration to mimic natural flow and salinity regime conditions to the greatest extent possible.

PART B. Short comings, flaws, and additional information needs in the DEIS

1. The Scope of the DEIS is far too narrow; further, the Scope serves to unfairly favor the needs of part of the basin and authorized purposes over others

The Scope of the DEIS precludes the consideration of many important issues and impacts, especially in the Apalachicola River, Floodplain, and Bay. The ecosystems that exist in these areas are truly unique in their natural, environmental, cultural and economic importance. They are of international, national, regional, and local significance. For the Scope to be adequate it is necessary to understand the functioning of the Apalachicola system, and how those functions depend upon timely and adequate flow in the river. The system's incredible biodiversity and ecological services are substantially degraded by low flows. Assessment of the impacts of alternatives requires an understanding of the ways in which reduced river flow will result in negative ecosystem impacts. Reduced river flow, and the reduced nutrient flow and degraded water quality that accompany it, are not addressed in the DEIS. Nor is there B

Response to ACF187 – Apalachicola RiverKeeper

B. The comment regarding the scope of the EIS is directly related to the project purposes authorized by Congress. The scope of the EIS is appropriate for the update of a WCM on a previously constructed project. The purposes of the Master WCM update and WSSA (appendix B in the EIS) are to determine how the federal projects in the basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to assess the extent to which reservoir storage at Lake Lanier can be made available to meet current and future water supply needs for Metro Atlanta. The authorized purposes of the federal ACF system do not include a specific directive to provide freshwater inflows to Apalachicola Bay to sustain the resources of the bay. In the WCM update process, balancing project operations to fulfill all authorized purposes, while evaluating impacts to the environment was a top priority. NEPA requires the evaluation of the PAA be compared to the current conditions (NAA).

Council on Environmental Quality (CEQ) regulations for implementing NEPA require consideration of the NAA (section 1502.14). In the CEQ's memorandum of March 23, 1981, *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, question no. 3 addresses how the NAA is defined depending on the nature of the specific federal action. The response to question no. 3 states, in part:

> The first situation might involve an action ... where ongoing programs initiated under existing legislation and regulations will continue, even as new plans are developed. In these cases, "no action" is "no change" from the current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed.

Consequently, for purposes of the Master WCM update process, the NAA reflects current reservoir operations as they have evolved over time in response to laws, regulations, policy, and new technical information. Basing the NAA for the ACF Basin on a pre-NEPA 1958 WCM or a predam condition to assess the effects of alternative WCM update plans would neither accurately reflect current baseline operations nor be consistent with "no action" as defined in the referenced CEQ memorandum

any consideration of the level of flow needed to sustain the ecosystem. A competent, ethical and responsible analysis of the impacts of water flow in this system requires a thorough and comprehensive assessment of impacts in these areas. Any alternative action that is adopted should be shown to avoid, minimize, or mitigate the inevitable negative impacts of reduced flow in the Apalachicola River, in order to assure that the ecosystem functions and natural services provided within the Apalachicola Basin are sustained. Because of its constrained Scope, the DEIS fails to consider these impacts. This failure, in turn, serves to favor the needs of part of the basin over others, in a manner that we consider unethical. Further, as discussed in Section 4, this favoritism will be seen to be a failure of Environmental Justice, in a way that the DEIS fails to address.

Sadly, this is not the first time we have brought these issues before the Corps in a formal proceeding. ***Apalachicola Riverkeeper*** sent comments in November, 2013 to Colonel Steve Roemhildt ***(Attachment 1a)*** in response to the most recent change to the Scope of Work. Those comments will not be repeated here, but all remain relevant because they were not addressed in the DEIS. From our view, operations have been altered since 1958 with a consistent trend to maximize the reservoirs' benefits for upstream uses. Policy and operations have consistently targeted the minimum releases possible from those reservoirs to the Apalachicola River to meet narrowly-focused objectives that utterly fail to include any substantive evaluation of the ecosystem functions provided by the Apalachicola ecosystem, or the ecosystem services thereby furnished to people who live and work in communities in the basin.

B

We share the criticisms offered by The US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) in its Draft Fish and Wildlife Conservation Report (DFWCAR) ***(Attachment 1b);*** as summarized on the first page of that attachment, the DEIS does not accurately represent or give equal consideration to the Fish and Wildlife Conservation authorized purpose. We concur with the similar criticisms from the Independent External Peer Reviewers (IEPR) ***(Attachment 1c)***; the comments from IEPR reinforce the positions of the USFWS and NOAA and add to their criticisms, citing a lack of consistency and clarity that result in confusion and baseless conclusions of the DEIS. These are summarized in the attached Executive Summary (page iii –viii) of the IEPR report. Further, we are also co-signor of the comments provided to the Corps by the National Wildlife Federation**.**

Despite listing numerous authorizations, guidance and legislation that provide both authority and responsibility for all federal actions to protect and restore the ecological integrity of ecosystem functions (i.e., ***Attachment 1d*** – National Water Policy), the DEIS does not give adequate consideration to the Apalachicola ecosystem or the citizens' natural-resource-based economy and culture as part of the Fish and Wildlife Conservation authorized purpose. Further, the current document ignores the cumulative impacts of 60 years of manipulations by the Corps, and of present and future upstream water consumption. In mistaking current conditions for 'baseline' conditions, the DEIS creates a flawed and false basis for the analysis of cumulative impacts between the "No Action Alternative" (NAA) and "Preferred Action Alternation" (PAA). To claim that proposed conditions are only slightly worse than current conditions is equivocating over fully-documented impacts, which show the Apalachicola ecosystem to be significantly degraded by current policies and practices.

This DEIS must be redone to consider a more healthy condition of the Apalachicola River, Floodplain and Bay ecosystem as a whole for the historical baseline comparison to recent (NAA) and proposed (PAA) evaluations of the estuarine and floodplain conditions.

2. Overall ecological system function is not assessed, addressed or considered by the limited focus of the DEIS

2a. Ecosystem dependence upon level and timing of flows

The ACF System and particularly the Apalachicola River, Floodplain and Bay and the eastern Gulf of Mexico are an inextricably-linked ecosystem in which river flow is the primary driver of its biological diversity and ecological and economic productivity. It is a unique and significant ecological resource hosting the highest biodiversity of any river system in North America and one of the most productive estuaries in the northern hemisphere. Economically, the fisheries supported by the Apalachicola system are valued in the billions of dollars. These values have been recognized for decades and provide a basis for exceptional efforts to understand, protect and maintain the system's ecological integrity, economic vitality, and natural resource benefits to the greatest extent. Climate change and extreme pressure from water use on river systems around the world are causing the loss of natural systems' productivity. Numerous examples are available which demonstrate how the proposed alternatives will result in eventual loss of the ecosystem services now provided by the Apalachicola system.

It is environmentally unacceptable and economically infeasible to ignore this system, where management can sustain its integrity if properly understood and appropriate action taken.

C

2b. Changes in flow

The DEIS does not describe or address changes in the flow regime due to the Corps management of the ACF system or to increased consumption. Without recognition of these basic needs to meet the Fish and Wildlife Conservation authorized purpose in the Apalachicola portion of the system, there is no opportunity for consideration of providing alternatives that would protect, restore or improve conditions. Analysis for the ecosystem should include: protection of the natural pattern of seasonal low, moderate and high flows; maintaining or restoring floodplain inundation; and distribution of flood waters to maintain the fish, wildlife, and botanical resources of the River, Floodplain and Bay.

2c. Impacts of changes in flow

The DEIS should recognize that change in the flow regime has caused declines in species abundance and reduced areal occupancy; many areas in the flood plain are no longer suitable habitat because of sustained dry conditions. There is potential for extirpation from the Region of Impact if additional change above that already experienced occurs. The DEIS accepts the current operations of the NAA as if they are adequate to sustain a healthy ecosystem in the Apalachicola. This is wholly false: the system is neither healthy nor being sustained. The PAA is considered only slightly (not significantly) worse than the NAA, despite the fact that drought conditions will be more frequent and more severe. The DEIS does not recognize that even small negative changes to previously-stressed systems can cause significant ecological upheaval.

The lack of understanding of the systems' dependence upon the level and timing of flows causes the cumulative impact analysis to erroneously conclude that current operations and the proposed alternatives will not have an appreciable or significant effect, and that no mitigation is required. This is simply not true.

C. Congress intended and authorized the ACF Basin to be a regulated system; it authorized the construction of multipurpose USACE reservoirs for the authorized purposes of flood risk management, navigation, hydropower, recreation, water quality, water supply, and fish and wildlife conservation. USACE makes continuous releases from the Buford, West Point, and Jim Woodruff projects for water quality control and to support aquatic conditions for fish and wildlife and endangered species in the basin. Attempts to achieve a natural flow regime or run of the river operations, as implied in the comment, would nullify the flood risk management and hydropower authorizations as intended by Congress. The cumulative impact assessment in the EIS (section 6.10) recognizes the impact of USACE reservoirs together with numerous other human-induced actions on the decline of aquatic species, habitat fragmentation, floodplain connectivity, and natural flow regime alterations. USACE modeled and analyzed the different alternatives and reviewed all available scientific data and information provided by commenters and stakeholders in determining the PAA and capturing its potential impacts

2d. The DEIS lacks a discussion of how flow sustains the River, Floodplain, and Bay and Eastern Gulf

Flows needed to sustain the most basic of the ecosystem functions must be considered to avoid a loss of floodplain connectivity; only when water flows (and therefore, water levels) are high is the floodplain fully connected to the river. This connection is essential, so that the inundating flows carry life-sustaining nutrients to the estuary and to the Bay. Further, the flow of nutrients continues some 250 miles southward in the eastern Gulf; this so-called Green River is crucial to the health and growth of many commercially-important species of finfish offshore. The timing and the areal coverage of the floodplain inundation is critical to the vegetation, fish and wildlife that make up the complex of plants, fish, birds, reptiles, crustaceans, amphibians and mammals (including humans) that use the floodplain for nourishment, growth, foraging, spawning, resting and protection. Under truly natural conditions, the hydrologic connectivity of the floodplain to the main river channel provides the mechanism of transport of water to the vital areas of the floodplain at the appropriate time and for sufficient duration to support the diverse assemblages of species that inhabit and use the floodplain. The importance of the floodplain inundation is well-documented in the literature and can be found in the documents included in the Apalachicola River and Bay Management Plan (***Attachment 3b***), ***Livingston 2008*** (***Attachment 4a***), and other reports and documents including but not limited to: ***Livingston 1983, Livingston 2015***; and the 3 USGS Reports - ***Light 1998, Light 2006, and Darst 2008***.

2e. Importance of Inundation

C

The USFWS Planning Aid Letters and the USGS documents (***Darst 2008, Light 2006, and Light 1998***) explain that the timing, duration, and depth of inundation of the floodplain are important to the vegetation of the floodplain for propagation and growth of the bottomland hardwood forest. Forest density, composition, tree size, age, mortality, and recruitment are all part of the forest ecosystem upon which the wildlife depend. As the floodplain becomes drier due to reduced duration and depth or offsets in the timing of flood flows, the forest loses density, mass, and canopy cover. Apalachicola Floodplain has experienced a loss of over 4 million swamp trees, primarily Tupelo, Cypress and Popash. The decrease in forest density and canopy will result in an increase in light on the forest floor, thereby encouraging a thicker growth of ground cover plants, which in turn will further reduce the success of forest replacement. If these changes continue, a resultant loss of leaf litter biomass, increase evaporation from the soil, decrease in soil organisms, and speeding up decomposition of the leaf liter. These changes and loss of biomass would result in a net loss of substrate for benthic organisms in the floodplain and ultimately downstream waters of the river, delta and estuary. (***Darst 2008, Light 2006, and Light 1998***)

2f. Importance of flow to the Bay

As flows move through the complex of sloughs and distributary creeks of the Floodplain and Delta, nutrients are accumulated and carried to the estuarine nursery areas of the Bay. This creates a low-salinity, high-nutrient condition conducive to growth and development of larval and juvenile stages of most (over 90%) of all commercially harvested species in the Gulf of Mexico. Apalachicola Bay has up until the very recent drought produced 90% of the oysters in Florida and over 10% of the national harvest from native oyster bars. Native oyster reefs are in global peril and over the last two centuries, 90% of native oyster reefs have become functionally extinct, as was reported in the journal *BioScience*

in 2011 (***Beck 2011***). That same report, before the BP oil spill, looked to the Gulf of Mexico as the last remaining region on the planet for sustainable harvest from native oyster reefs. We know that Apalachicola Bay's situation is even more rare and important now, given the subsequent damage. The nutrient-laden flows support and balance the food web and habitats within the estuary (***Attachment 4a, Livingston 1983, Livingston 2015***). Those same nutrient rich freshwaters move over 250 miles offshore and nourish the habitat and mature stages of the same recreational and commercially-harvested species as described in ***Attachments 5a, 5b, 5c, and 5d***) that NOAA has valued at over $5.8 Billion (***Attachments 6a and 6b***).

3. Impacts of Reduced River Flow and the need to consider and accomplish a more balanced alternative is missing in the DEIS

3a. Low Flow Impacts to Riverine Hydrology and Biology

Drought imposes highly-stressful conditions on ecosystems. To impose increased severity on the biological resources of an ecosystem during high-stress drought conditions ignores well-documented information related to conditions on Apalachicola River, Floodplain and Bay. These conditions are leading to degradation and collapse of the ecosystem. The three USGS Reports (***Darst 2008, Light 2006, and Light 1998***) and ***Attachments 3b, 3c, 3d and 3e*** provide an overview of the impacts to the Apalachicola River Floodplain due to reduced high, median, low, and drought flows. During the drought of 2006-2007 and 2011-2012 just such an increase in stress was put on the Apalachicola ecosystem by the Corps' operations with the ultimate result being degradation of water quality and loss of floodplain and fish habitat. The consequences were near-ecological-collapse of the estuary during and following both drought periods, with significant declines in every commercial fishery in the estuary. Since 2012, over three years since the 2012 drought, Apalachicola Bay is experiencing only a meager recovery from those stressful conditions. These impacts were documented in the ***Apalachicola Bay Oyster Situation Report.***

D

3b. The Apalachicola River Floodplain and Bay are not healthy and are under significant stress from a documented altered flow regime.

Flows during droughts are even more critical because of the compromised conditions existing across the ecosystem. Hydrographs in ***Attachment 1e***, based on the observed flow data in ***Attachment 2d***, show the differences between observed pre- and post-dam flows on the Apalachicola. These changes in flow are primarily due to: (a) Corps operations; (b) residential water consumption; (c) evaporation in the basin due to reservoirs; (d) municipal and industrial water supply; and (d) agricultural irrigation (as shown in ***Attachments 2a and 2b***). Altered timing and reduction of flow magnitude by the quantity shown in these attachments can be equivalent to a 40-50% reduction of flow below normal to the Apalachicola River, Floodplain and Bay during dry and drought periods. Reducing flows to the Apalachicola portion of the system that do not mimic natural flows commensurate with changes in rainfall, can cause the system to degrade or fail. A report by Steve Leitman (***Attachment 2c***) compares the relationship between rainfall and flow alterations in the Apalachicola, and explains that flows during earlier more-severe droughts have been higher than flows in more recent less-severe droughts in the Apalachicola. This can only be explained by increased water depletions from use, water regulation, and/or reservoir evaporation in the upstream basin. The DEIS does not include any information that supports lower flows from climate change.

Response to ACF187 – Apalachicola RiverKeeper

D. The authorized purposes of the federal ACF system do not include a specific directive to provide freshwater inflows to Apalachicola Bay to sustain the resources of the bay. However, water management measures suggested by stakeholders that would increase freshwater flows into Apalachicola Bay were considered, as discussed in section 4 of the final EIS. The PAA includes fish and wildlife conservation operations throughout the basin (e.g., the reservoir fish spawn operations, minimum flow provisions in the Apalachicola River, and fish passage at Jim Woodruff Lock and Dam). Section 5 of the EIS provides additional information on the PAA. The EIS considered and disclosed the expected impacts that the PAA could have on fish and wildlife resources in the Apalachicola River and Bay (or elsewhere in the system). The analysis presented in section 6 of the EIS indicates that the PAA would have a minimal effect on flow conditions in the Apalachicola River and into the bay compared to current reservoir operations under the NAA. Because flow and water quality changes in the Apalachicola River and Bay are not expected under the PAA, no anticipated incremental effect would be expected on fish or wildlife resources in the bay.

3c. Documented impacts of low flows

The document at ***Attachment 3f*** (*Presumptive Flows Standards*, by Brian Richter*)*, concludes that a river system experiencing a 10% reduction in the pre-development flow regime may maintain its ecological functions, while a 20% reduction of flow in the natural river flow regime is significant enough to result in significant loss of ecological functions and integrity. ***Attachment 4d*** also highlight the impacts to streams from reduced flow. The Corps' failure to compensate for the water uses in Georgia or to impose limitations on Georgia to allow the Corps to meet it authorized purpose for Fish and Wildlife Conservation is a defacto allocation of water away from Florida.

An appropriate preferred alternative would consider the flows needed to sustain a healthy river and floodplain connection and mimic the frequency, timing and duration of the natural flow regime and floodplain inundation conditions during droughts.

3d. Low Flow Impacts to Estuarine Ecology

During normal low flows, less water is carried through the floodplain and results in an overall reduction of nutrients, lower Dissolved Oxygen (DO) and increase salinity in the Bay. During typical low water months, and particularly during droughts, higher salinities increase the naturally-occurring diseases and predators that prey on oyster beds in the Bay, and which decrease DO near the bay floor. As lower-than-normal drought flows are released by the Corps, water quality impacts cause even higher salinities for prolonged periods, lower nutrients and DO, increased disease and predation on oysters, which combined, result in an overall loss of oyster, fish, shrimp, crab, and wildlife in the estuary. ***Attachments 4a, 4b, 4c, 4e and 4g*** explain and demonstrate the importance of river flows to the water quality and estuarine conditions of Apalachicola Bay and document water quality impacts during drought conditions. Salinity data for Apalachicola Bay was received from the Apalachicola National Estuarine Research Reserve is included in ***Attachment 4f*** and serves as the basis for demonstrating much of the discussion in these comments and emphasized in ***Attachments 4a - 4d***.

D

3e. Related Marine Ecology of the Gulf of Mexico

Because the ACF System provides 35% of the freshwater flow to the Eastern Gulf (***Edmiston 2008***), it is logical to correlate the freshwater flow and related nutrients' contribution to the health and productivity of the offshore fisheries and habitat in this region of the Gulf. ***Attachments 5a, 5b, 5c, 5d, and 4c*** provide an explanation of the importance of the freshwater and nutrient plume from the ACF System to the eastern Gulf. Once the connection with freshwater flows from the ACF System to the health of the Eastern Gulf fisheries is understood, it is important to recognize the economic importance of those flows to West Florida, and ultimately the SE United States. Those values have been evaluated by NOAA in ***Attachment 6a***. A further analysis of the NOAA estimated value of the fisheries of Apalachicola Bay and the Gulf (***Attachment 6b***) shows the value to West Florida to be over $5.8 billion. The linkages of the same freshwater flows which nourish Apalachicola Floodplain, Delta, and Bay with the productivity of Gulf fisheries provide an obvious correlation between appropriate freshwater flows and a healthy Gulf fishery and Essential Fish Habitat (EFH). This further emphasizes the importance of consideration for the flows needed to sustain a healthy River, Floodplain and Bay as a critical component of a complete DEIS.

Flows that sustain a healthy estuarine environment should also provide the Gulf marine environment with adequate nutrient output to sustain offshore fisheries, including Essential Fish Habitat.

4. The DEIS should consider Conjunctive Uses of water releases

Water Releases with Conjunctive Uses are those that meet multiple purposes and that also benefit the ecology of the Apalachicola River, Floodplain and Bay. Such releases would improve flows for the river, floodplain and bay and would also benefit hydropower, recreation and navigation in the basin below Lake Lanier. Properly managed, conjunctive-use releases would have little or no impacts to the capacity or ability for north Georgia metro water supply demands to be met. Such releases are not critically evaluated in the DEIS.

For example: target releases for navigation established in the DEIS alternatives did not consider the potential for benefits to the ecology of the Apalachicola River, Floodplain and Bay. Such releases were explained in the Sustainable Water Management Plan (SWMP) (***Attachment 3a***) provided by the ACF Stakeholders and the USFWS in its Planning Aid Letters. The SWMP provides detailed information that demonstrates that the release of relatively minor pulses during dry periods (to more closely mimic natural flow paradigm) can lower salinity in Apalachicola Bay to the extent that it stress on the oyster population could be moderated.

E

In PART A of these comments, we have suggested pulse flows of 12,000 cfs as an example of an alternative scenario the Corps could consider to achieve conjunctive uses. The basis for that selected flow is the benefits that would be achieved by such a flow, including but not limited to: flushing flows in the larger slough systems of the floodplain improving water quality and fish habitat, a pulse of nutrients would be supplied to the Delta and estuary, an increase in DO and an estimated 3- 4 ppt decrease in salinity of the Bay at Cat Point for a period of time, a 5' depth for a navigation channel without dredging, and increase water availability for hydropower, low-consumption/high-return rate industry, recreation, and fish and wildlife conservation between Buford Dam and Jim Woodruff Dam.

The Corps is unique in its failure to fully analyze such multipurpose flows. In contrast, USFWS is considering similar adjustments in Corps flow regulation; these adjustments would benefit oyster and gulf sturgeon habitat and spawning. The Florida Fish and Wildlife Conservation Commission (FWCC) demonstrated in its summary report (***Attachment 3c***) how increasing river levels above 10,000 cfs maintains habitat and water quality in the Apalachicola Floodplain. Flows that are sufficient to maintain water quality in the floodplain can also benefit navigation (without inducing the impacts associated with dredging), recreation, estuarine habitat and water quality, and hydropower.

Conjunctive uses of water that improve ecological conditions in the basin should be included in the evaluation of alternatives to provide a more balanced and equitable range of benefits to all users in the basin.

5. The DEIS does not provide an Environmentally Preferable alternative using the best available data and science

E. Conjunctive use releases from the federal multiple-purpose reservoir occur by default. The multipurpose USACE reservoirs were authorized for flood control, navigation, hydropower, recreation, water quality, water supply, and fish and wildlife conservation. Releases from the reservoirs are timed to provide electricity during peak demand. The hydropower releases have the conjunctive use of meeting several needs such as downstream water demands, supporting the balanced operation by raising downstream reservoirs, meeting water quality minimum flow requirements, evacuation of water from flood storage, supporting Endangered Species Act flow requirements below Jim Woodruff Lock and Dam, and supporting the 7-ft channel during the navigation season. Conjunctive or multipurpose releases are imbedded within the water management operations of the ACF Basin. There are secondary benefits to every release made from the reservoir and inherently incorporated into the impact analysis. USACE considered the benefits of multipurpose flows. For example, flood plain connectivity in the Apalachicola River basin was considered in the formulation of the navigation season. USACE considered releases that met multiple project purposes at the same time and captured the impacts, both beneficial and adverse, that occur from meeting the project purposes. USACE also addressed and considered the pulse flow comment submitted by the ACF stakeholders in the final EIS.

5a. The estuary is currently neither healthy nor sustainable.

In contrast to the DEIS statements that Apalachicola Bay is a relatively healthy estuarine ecosystem, ***Attachments 7a and 7b*** document impacts to the estuary during the droughts of 2007 and 2012. These were periods during which drought flows were lower than ever before recorded and well below what a natural flow regime would have provided during similar drought conditions. Leitman provides a comparison of drought flows and their relationship in ***Attachment 2c***. The 2nd slide in ***Attachment 3e*** depicts the flow during 2007 relative to the average flow from 1923-2009. The flat-line low flow released during 2007 was unprecedented and was followed by a similar record flat-lined low flow for a duration that lasted for an even greater time period during 2011-2012. Further documentation of the decline of Apalachicola Bay immediately after the prolonged periods of flat lined extreme drought flows are also documented in the April 2013 ***Apalachicola Bay Oyster Situation Report*** from the Oyster Recovery Task Force. F

An appropriate preferred alternative would consider the flows needed to sustain as healthy an estuarine condition in Apalachicola Bay during droughts as possible.

5b. Climate change, rainfall, and runoff

The discussions of climate change and rainfall/runoff relationships provided in the DEIS are not well-founded and do not support or justify the reductions in flow that have been experienced or that have been recommended. Recommendations on the flow needs for riverine and estuarine ecosystems that will maintain ecological functions are found throughout the literature, and can be found specifically in documents outlining the presumptive standards and calculable quantities for instream flow needs developed by Brian Richter et al. (***Attachment 3f***), recommended for use by The Instream Flow Council (***Annear 2004***), and outlined in the USFWS Planning Aid Letters provided to the Corps. The need to mimic the natural flow regime, and to limit alteration thereto, is clearly described in these and other literature. The Corps (and its contractors) with the responsibility to meet the Fish and Wildlife Conservation authorized purpose should be well-versed in the determination of the flow needs for systems such as the Apalachicola or should defer to experts in the instream flow field. Documentation of flow alteration due to climate change should be included as a high priority for research for the ACF Basin. G

A comprehensive study of instream flow needs should be undertaken to establish the natural flow regime requirements for Apalachicola River, Floodplain, and Bay before any re-allocation of water is undertaken.

5c. The Unimpaired Flow Database (UIF) is not scientifically valid.

The Unimpaired Flow Database (UIF) and Basin Inflow calculation were not updated. Because the original calculations were based upon insufficient and/or invalid data, evaluations based on these data are necessarily inaccurate. Modeling investigations should explore why the UIF flows data being used by the Corps in the lower Flint River Basin are very close to the current USGS observed flows. Given the known volume of depletions in that region, these figures **MUST** differ substantially. The similarity of these two flow data sets clearly show that the large depletions of flow from municipal and industrial use, agricultural irrigation and evaporation in the Flint River Basin are not accurately represented in the H

Response to ACF187 – Apalachicola RiverKeeper

F. The purposes of the Master WCM update and WSSA (appendix B in the EIS) are to determine how the federal projects in the basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to assess the extent to which reservoir storage at Lake Lanier can be made available to meet current and future water supply needs for Metro Atlanta. In the WCM update process, balancing project operations to fulfill all authorized purposes, while evaluating impacts to the environment was a top priority. The analysis in the EIS demonstrates that the PAA would result in little to no change in flow and water quality conditions in the Apalachicola River and Bay and, consequently, that there would be little to no effect on biological and other resources in the river and bay. The authorized purposes of the federal ACF system do not include a specific directive to provide freshwater inflows to Apalachicola Bay to sustain the resources of the bay. Additionally, the PAA includes measures necessary to address the adverse effects of project operations on federally listed endangered or threatened species downstream of Jim Woodruff Lock and Dam. USACE consulted on the PAA and the results are presented in appendix J of the final EIS. In the biological opinion the USFWS concluded that effects to estuarine invertebrate production are insignificant because the PAA provides slightly beneficial effects from increasing the number of freshwater pulses and increasing the number of days greater than or equal to 16,200 cfs in the winter. USFWS also anticipate only minor changes in salinity regimes and estuarine habitat due to the WCM.

G. The PAA has been evaluated for adaptation to climate change in compliance with current USACE regulations. Under section 7 of the Endangered Species Act, USACE consulted with the USFWS regarding the effects of existing operations at Jim Woodruff Lock and Dam and releases to the Apalachicola River on federally listed threatened and endangered species and federally designated critical habitat. Those consultations developed minimum flow provisions for Jim Woodruff Lock and Dam as part of the overall plan established to avoid and minimize impacts on the listed species. Marine life in Apalachicola Bay could incidentally benefit from the minimum releases, but USACE is not authorized to and does not make releases from its reservoirs specifically in support of Apalachicola Bay. The recommended comprehensive study is outside the scope of the Master WCM update.

H. According to the Unimpaired Flow Report in Volume I: Surface Water Availability of USACE's 1997 *ACT/ACF Comprehensive Water Resources Study*, as with all data sets, development of this data set involved various assumptions and approximations. The analyst must consider those items and judge their effect on any analysis employing the unimpaired flows. Use of the data should be carefully evaluated based on the methods, assumptions, and data irregularities described in the report. Missing data fill-in, correlations, net evaporation calculations, channel routings, withdrawals and returns, leakages, and flow smoothing are some of the many factors considered before using these data. A comparison of the observed and unimpaired flow of the lower Flint River U.S. Geological Survey gages at Albany, Newton, and Bainbridge indicates that the August 2011 unimpaired flow of 590 cfs, 680 cfs, and 1,160 cfs, respectively, is greater than observed. That would indicate that flows have been adjusted to account for consumptive water use during the irrigation period. The unimpaired flow data set has been updated for the period 1939-2011, and documentation has been included in appendix O of the final EIS.

During section 7 consultation with USFWS, USACE evaluated a revision to basin inflow that would account for water use consumption. A near-real-time basinwide water use reporting scheme is required to implement. Presently, USACE receives the actual water use data upon request. The data typically lag 1–2 years behind the current year. Until the states implement a real-time water use reporting requirement associated with withdrawal and discharge permits, USACE will continue using the current basin inflow computation method.

Response to ACF187 – Apalachicola RiverKeeper

UIF data set. This inaccuracy completely discredits the evaluations of alternatives and most modeling exercises undertaken by the Corps, by making it appear that less water would have been flowing in the Apalachicola portion of the system in pre-developed times represented by the UIF data set. These inaccuracies have led the Corps to consider the flows currently being released during droughts to the Apalachicola are the same or close to natural flows during droughts. This is false. Some of the problems associated with the UIF were outlined in the Draft UIF Report by GWRI/GT, 2012. This document was released to the Corps for review.

The methods used by the Corps to calculate basin inflow provide for reducing flows more often and earlier as water consumption increases, placing the burden of the drought operations on the Apalachicola portion of the system, while providing water supply users with no incentive to conserve water use. The flaw in this method of deciding to reduce flows downstream of Jim Woodruff is discussed in more detail in ***Attachment 2c and 2e***. A more balanced approach to curtailing water use and at the same time reducing downstream flows for implementing drought operations will improve flow conditions in the Apalachicola.

The Corps' assumptions and results are inconsistent with the impacts being realized in the floodplain and estuary; and, therefore underestimate the cumulative impacts being experienced by the ecosystem and economy due to the Corps' operations.

5d. Conclusions in the DEIS regarding Anthropogenic Impacts to Apalachicola Bay are not supported

The DEIS surmises that Apalachicola Bay has been subjected to numerous anthropogenic impacts including, but not limited to, sea level rise, climate change and harvesting impacts. The implication is that these impacts are the cause for changes to conditions in the Bay. The runoff/rainfall data and analysis provided in the DEIS appears to be intended to show changes to this relationship from anthropogenic and other changes, but is inadequate to be evaluated or accepted. While all of these factors and others may have an effect, the degree of the impacts being experienced in the Bay from these and other causes is not supported by available data, nor is it included in the DEIS. Tellingly, the predominant cause for the recent fisheries collapse has been documented as a lack of freshwater flow (FWCC Disaster Declaration report ***Attachment 7a and 7b***) and the referenced ***Apalachicola Bay Oyster Situation Report 2013***).

I

I. USACE continues to maintain that numerous factors contribute to the variability of oyster and seafood harvests. Potential impacts of the PAA to Apalachicola Bay salinity were modeled by a University of Florida scientist under contract to USFWS. Freshwater inflows from the Apalachicola River were found to have no significant impact on salinity levels. In addition, virtually no differences were noted in river flows between the PAA and the NAA, as documented in the EIS.

Sea level rise is noted in the DEIS to be 0.05 inches/year (1.27mm/year) in the climate change section. This section concludes that the Corps' operations, as planned, will be adequate to handle the forecasted climate changes. At the same time, the DEIS insinuates that the Bay condition is a lost cause due to the suspected increase in sea level rise and/or other anthropogenic impacts. These conclusions conflict and are not supported. According to NOAA, Apalachicola Bay has been experiencing a 1.82 mm/year rise in sea level in the more recent past, which is the lowest rise in sea level recorded among all locations monitored by NOAA on the Gulf and Southeastern Atlantic coasts. No effects have been documented in Apalachicola Bay from either the rise in sea level or increased carbon. Climate-change-induced reductions in flow that reach the level of decline being realized in the Apalachicola Basin have not been demonstrated. There is a need to accurately assess rather than assume certain conditions exist, have resulted in an impact, or project impacts will occur. Potential impacts to Bay salinity could be evaluated with an appropriate hydrodynamic model such as that developed by Aris Georgakakos.

Impacts due to anthropogenic activities can be considered valid after a reasonable assessment of the conditions have been thoroughly considered. Management should continue to assess the climate conditions and rainfall/runoff relationship that exist throughout the River, Floodplain and Bay in order to accurately evaluate impacts and manage for change.

6. The Corps creates an environmental injustice by not recognizing the cultural aspects of the Oystermen community

According to EPA, *"Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work."* (http://www3.epa.gov/environmentaljustice/)

In the real world, we understand Environmental Justice to mean that the communities of least resistance are not unduly burdened by our environmental choices, which they are largely helpless to alter. In the ACF system, the community most burdened by the current Corps operations, and which will be further burdened by the proposed revisions, are the poor and powerless fisheries harvesters that work the Bay, the Estuary, and the Floodplain. Their livelihoods, their culture, and their social relationships, arrangements, and institutions depend on the ready availability of healthy organisms and other natural products to harvest. Their very economic and cultural existence is threatened by the proposed alteration. As noted by scholar John Moran in his comments regarding Section 6.5.8 of the DEIS:

> *The threat of collapse of the oyster industry is an environmental justice issue in Eastpoint, qualifying under low-income community. The oystermen of Eastpoint and Apalachicola are widely recognized in Florida by journalists, travel writers, authors, and social science researchers as a distinct cultural group. This increasingly low-income, often multi-generational population of resource users also relies on subsistence to supplement their diets. The oystermen are facing suicide, homelessness, drug addiction, and other social ills related to resource disaster in the Apalachicola Bay. Some of the oystermen have indigenous heritage. Other oystermen are illiterate and have limited schooling. Professional oral historians, such as Amy Evans for the Southern Foodways Alliance at the University of Mississippi, have documented this unique cultural heritage, including the local invention and manufacture of tongs, the local ecological knowledge of the community, and the transmission of this knowledge across multiple generations, leading back to the first wave of settlers in the community. Based on my training in environmental justice literature at Stanford University's Department of Anthropology, I testify that the oystermen population in Eastpoint is a low-income community whose economic and social health is totally inseparable from the Apalachicola Bay. The need of their community for a functioning estuary must be considered and assessed through an environmental justice framework using quantitative and qualitative data at the municipal, rather than regional, level.*

This lack of Environmental Justice receives no substantive consideration in the DEIS; this omission is in clear contradiction to EPA policy, is completely unacceptable and must be rectified.

J

Response to ACF187 – Apalachicola RiverKeeper

J. Pertinent information from this comment has been incorporated into the environmental justice discussion in the EIS (in sections 2.6.10 and 6.4.8). The EIS indicates that implementing the PAA would have no effect on the Apalachicola Bay ecosystem and commercial fishing/oyster harvesting activities as compared to the NAA. Accordingly, the PAA would not be expected to have an incremental adverse effect on the community.

7. Summary and conclusion

The members, board, and staff of ***Apalachicola Riverkeeper*** believe that the Corps has an ethical and legal responsibility to include a full assessment of the freshwater flow needs of the Apalachicola River, Bay, Estuary, and Floodplain in the update of the ACF WCM. This is especially crucial and critical given that this is the first revision since 1958, and likely the last for many years to come. Conditions have changed substantially in the last 56 years, and will continue to change. This may be the Corps' last meaningful chance to get it right, and to protect the future of our unique, and uniquely-valuable resource. Once lost, it is unlikely ever to be recovered.

We ask that you consider the following summary (repeated from our earlier comments) in your decisions:

K

The Apalachicola River, Floodplain, and Bay System is a national treasure and one of the most productive river systems in the North America. Its significance cannot be overstated. It has been designated as an International Biosphere Reserve by the United Nations, as a National Estuarine Research Reserve by the United States, and as an Outstanding Florida Water by the State of Florida. The river harbors the most diverse assemblage of freshwater fish in Florida, the largest number of species of freshwater snails and mussels, and the largest number of endemic species in western Florida. The river basin is home to some of the highest densities of reptile and amphibian species on the continent and the river's floodplain boasts one of the most diverse floodplain forests in North America.

The Apalachicola River's waters and floodplain are also the biological factory that fuels the Apalachicola Bay - one of the most productive estuaries in the Northern Hemisphere. The Apalachicola Bay is home to one of the largest and most productive oyster harvesting areas in the Gulf of Mexico, one of the principal nurseries for Gulf shrimp and blue crabs, and major commercial fishing operations. Apalachicola Bay provides nearly 90 percent of Florida's oyster harvest and over ***10 percent of the nation's oyster harvest****. The river and bay provide thousands of commercial fishing, recreational fishing, and ecotourism jobs. These jobs form the cornerstone of the economy for the six Florida riparian counties along the Apalachicola River.*

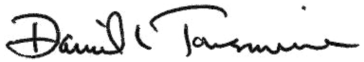
Apalachicola Riverkeeper has repeatedly urged the Corps to develop a water management regime for the ACF system that will protect and recover the ecological health of the Apalachicola River and Bay and the entire ACF system. Fundamental to such a regime is the establishment and maintenance of the ecological in-stream flows needed to protect and restore the chemical, physical, and biological integrity of the ACF Rivers and the species that depend on them. **We respectfully urge you to institute the assessments and considerations outlined above to ensure that this happens. Without the protection of these flows, the Florida citizens' livelihoods, cultural heritage and communities with economies that depend on the functioning of these natural systems will be lost.**

*Apalachicola Riverkeeper is also submitting a separate set of additional comments that are signed jointly by Apalachicola Riverkeeper, National Wildlife Federation, Florida Wildlife Federation, and 1000 Friends of Florida. These group comments are in addition to the comments provided in this document.

K. The purposes of the Master WCM update and WSSA (appendix B in the EIS) are to determine how the federal projects in the basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to assess the extent to which reservoir storage at Lake Lanier can be made available to meet current and future water supply needs for Metro Atlanta. In the WCM update process, balancing project operations to fulfill all authorized purposes, while evaluating impacts to the environment was a top priority. The analysis in the EIS demonstrates that the PAA would result in little to no change in flow and water quality conditions in the Apalachicola River and Bay and, consequently, that there would be little to no effect on biological and other resources in the river and bay. The authorized purposes of the federal ACF system do not include a specific directive to provide freshwater inflows to Apalachicola Bay to sustain the resources of the bay. Additionally, the PAA includes measures necessary to address the adverse effects of project operations on federally listed endangered or threatened species downstream of Jim Woodruff Lock and Dam. USACE addressed and considered all data and information provided by the Apalachicola Riverkeeper and other commenters. USACE consulted on the PAA and the results are presented in appendix J of the final EIS. In the biological opinion the USFWS concluded that effects to estuarine invertebrate production are insignificant because the PAA provides slightly beneficial effects from increasing the number of freshwater pulses and increasing the number of days greater than or equal to 16,200 cfs in the winter. USFWS also anticipate only minor changes in salinity regimes and estuarine habitat due to the WCM.

Thank you for the opportunity to provide comments. We look forward to working with the Corps to accomplish a WCM that we can all live with.

Sincerely,



Dan Tonsmeire
Riverkeeper

Cc:
The Honorable Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works)
Lieutenant General Thomas P. Bostick, USACE Commander General and Chief of Engineers
Major General Ed Jackson, USACE Deputy Commanding General for Civil Works and Emergency Operations
Brigadier General David Turner, USACE Commander, South Atlantic Division
Office of General Counsel, USACE
The Honorable Christy Goldfuss, Chair, President's Council on Environmental Quality
The Honorable Gina McCarthy, Administrator, U.S. Environmental Protection Agency
The Honorable Dr. Kathryn Sullivan, Secretary, U.S. National Oceanic and Atmospheric Administration (NOAA)
The Honorable U.S. Senator Bill Nelson - Florida
The Honorable U.S. Senator Marco Rubio – Florida
The Honorable U.S. Representative Gwen Graham – Florida District 2
The Honorable Governor Rick Scott - Florida
The Honerable Bill Montford, Florida State Senator
The Honorable Brad Drake, Florida State Representative
The Honorable Halsey Beshears, Florida State Representative
Jon Steverson, Secretary, Florida Department of Environmental Protection
Nick Wiley, Director, Florida Fish and Wildlife Conservation Commission

Reference List

Ager, L. C., Mesing, C. L., Land, R. S., Hill, M. J., Spelman, M., Rousseau, R., & Stone, K. (1986). *Five year completion report (1981-1986): Fisheries ecology and dredging impacts on the Apalachicola River system.* Prepared for the State of Florida Game and Fresh Water Fish Commission.

Annear, T., Chisholm, I., Beecher, H., Locke, A., Aarrestad, P., Coomer, C., Estes, C., Hunt, J., Jacobson, R., Jobsis, G., Kauffman, J., Marshall, J., Mayes, K., Smith, G., Wentworth, R., & Stalnaker, C. (2004). *Instream flows for riverine resource stewardship, revised edition.* Instream Flow Council, Cheyenne, WY.

Edmiston, H. L. (Ed.). (2008). *A river meets the bay: a characterization of the Apalachicola River and Bay system.* Apalachicola, FL: Apalachicola National Estuarine Research Reserve.

Edmiston, H. L. & Tuck, H. A. (1987). *Resource inventory of the Apalachicola River and Bay drainage basin*. Apalachicola, FL: Office of Environmental Services, Florida Game and Fresh Water Fish Commission.

Leitman, H., Sohm, J. & Franklin, M. (1984). *Wetland hydrology and tree distribution of the Apalachicola River flood plain*. (U.S. Geological Survey Water Supply Paper 2196). Washington, DC: U.S. Government Printing Office.

Livingston, R. J. (2015). *Climate change and coastal ecosystems*. Boca Raton, FL: CRC Press.

Livingston, R. J. (1983). *Resource atlas of the Apalachicola estuary*. (Florida Sea Grant College Program, Sea Grant Project No. T/P-1, Grant No. NA80AA-D-00038, Report 55). Gainesville, FL: Florida Sea Grant College Program.

Livingston, R.J., Leitman, S., Woodsum, G., Galperin, B., Homann, P., Christensen, J. D., & Monaco, M. E. (2003). *Relationships of river flow and productivity of the Apalachicola River-Bay system.* Tallahassee, FL: Florida State University.

Locke, A., Stalnaker, C., Zellmer, S., Williams, K., Beecher, H., Richards, T., Robertson, C., Wald, A., Paul, A., & Annear, T. (2008). *Integrated approaches to riverine resource stewardship: case studies, science, law, people, and policy.* Instream Flow Council, Cheyenne, WY.

Shields, J. & Pierce, B. D. (1997). *Comprehensive shellfish harvesting area survey of Apalachicola Bay, Franklin County, Florida*. Tallahassee, FL: Florida Department of Environmental Protection.

U. S. Department of Commerce's National Oceanic and Atmospheric Administration. (2013). *Apalachicola Bay Oyster Situation Report*. Grant No. NA10-OAR4170079. Gainesville, FL: Florida Sea Grant College Program.

Beck, Michael W., Robert D. Brumbaugh, Laura Airoldi, Alvar Carranza, Loren D. Coen, Christine Crawford, Omar Defeo et al. "Oyster reefs at risk and recommendations for conservation, restoration, and management." *Bioscience* 61, no. 2 (2011): 107-116.

Darst, M.R., Light, H.M., 2008, Drier Forest Composition Associated with Hydrologic Change in the Apalachicola River Floodplain, Florida: U.S. Geological Survey Scientific Investigations Report 2008-5062, 81 p., plus 12 apps. Found at http://pubs.usgs.gov/sir/2008/5062/

Light, Helen M., 1998, Aquatic Habitats in relation to river flow in the Apalachicola River Floodplain, Florida / by Helen M. Light, Melanie R. Darst, and J.W. Grubbs. Found at http://fl.water.usgs.gov/PDF_files/pp1594_light.pdf

Helen M. Light[1], Kirk R. Vincent[2], Melanie R. Darst[1], and Franklin D. Price[3] , 2006, Water-Level Decline in the Apalachicola River, Florida, from 1954 to 2004, and Effects on Floodplain Habitats. Found at http://pubs.usgs.gov/sir/2006/5173/

Apalachicola Bay Oyster Situation Report, 2013. Found at: http://www.flseagrant.org/wp-content/uploads/tp200_apalachicola_oyster_situation_report.pdf

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

U.S. Army Corps of Engineers, Mobile District
P.O. Box 2288
Mobile, Alabama 36628–0001

FEB 01 2016

Attention: Colonel Jon J. Chytka

Re: EPA Comments on the Draft Environmental Impact Statement(DEIS) for the Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin Water Control Manual; Alabama, Florida and Georgia. CEQ #:20150278; ERP #: COE-E39091-00

Dear Colonel Chytka:

Pursuant to Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) reviewed the Draft Environmental Impact Statement (DEIS) for the Update of the Water Control Manual (WCM) for the Apalachicola-Chattahoochee-Flint (ACF) River Basin. The EPA previously provided Public Notice and Notice of Intent comments on December 8, 2008, and scoping comments on November 25, 2012. We also participated in a scoping meetings as well as public meetings held on October 22, 2008, and March 25, 2013, respectively.

There are five reservoir projects operated and managed by the USACE in the ACF Basin – Buford Dam and Lake Lanier; West Point Dam and Lake; Walter F. George Lock, Dam, and Lake; George W. Andrews Lock, Dam, and Lake; Jim Woodruff Lock and Dam; and Lake Seminole; and an additional nine reservoirs that are privately owned. The authorized purposes of the federal reservoirs include flood risk management, hydropower, navigation, water supply, water quality, fish and wildlife conservation, and recreation.

According to the DEIS, the purpose of the WCM is to determine how federal projects in the ACF Basin should operate based on their authorized purposes and applicable laws. The operations at each of the federal reservoirs managed by the U.S. Army Corps of Engineers (USACE) are described in a master WCM, which includes WCMs for the operation of the ACF Basin and for the individual USACE projects within that system. In order to implement the proposed operations, the water control plans and manuals for the ACF River Basin need to be updated.

The EPA appreciates the efforts the USACE made to evaluate the impacts of the proposed action in the Basin. However, as discussed below and in the detailed comments (See enclosure), there are aspects of the evaluation that could benefit from further analysis and collaborative review. Given the uncertainty associated with how various metrics were used to develop the alternatives analysis, newly developed information on reduced population growth and consumptive use in the

A

Response to ACF188 – EPA

A. Updating WCMs for projects is an inherent USACE function. It is important to distinguish that the Savannah River basin comprehensive study, Savannah Harbor expansion project, and Everglades restoration project were feasibility studies. The Master WCM update is not a study and is only a change to operation of existing constructed projects. During the past 26 years USACE has attempted to update its WCMs for the ACF Basin. During that time, USACE has participated in interagency working groups, comprehensive studies, interstate compacts, settlement discussions, meetings between state governors, litigation, and negotiations led by the U.S. Secretary of the Interior. EPA and USFWS were involved in several of those cooperative efforts. USACE has addressed EPA's comments as well as the comments of other agencies and stakeholders in its efforts to update the WCMs, but does not think another attempt at an interagency working group is needed or that it would improve the current process. USACE may consider interagency working groups on future studies.

upper basin, and the unrefined analysis from the water quality modeling tool, the EPA supports the formation of an Interagency Workgroup (IWG) to fully assess the potential water quality and other impacts from the changes in reservoir operations proposed in the DEIS. The EPA notes that other federal agencies have made similar requests, and we would fully support this effort. In addition to reviewing the analysis of the alternatives, the EPA anticipates that the IWG would help to develop a Basin-wide monitoring and adaptive management plan similar to the Savannah River Basin Comprehensive Study. The study is being performed as a cooperative effort between the USACE, the EPA, the Georgia Department of Natural Resources, the South Carolina Department of Natural Resources, and The Nature Conservancy. Additionally, the EPA has had success working with the USACE on other IWGs (i.e., Savannah Harbor Expansion Project and Everglades Restoration) to resolve project uncertainties and develop adaptive management and monitoring strategies. The EPA would expect similar success if the USACE Mobile District fully engaged federal and state partners on the ACF WCM.

The DEIS evaluates a no action alternative (NAA) and several action alternatives. Alternative 7H was identified as the USACE's preferred alternative. The preferred alternative includes the proposed Glades Reservoir project. Based on our review, the EPA notes that the alternatives will have to be modified to reflect the new population growth and water demand numbers generated in August, 2015. We are also concerned with the limited range of alternatives examined in the DEIS and the methodology that was used to select the final alternatives. The EPA believes that there are other alternatives not considered in the DEIS that will result in fewer environmental impacts. B

The EPA is also concerned that the DEIS does not fully consider the affected environment including impacts to water quality, recreation and threatened and endangered species when selecting the preferred alternative. We note that other project purposes such as navigation and water supply are given higher priority when screening the alternatives. We recommend that there should be equal consideration given to all of the project purposes identified in the DEIS when drafting the Final EIS (FEIS).

The EPA continues to be concerned about the potential for significant environmental and economic impacts resulting from the preferred alternative. The DEIS acknowledges that implementing the proposed operational decisions will have water quality impacts. Changes to the ambient water quality of the ACF Basin from implementing the preferred alternative may necessitate corrective actions by the States and other stakeholders including, additional water quality monitoring, developing or revising total maximum daily loads (TMDLs) for various pollutants, implementing revised TMDLs, modifying National Pollutant Discharge and Elimination System (NPDES) permit limits for point sources as well as funding projects to mitigate impacts from nonpoint sources within the ACF Basin. In summary, the EPA recommends that the USACE continue to revise the WCM update to ensure that all project purposes are weighted equally. The USACE is responsible for ensuring that WCM operations do not cause State water quality standards to be exceeded, including maintaining downstream uses and adequate flows to maintain the physical integrity of the habitat, consistent with the authorized purposes of the projects. Implementing the operational changes associated with the preferred alternative are likely to result in additional localized stream and wetland impacts that are not reflected in the DEIS. C

Response to ACF188 – EPA

B. The revised population growth and water demand numbers are included in the final EIS. Unfortunately, the numbers were not available before publication of the draft EIS. USACE reviewed the scoping comments and created an alternatives array for consideration. Water quality and recreation were given equal consideration with other authorized purposes in ranking alternatives and determining a preferred alternative. Threatened and endangered species is not an authorized purpose for the ACF Basin, but USACE operates to meet the requirements of the Endangered Species Act (ESA). USACE has operated under a biological opinion for threatened and endangered species in the ACF Basin for almost a decade. USFWS, the agency responsible for overseeing the majority of species in the basin, has not voiced any concerns regarding the impacts to those species under the PAA. Further, USACE consulted with USFWS under the ESA regarding the PAA before producing a final EIS. The biological opinion is included in appendix J.

C. USACE added information to the final EIS regarding NPDES permit and potential impacts in a qualitative manner. However, NPDES permit and total maximum daily loads are the responsibility of the designated state agency under the Clean Water Act. Changes in the water management operations will not cause state water quality standards to be exceeded between water management alternatives (Alternative 1 and Alternative 7); instead state water quality standards will be exceeded by dischargers documented in the effects between different water supply options (Alt7I, Alt7J, Alt7K, Alt7L, and Alt7M). USACE highly recommends that EPA contact GAEPD, the designated authority in Georgia that oversees part of the Clean Water Act, to ensure that the NPDES permits are revised.

The EPA has rated the DEIS as "EO-2", indicating that we have environmental objections with the preferred alternative with additional information requested for the final document. The preferred alternative includes the proposed Glades Reservoir project. This reservoir project has been neither approved nor permitted and the preferred alternative should not be predicated on an alternative that has not been or may never be constructed. The EPA believes that the implementation of the preferred alternative has the potential to be inconsistent with current state designated uses as established by the state water quality standards in portions of the river system. This has the potential to cause exceedances of applicable state water quality criteria. In addition, this could require modifications to applicable TMDLs and NPDES permits. The DEIS does not fully evaluate the consequences of the preferred alternative. The EPA's review has identified environmental impacts that should be avoided or minimized in order to adequately protect the environment. The EPA recommends that the Mobile District of the USACE consider working with the agencies prior to the submittal of the FEIS document to help ensure that all concerns are addressed during the NEPA process. The EPA also recommends that the FEIS demonstrate responsiveness to the comments described in the attachment. The EPA is willing to work with the USACE to ensure that operation of the ACF Basin is consistent with water quality standards and protective of aquatic resources.

D

The EPA appreciates the opportunity to provide comments on the proposed WCM DEIS for the ACF Basin and looks forward to working with you to address our concerns. If you have any questions regarding our comments, please contact Ntale Kajumba (404/562-9620) of the NEPA Program Office.

Sincerely,

G. Alan Farmer
Director
Resource Conservation and
Restoration Division

James Giatinna
Director
Water Protection Division

Enclosure: EPA Detailed Comments

3

Response to ACF188 – EPA

D. USACE completed the update to the WCMs for the ACF Basin in May 2015. During that process, USACE determined that it was appropriate to consider potential new reservoirs in the system for which reservoir permit applications had been submitted because the reservoirs were reasonably foreseeable. Designating those reservoirs as reasonably foreseeable is not endorsement of their permitting or construction. In compliance with NEPA and Council on Environmental Quality guidance, USACE determined it was appropriate to include those reasonably foreseeable projects to capture all potential impacts. In the ACF Basin update, USACE committed to analyzing Georgia's water supply request. Because the request included Glades Reservoir, USACE included analysis of the reservoir in its draft EIS. If the reservoir projects are not built, which will result in less impact to the ACF Basin. Under NEPA, that is acceptable. In accordance with the GAEPD letter dated January 29, 2016, Hall County's certification of need for water supply from Glades Reservoir has been rescinded. Accordingly, USACE revised the water supply options presented in the final EIS to exclude Glades Reservoir as a reasonably foreseeable action with regard to water supply. To provide the public with information on all potential impacts, USACE also intends to analyze the impacts of the entire amount of Georgia's water supply request coming out of Lake Lanier. USACE believes that the draft EIS fully evaluates the consequences of the PAA. The final EIS, however, includes additional analysis of impacts. Further, the permit application for the Bear Creek Reservoir project was withdrawn by the applicant by letter dated September 8, 2015. Bear Creek Reservoir has been deleted from the HEC-ResSim model for the analysis presented in the final EIS.

Enclosure
EPA's Detailed Comments on the Water Control Manual Update DEIS for the ACF River Basin
CEQ No.: 20150278

The ACF River Basin begins in northeast Georgia, spans the Georgia-Alabama state line into central Alabama, and follows the state line south to Apalachicola Bay, Florida. The basin is approximately 385 miles long and drains 19,573 square miles.

There are five Federal reservoirs - four located on the Chattahoochee River and one along the Apalachicola River, and nine privately-owned reservoirs in the ACF system. At the headwaters of the system north of Atlanta are Buford Dam and Lake Lanier. Other Federal reservoirs in the river system include West Point Dam and West Point Lake; Walter F. George Lock and Dam and W.F. George Lake; George A. Andrews Lock and Dam and George A. Andrews Lake; and Jim Woodruff Lock and Dam and Lake Seminole.

The purpose of the ACF Water Control Manual updates is to identify operating criteria and guidelines for managing water storage and release of water from USACE reservoirs.

Alternatives

The DEIS evaluates a no action alternative (NAA) and several action alternatives (Water Management Alternatives 1-7 and Water Supply Alternatives A-H). The NAA involves no change in how the dams are currently managed. It includes general system operations, action zones, and authorized project purposes described in the DEIS. The NAA also includes current water supply operations including withdrawals directly from Lanier Reservoir and Buford Dam releases for downstream withdrawal. The DEIS also identifies the preferred action alternative (PAA) which includes general system operations, action zones, and authorized project purposes described in the DEIS; current water supply withdrawal levels and part of Georgia's 2040 water supply need within Lanier Reservoir (185 millions of gallons per day or mgd), assuming an additional 40 mgd would be withdrawn from the proposed Glades Reservoir; and releases from Buford Dam of 408 mgd that would provide for water supply withdrawals from the Chattahoochee River at Atlanta.

The PAA provides a minimum flow rate of 750 cfs at Peachtree Creek from May through October and 650 cfs from November through April. The action zones under the PAA would be modified for Lanier Reservoir, West Point Reservoir, and Walter F. George Reservoir. The action zones in Lanier Reservoir and West Point Reservoir move up in the fall and winter and the action zones move down in Walter F. George Reservoir, mainly during the summer. Under the PAA, a reliable navigation season would also be provided. The navigation season would extend from January through April or May based on hydrological conditions.

No Action Alternative: On page 4-46 (4.2.1.2.7), the DEIS states that, "Under the Water Management Alternative 1, withdrawals would be limited to 20 mgd from Lake Lanier (Buford and Gainesville relocation contracts) with a 50 percent return rate and to current withdrawals (277 mgd) downstream of Buford Dam by Metro Atlanta. The withdrawal value for Lake Lanier does not reflect current withdrawals, only those that are currently authorized and do not require a

E

Response to ACF188 – EPA

E. Formulation of water management alternatives in phase 1 was based on withdrawals from Lake Lanier limited to 20 mgd (relocation contracts). The rationale for that approach is explained on pages 4-1 and 4-2 of the EIS. USACE continues to believe that the stated rationale is valid. There appears to be some confusion in distinguishing between the NAA and the Future without Project Condition Alternative. As required by NEPA, the NAA represents what is currently occurring in the system regardless of whether it is authorized. The NAA includes 277 mgd released for downstream withdrawals for Metro Atlanta (which, as noted below, is authorized) and 128 mgd withdrawn for water supply from Lake Lanier directly (which has not been authorized). As stated in its notice of intent, the purposes of the EIS for the Master WCM update and WSSA (appendix B in the EIS) are to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to assess the extent to which reservoir storage at Lake Lanier can be made available to meet current and future water supply needs for Metro Atlanta. Therefore, USACE started with the existing water management measures, then used modeling, public comment, and experience to improve those measures to develop a proposed water management alternative. After developing the proposed water management alternative, USACE then examined water supply under two separate authorities: the River and Harbor Act of 1946—which authorized the construction of Lake Lanier and the ACF Basin—and the Water Supply Act of 1958 (WSA)—a discretionary authority under which storage in completed USACE reservoirs may be reallocated to municipal and industrial water supply. As part of its water supply request, the State of Georgia requested additional releases from Lake Lanier for water supply withdrawals for Metro Atlanta. Therefore, USACE modeled an increase from 277 mgd to 379 mgd for downstream water supply for Metro Atlanta. After determining the downstream releases and capturing those, USACE then examined withdrawals directly from the reservoir and reallocation of storage in Lake Lanier under the WSA. The analysis required under the WSA involves comparing the impacts associated with authorized withdrawals of 20 mgd for the relocation contracts (the Future without Project Condition Alternative) and the impacts associated with the proposed reallocation to determine if the considered reallocation would have a serious effect on other authorized project purposes. USACE has provided a better explanation in the graphs in the final EIS. The final EIS also considers amounts being withdrawn from Lake Lanier ranging from 128 mgd (current withdrawals) to 242 mgd (Georgia's 2015 request).

storage agreement." However, Table 5.2-1 and Section 5.2.1.2.7 on page 5-12 indicate that the NAA has Lake Lanier withdrawals at 128 mgd. Section 4.1.2.9 Water Supply (pg 4-33) indicates that modeling was based on 20 mgd withdrawals at Lake Lanier and does not fully explain when the 128 mgd (status quo or NAA) was taken into consideration and modeled. Chapters 4 and 5 seem to be inconsistent when discussing the water withdrawals of the status quo (128 mgd) within the NAA. However, as a result of a discussion with the USACE on December 19, 2015, the EPA understands that the USACE did consider the NAA (128 mgd) water withdrawals when modeling the second phase of the plan formulation. The EPA notes that it is more appropriate to model 128 mgd (current withdrawals from Lake Lanier) rather than for 20 mgd (approved water contracts from Lake Lanier) during Phase I of the alternatives analysis. The EPA also notes that there are numerous graphs and visual displays; however, the body of the text is lacking sufficient information to describe the significance of these graphs. As written, the NAA and modeling for the NAA at Lake Lanier is difficult to understand and is confusing for stakeholders and the public to understand.

The EPA is concerned that Alternative 1 is carried forward as a basis for comparing performance among the other alternatives, however, a No Action Alternative would better be represented by what is currently being withdrawn from Lake Lanier. The status quo is clarified (on page 5-5, lines 19-20) as "up to 128 million gallons per day (mgd) of water is being withdrawn from Lake Lanier without storage agreements." Therefore, the EPA believes that 20 mgd is not an accurate representation of current water supply operations, and 128 mgd (status quo) would better represent a No Action Alternative by which to compare alternatives. The EPA is also concerned that all seven Water Management Alternatives use the same water supply operations of 20 mgd for relocation contracts, which makes it difficult to evaluate and rank the selected water management measures (Section 4.1.4). E

The USACE states that "In the first phase, water management measures were identified and screened to identify the set of measures that were combined into water management alternatives. The water management alternatives were then evaluated and ranked based on performance metrics. The result of alternative formulation phase I was identifying Water Management Alternative 7 as the Water Management Proposed Action Alternative" (5-1). The EPA is concerned that using the same water supply operations for the first phase of analysis of the seven alternatives does not represent the status quo and therefore does not fully or accurately characterize the beneficial or adverse effects of each of the Water Management Alternatives. Since Lake Lanier is at the headwaters of the system, it is critical to fully disclose the amount of withdrawals used in the model in order to understand performance metrics throughout the system (e.g. drought operations, hydroelectric power generation, federally listed threatened and endangered species operations). If this number is not adequately represented, it is difficult to assess flow at the lower reaches within the system for alternatives analysis. One of the requirements of the alternatives analysis is to "characterize the beneficial and adverse effects by magnitude, location, timing and duration" (ER 1105-2-100, Planning Guidance Notebook, page 2-6). The EPA recommends using the status quo withdrawals (128 mgd) in the model for withdrawals from Lake Lanier, to better assess the performance metrics and magnitude of impact throughout the system.

Recommendation: The EPA recommends that modeling the NAA with 128 mgd during Phase 1 of the alternatives analysis would more accurately reflect the status quo of the basin and provide a better foundation for screening management measures. At a minimum, the EPA recommends the FEIS better explain the methodology and rationale of modeling water withdrawals (especially at Lake Lanier) during the second phase of plan formulation. The EPA also recommends that the FEIS expand the discussion (in Chapters 4 and 5) of when modeling was conducted and the integration of formulation of the water management alternatives in phase 1 and water supply alternatives in phase 2 and how that relates to the final suite of alternatives. In addition, the FEIS should include an expanded discussion related to the significance or importance of the numerous graphs in the DEIS.

Consider Alternatives to Only Optimizing Navigation Releases: Given the importance of the ACF WCM DEIS to the regulation of the ACF basin, the DEIS should have considered a broader range of alternatives that optimize releases for multiple project purposes. However, it appears that an evaluation of each mission authority (navigation, hydropower, water supply, etc.) was done singularly rather than combined with other authorities to maximize benefits. Optimizing releases for navigation could be evaluated such that aquatic species and downstream recreation could also benefit.

F

Recommendation: The EPA recommends the FEIS include an evaluation of navigational releases in the context of optimizing releases for other beneficial uses to include environmental flows (water quality and fish and wildlife) and downstream recreation (to include federal and non-federal reservoirs and riverine sections).

Considering Alternatives to Peaking Power at Buford Dam: The EPA is concerned that alternatives to operating Buford dam for peaking power are not considered in the DEIS. The DEIS does not evaluate management measures and alternatives that go beyond USACE authorities. Specifically, the EPA is concerned that management measures and alternatives are not considered that evaluate seeking other sources of power that would avoid operating Buford dam for peaking power. The EPA also notes that South Eastern Power Administration (SEPA), has the flexibility to buy power on the grid in lieu of generating at the dam and has exercised this approach during droughts. The EPA acknowledges the Congressional hydropower authority that was assigned to Buford dam in the authorizing legislation. We also acknowledge that removing that authority would take Congressional action, but consideration and evaluation of eliminating or reducing peak power releases does not require Congressional action. The Council on Environmental Quality (CEQ) addresses evaluating alternatives outside an agencies authorities and states, "An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. [40 CFR] Section 1506.2(d). Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. [40 CFR] Section 1500.1(a)." (https://ceq.doe.gov/nepa/regs/40/1-10.HTM#2). Evaluating this alternative is critical due to the environmental, recreation and safety concerns that arise from the current and proposed operation of the dam.

G

Response to ACF188 – EPA

F. USACE does not prioritize one authorized purpose over another. Therefore, creating an alternative that is not reasonably foreseeable nor authorized would add no value to the EIS. Furthermore, USACE does not have a congressionally authorized purpose to provide releases for downstream recreation. Any benefit to downstream recreation is an incidental effect from operating for congressionally authorized purposes.

G. Peaking hydropower is a congressionally authorized project purpose for the Buford Dam. USACE has attempted to update its WCMs on the ACF system for the past 26 years. During that 26-year period, despite comprehensive studies, proposed interstate compacts, countless rounds of litigation, and extensive negotiation and mediation, Congress has declined to get involved. The Master WCM update process is not a feasibility study and, therefore, is not the appropriate vehicle to consider deauthorizing peaking hydropower. Based in part on this quarter century record of inactivity, USACE found that it is unreasonable to expect Congress to deauthorize peaking power at Buford. NEPA requires USACE to look only at actions outside of this authority that are reasonable. Ending peaking power at the Buford Dam is not reasonable in this case. USACE notes that EPA cites actions under the Federal Power Act, but is unaware of any times peaking power was deauthorized at an USACE facility.

Response to ACF188 – EPA

This consideration is consistent with the EPA's position for the need to re-evaluate the balance between dam operations and current use designations in a waterbody. In a July 7, 1998, *Federal Register* (Vol. 63, No. 129, pg. 36755) there is a review of the language in the 1986 amendments to the Federal Power Act (Electric Consumer's Protection Act, or ECPA) which states that when considering the relicensing of a dam there should be equal consideration given, "... to the purposes of energy conservation, the protection, mitigation of damages to, and enhancement of fish and wildlife (including related spawning grounds and habitat), the protection of recreation opportunities, and the preservations of other aspects of environmental quality." The *Federal Register* notes that the legislative record indicates that there should no longer be "business as usual" but that "projects licensed years earlier must undergo the scrutiny of today's values as provided in this law and other environmental laws applicable to such projects." This contemplates that the relicensing evaluation should be measured "against today's values" rather than be held to decisions made at the time of dam creation.

Although written in the context of FERC licenses, the legislative history recognizes it is necessary to evaluate the need to balance dam operation with downstream designated uses in general. By analogy, this seems particularly relevant for the review of this project, since, as noted in the historical section, this river basin and its uses have undergone significant change since the dam was first put in operation.

Recommendation: The EPA recommends the FEIS evaluate alternatives to operating Buford dam for peaking power and/or reducing Buford dam releases for peaking power.

Water Supply Alternatives: The DEIS discussed the State of Georgia's 2013 allocation request. The EPA notes that if the state's water demand can be met by allocation from Lake Lanier, then another approach would be to select an alternative that does not include newly proposed reservoirs (especially given the direct and irreversible impacts to streams and wetlands as well as the costs of constructing a new reservoir). In addition, the proposed projects have not completed the environmental and permitting phases. The EPA notes that the USACE determined the appropriate allocation to the state of Georgia should be a total of 225 mgd (pg 5-7). The PAA includes the total allocation of 185 mgd with the inclusion of Glades Reservoir (an additional 40 mgd). However, there is no alternative that considers a total allocation of 225 mgd to the state of Georgia without further construction. In other words, the FEIS should consider an alternative that would grant the state of Georgia an additional 40 mgd allocation (on top of the 185 mgd for a total of 225 mgd) without including Glades Reservoir. The EPA is concerned that this alternative was not evaluated during the alternatives analysis and therefore, the full range of alternatives were not considered or disclosed. Furthermore, that this allocation could be made directly from Lanier rather than constructing a new impoundment that would simply pass through water for withdrawal from Lake Lanier, may well be the Least Environmentally Damaging Practicable Alternative.

H

In August 2015, the Metro North Georgia Water Planning District (MNGWPD) released updated water demand projections that indicate metro Atlanta will need 25% less water in 2050 than a previous analysis (2009) projected, due in part to 2050 population projections that are notably less than anticipated. Understandably, the latest numbers are not included in the state of

7

H. USACE examined an alternative with total amount of water in Georgia's water supply request coming directly from Lake Lanier in the final EIS. That alternative includes water supply projections based upon updated population numbers.

Georgia's 2013 allocation request nor are they within the current DEIS. However, it should be noted that the total water demand for Hall County was projected to be at most 34 mgd.

Recommendation: As previously discussed, the EPA requests that the FEIS consider an additional alternative that includes the USACE's calculated water allocation of 185 mgd with an additional 40 mgd Hall County allocation (without assuming construction of Glades Reservoir) for a total allocation of 225 mgd or lower based on revised values. The water allocation numbers for all alternatives, including the additional alternative that excludes Glades Reservoir, will need to be re-calculated based on the updated water demand and population projections from the MNGWPD and the Georgia Office of Planning and Budget (OPB).

Water Management Measures Alternatives: It appears that the water management measures and metrics were not coordinated with appropriate state and federal resource agencies. Given the significance of the ACF WCM update, it is important that these water management measures be vetted with state and federal subject matter experts to ensure the foundation of alternative analysis is accurate.

I

Recommendation: The EPA recommends that the USACE fully coordinate with the state and federal resource agencies regarding the alternative analysis especially on water management measures and metrics.

Ranking Water Management Alternatives: The EPA notes that each alternative is ranked based on its performance for hydropower, navigation, fish and wildlife management, recreation and water supply (ES and pages 4-61 – 4-74). However, the USACE does not similarly rank each project for water quality or threatened and endangered species. As previously discussed, the EPA is concerned with the lack of balance in analyzing all authorized project purposes (as established in ES-1) in the alternative analysis.

J

Recommendation: The EPA recommends the FEIS consider all authorized purposes including water quality and threatened and endangered species, during the initial screening of water management alternatives.

Full consideration of all Congressional Authorities in Alternative Selection

The DEIS states, on page ES-1 that " USACE operates and manages the ACF Basin projects as one system to meet the following authorized purposes: flood risk management, hydropower, navigation, fish and wildlife conservation, recreation, water quality, and water supply." However, the EPA notes that the DEIS does not include water quality, recreation or threatened and endangered species as a management measure within Chapter 4 or 5. The EPA notes that the USACE recognizes the importance of environmentally related project purposes and states that "Updates to the WCMs are also needed to: Address environmental objectives for water quality, federally listed threatened and endangered species, and fish management (page 1-4 (line 1))." However, water quality, fish management and threatened and endangered species are not considered in the same manner as other authorized purposes within the Water Management Objectives ((ES-10 or Chapter 4) or Water Supply Objectives (ES-16 or Chapter 5).

K

Response to ACF188 – EPA

I. USACE has coordinated with the appropriate state and federal resource agencies as required pursuant to NEPA, the Coastal Zone Management Act, the Fish and Wildlife Coordination Act, the Endangered Species Act, and all other applicable laws. USACE has considered all comments submitted by stakeholders and agencies.

J. The metrics utilized in the fish and wildlife conservation ranking included endangered species considerations. USACE ensures that it met its water quality responsibilities at Buford Dam, Peachtree Creek, and West Point Dam, and below its projects for all alternatives. It is important to note that USACE considered flood risk management in formulating all alternatives the same way that it considered water quality.

K. As discussed previously, water quality was considered as a management measure in ranking all alternatives. Protection of threatened and endangered species is not an authorized purpose for the ACF Basin, as previously discussed. USACE made sure that the 2012 Revised Interim Operations Plan biological opinion's level of operations for threatened and endangered species protection was contained in all alternatives. As shown on section 4.1.2 of the final EIS, measures for water quality control (flows at Peachtree Creek) and for threatened and endangered species protection were identified and considered. USACE respectfully points out that Apalachicola Bay is not within the federal authorized project. Therefore, while impacts to the bay are documented in the EIS, USACE does not have authority to operate for fish and wildlife conservation in the Apalachicola Bay. USACE coordinated with the USFWS under the Fish and Wildlife Coordination Act and received suggestions from the state fish and wildlife agencies in developing management measures for operation of the ACF Basin. USACE also consulted with the USFWS under section 7 of the Endangered Species Act and the resulting biological opinion along with discussion of that consultation process are included in appendix J of the final EIS. USACE is not authorized or required to protect designated uses of river reaches throughout the ACF Basin.

Response to ACF188 – EPA

In the Executive Summary (ES), eight guidelines screening criteria are listed (p. ES-6) for any proposed measure or alternative considered in the update process. One of the eight screening criteria provides that the measure (or alternative) "should address one or more of the congressionally authorized project purposes." The DEIS discusses this criteria further:

"In accordance with USACE governing regulations, water control plans are prepared giving appropriate consideration to all applicable congressional acts relating to the operation of federal facilities. For the ACF Basin, the congressional acts include the authorizing legislation, referenced project documents, and relevant general authorities (e.g., the Fish and Wildlife Coordination Act, Federal Water Project Recreation Act-Uniform Policies, [Federal] Water Pollution [Control] Act of 1972 as amended, the ESA, the Flood Control Act of 1944, and the Water Supply Act of 1958)."

Despite this language, it is not clear from the DEIS that maintaining state water quality standards was part of the screening criteria the USACE used to evaluate the water management measures and alternatives. In addition, on page ES-10, the DEIS states that the USACE "developed objectives for the Master WCM update and the WSSA to address challenges identified and issues based on operational experience gained under the draft 1989 Master WCM." The EPA is concerned that the objectives developed based on operational experience may have missed several challenges related to relevant authorities such as water quality, fish and wildlife conservation, and aspects of water supply. All statutes related to all project purposes and objectives should have been considered when developing proposed measures and alternatives. K

In summary, the EPA has serious concerns with the alternative selection methodology the USACE used in the DEIS because it does not appear that water quality was taken into consideration in the formulation and screening of alternatives. The DEIS defines water quality as an authorized purpose, and it therefore should have been included in the screening criteria and objectives. However, none of the water management measures, which are based on objectives, include water quality considerations. In addition, it is not clear from the DEIS that maintaining state water quality standards was part of the screening criteria the USACE used to evaluate the water management measures. As a result, the alternatives evaluated in the DEIS, which are based on the water management measures, appear to be devoid of any water quality considerations.

Recommendation: The EPA recommends the USACE more fully consider environmentally related authorities such as water quality, recreation and threatened and endangered species. To ensure a more balanced approach to the operation of the system and disclosure of impacts, the EPA recommends that the FEIS more holistically consider water quality, fish management and federally listed threatened and endangered species within the alternative analysis. Specifically, the EPA recommends the following:

- Incorporate water quality and federally listed threatened and endangered species as a water management measure, which will ensure a more holistic approach to the operation of the system.
- Expand the Fish and Wildlife water management measure to include other aquatic species and also include oyster production in Apalachicola bay. The EPA also recommends the

USACE collaborate with US Fish and Wildlife Service (USFWS) and state fish and wildlife agencies in developing management measures.

- Include a water management measure objective that includes water quality, protection of designated uses (i.e., aquatic life, recreation, shellfish harvesting, etc.), fish and wildlife management, and federally listed threatened and endangered species. These should be evaluated throughout the system, not just within the five USACE operated reservoirs.
- Add water quality, fish management and federally listed threatened and endangered species as a screening criteria.

Water Quality/Water Quality Standards

Water Quality/Water Quality Standards: The EPA is concerned that applicable state water quality standards and water quality in general were not fully addressed in the DEIS as required by USACE authorities, guidance and the CWA, and NEPA. As noted above, water quality is not given equal value and importance as compared to other project purposes in the DEIS and was not included in the metrics for alternative selection. As stated in the EPA's original scoping comments, the revised WCM should be consistent with state water quality standards – specifically, the implementation of the WCM should not cause or contribute to an exceedance of a water quality criteria (narrative or numeric) and should provide for the protection of the designated uses, including downstream uses. This should include ensuring compliance with physical parameters (i.e., pH, temperature, conductivity and dissolved oxygen), biological criteria, chemical parameters, nutrient loadings (including lake nitrogen, phosphorus and chlorophyll standards) and providing the flows necessary for protection of the designated uses. For the rivers and reservoirs affected by this WCM, those uses include drinking water, recreation, fishing, swimming, shellfish harvesting and aquatic life protection. These designated uses apply on both the riverine and estuary sections as well as within the reservoirs.

In response to scoping comments that the USACE should analyze the effects of the WCM operations on water quality standards, the USACE states that water quality will be taken into account when updating water control plans and manuals but that:

"Water quality management and control of point and nonpoint sources of pollution off USACE project lands is principally the responsibility of the states. In accordance with ER 1110-2-8154, the USACE has an objective to ensure that water quality, as affected by a USACE project and its operation, is suitable for project purposes, existing water uses, and public safety, and is in compliance with applicable federal and state water quality standards….Under the [Federal] Water Pollution [Control] Act of 1972 as amended, states (not USACE) establish water quality standards and are responsible for ensuring that wastewater discharges meet those standards."

The EPA disagrees with this statement. The USACE, like all federal agencies, is required to ensure that all federal, state, interstate, and local requirements including water quality standards are met when developing a Water Control Manual, which includes not creating conditions that impair water quality standards, consistent with the authorized purposes of the water control structures. These requirements are found in the CWA, Executive Orders, promulgated regulations, and the USACE's own guidance.

L

Response to ACF188 – EPA

L. The HEC-5Q model developed for the ACF Basin allows USACE to compare alternatives throughout the entire system. Site-specific models developed for nutrient criteria and total maximum daily loads (TMDLs) would instead require an evaluation of effects on a project-by-project basis. Section 6.1.2 of the EIS reviews how various alternatives affect state water quality standards. The EIS was updated to more explicitly define where changes to existing TMDLs might be necessary. Those changes would need to be performed by agencies with the regulatory authorities responsible for defining TMDLs (EPA and states). The assimilative capacity of a water body defined by a TMDL is based on state water quality standards. Therefore, by reviewing where violations of the water quality standards might occur in each alternative that do not occur in the NAA, USACE does consider effects to existing TMDLs. Further, it is EPA and state responsibility to define NPDES permits. USACE considered point source loads and comparison of water management alternatives (Alternative 1 and Alternative 7) to allow those agencies to decipher the influence of water management activities versus the effects of return loads from NPDES permittees.

Response to ACF188 – EPA

Section 313 of the CWA addresses federal facilities pollution control. Under Section 313, each agency of the federal government with jurisdiction over any property or facility or engaged in any activity resulting, or which may result, in the discharge or runoff of pollutants, shall be subject to and comply with all federal, state, interstate, and local requirements… respecting the control and abatement of water pollution.

Similar language and requirements are found in Executive Order 12088, 43 FR 47707, Oct. 17, 1978: "[t]he head of each Executive agency is responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to Federal facilities and activities under the control of the agency." The USACE must also follow its regulations including, for example, 33 CFR § 222.5(f)(1), which requires the USACE to prepare water control plans giving appropriate consideration to all applicable Congressional Acts relating to operation of Federal facilities.

In addition to federal laws, Executive Orders, and promulgated regulations, the USACE has also published regulatory guidance related to water control manuals and water quality. Relevant guidance includes, ER1110-2-8154, Water Quality and Environmental Management for Corps Civil Works Projects, and ER1110-2-8156, Preparation of Water Control Manuals. These Environmental Regulations (ERs) identify the USACE's responsibility to address water quality.

Recommendations: The EPA recommends that the USACE: 1) accurately quantify the water quality impacts for the various regulation options considered using a site-specific sophisticated modeling framework; and 2) select the option that complies with water quality standards to the maximum extent feasible, which includes not creating conditions that impair water quality standards, consistent with the authorized purposes of the dam. The option selected should provide for the protection of the designated uses, including downstream uses.

L

The EPA recommends analyzing the effects of the WCM operations on water quality standards, with a particular emphasis on physiochemical endpoints such as dissolved oxygen and other numeric water quality standards, biological endpoints such as sensitive aquatic species and physical endpoints that protect the designated aquatic life use, including adequate flows to maintain the physical integrity of habitat.

Designated Uses: The EPA notes that designated uses of riverine sections were not specifically identified or evaluated in the DEIS.

In Section 2.1.2, the USACE does include an overall listing of the designated uses for each state. However, there is no overall mention of which designated uses apply to which segments in the basin. The DEIS should include a map or listing of which of those designated uses apply in each of the segments of the rivers and reservoirs covered in the DEIS, so that it is clear not only which criteria apply, but also which uses must be protected. For instance, in the DEIS there is a discussion to evaluate what is needed to support recreation on the reservoirs. However, those are not the only segments in the Basin with recreation as a designated use. Riverine segments with recreation, including those directly below and significantly impacted by project operations such as the Chattahoochee River National Recreation Area located in the first 48 miles below Buford Dam, have significant recreation in and on the water. The DEIS not only fails to evaluate

impacts of the alternatives on those sections, but there is not even any acknowledgement of the recreation on riverine segments. The operation of the projects will affect downstream designated uses and the FEIS should identify, evaluate and disclose those impacts.

Recommendation: The EPA recommends that designated uses of riverine segments in the ACF Basin be identified and evaluated in the FEIS. We also recommend that each of the designated uses affected by the project must be identified along with the conditions necessary to protect those designated uses evaluated.

Water Quality Standards: The Water Quality Chapter of the WCM (Chapter 2.1.2) includes a listing of the water quality criteria for Alabama, Georgia and Florida. The EPA notes that the following criteria is incorrectly referenced, "Site-specific nutrient standards have been developed for West Point Lake; monthly average chlorophyll a must be less than 27 µg/L at the LaGrange water intake during the growing season (April-October)." M

Recommendation: The EPA recommends that this be revised to state that GAEPD requires chlorophyll a to be less than 24 µg/L at West Point Lake.

Ecological Flows: During scoping, the EPA recommended that the WCM was an opportunity to more appropriately incorporate at least some level of naturalized instream flows. The EPA's scoping comments noted that since the date of the last WCM update, "numerous licenses were…negotiated and re-issued by the Federal Energy Regulatory Commission (FERC). Many renewed FERC licenses included advancements in water management and dam operations to better protect and maintain aquatic life which could be adapted for use on federally regulated rivers. For example, the FERC license issued to South Carolina Electric and Gas (SCE&G) for the operation of the Lake Murray Dam on the Saluda River includes numerous updated provisions for protection of mussels, sturgeon, trout and rare plant and animal species. The revision of the WCM provides an opportunity to incorporate the latest science and successful practices for regulating flows to improve water quality, meet designated uses and, where possible, restore the hydrologic condition and ecological integrity of the river system. For instance, ecologists now understand that flows across the range of the natural hydrograph are important for maintaining structure and function of aquatic ecosystems rather than regulating a river to meet a static low flow target." The EPA also supported, "…the suggestions provided in the Fish and Wildlife Service's Planning Aid Letter (dated April 2, 2010, with March 1, 2011 addendum) to efficiently derive flow targets protective of a balanced and indigenous aquatic flora and fauna." The EPA suggests the use of multiple endpoints to demonstrate the protection of aquatic life designated uses. Relevant endpoints include floodplain connectivity (inundation, maintenance of off-channel habitats, wetted perimeter, out-of-bank habitats) and habitat suitability analysis. Because of the intensity of the latter (e.g. PHABSIM), the EPA recommends consulting the relevant wildlife resources agencies to determine which habitat locations are critical to aquatic life in the basin and may warrant prioritized, intensive study. In response to those comments, the DEIS stated that the "USACE evaluated the feasibility of providing a seasonally varying baseflow hydrograph that would more closely approximate pre-dam conditions (e.g., more closely simulate run-of-the-river, before impoundment conditions). That analysis confirmed that the presence of the dams and their operations have altered the pre-dam flow regime by generally providing a more stable flow pattern with higher base flows and N

Response to ACF188 – EPA

M. The EIS has evaluated each alternatives' potential impacts on the relevant water quality standards (DO, chlorophyll a, temperature, etc.). By evaluating the standards, the effects on designated uses are also evaluated. A figure was added to section 2 to illustrate the designated uses in the ACF Basin.

N. The ACF Basin was authorized in the 1946 River and Harbor Act as a multipurpose system. One of the authorized purposes was flood control. The terminology has changed since 1946—with flood control now being classified as flood risk management—but the purpose of the authorization remains the same: Use the storage at the reservoirs in the ACF Basin to capture high rain events and release the water in a carefully regulated manner to minimize flooding. To be effective, this requires that USACE retains water in the reservoirs and releases them gradually. Natural flows or run of the river operations as suggested by EPA would nullify the congressional intent when authorizing the ACF Basin project and increase the likelihood of downstream flooding throughout the system. Congress intended and authorized the ACF Basin to be a regulated system; it authorized the construction of multipurpose USACE reservoirs for the purposes of flood control, navigation, hydropower, recreation, water quality, water supply, and fish and wildlife conservation. USACE makes continuous releases from the Buford, West Point, and Jim Woodruff projects for water quality control and to support aquatic conditions for fish and wildlife conservation and endangered species protection in the basin. The constant releases were designed to be made through hydropower generators (house units); the other releases from the reservoir were designed to be made through peaking generation units for hydropower production. Components of the USFWS recommended system operation were included in the alternative formulation process as water management measures (section 4.1 of the EIS). Measures that passed the screening processes were combined into alternatives for consideration (section 4.1.4 of the EIS). Consequently, USFWS recommendations were considered in the selection of the PAA.

During the past 26 years, USACE has participated in interagency working groups, comprehensive studies, interstate compacts, settlement discussions, meetings between state governors, litigation, and negotiations led by the U.S. Secretary of the Interior. EPA and USFWS were involved in several of these cooperative efforts. USACE has addressed EPA's comments as well as the comments of other agencies and stakeholders in its efforts to update the WCMs, but USACE does not think another attempt at an interagency working group is needed or that it would improve the current process. USACE may consider interagency working groups on future studies.

lower peak flows. The Buford and West Point projects were designed to provide flood risk management and altering seasonal variability, and reducing higher peak flows has been the result. Therefore, operating the projects to match the natural flow regime would adversely affect the congressionally authorized purpose of flood risk management." However, the DEIS does not explain how operating projects to mimic natural flows will adversely impact flood risk management.

Recommendation: The EPA recommends the FEIS explain how this proposed management measure (incorporation of natural flows) would adversely impact flood risk management in the system. The EPA continues to support the incorporation of naturalized instream flows to improve water quality and aquatic life conditions in the ACF basin. The EPA also supports the updated recommendations by the USFWS included in the DEIS and the use of an Interagency Workgroup, to include, at a minimum, ensuring the inclusion of those actions necessary to meet the requirements set out by the USFWS.

National Pollutant Discharge Elimination System (NPDES) Permits and Total Maximum Daily Loads (TMDLs)

The EPA is concerned that the USACE did not fully consider the impacts to all NPDES permit holders in the ACF Basin. Table 2.1-33 identifies the 2009 permit limits for facilities that discharge to streams in the ACF Basin and 2012 permit limits for six Alabama facilities. The table lists various parameters such as dissolved oxygen and nitrate/nitrite but does not include additional parameters of concern, such as metals. This table also includes many assumed values for modeling rather than actual permit limits. The EPA notes that this table only lists the major point sources, defined as those that discharge more than 1 MGD of wastewater to surface waters. Table 2.1-33 lists 69 major discharges to the basin, however, the EPA currently lists only 66 major dischargers. This discrepancy could be due to using 2009 data in the table rather than more current values. Additionally, there are many minor dischargers in this basin that will also be affected and should be listed in this document. The EPA notes that currently 1,750 total permits are listed as discharging into the ACF Basin. O

Implementing the proposed operational decisions may require corrective action impacting permittees through any needed revisions to NPDES permit limits and pollutant load allocations under TMDLs. These potential impacts have not been disclosed. Critical low flows, or the regulated low flow in systems such as the ACF, are used to calculate an NPDES permittee's discharge limits so that permits will be protective of aquatic life under the most critical conditions. The PAA includes a revision of the regulated low flow from 750 cfs to 650 cfs from November to April of each year. This change to the low flow will decrease assimilative capacity for point and non-point sources. Lowering the critical low flow will necessitate review of permits during permit reissuance to determine if the current permit limits are protective or if limits must be revised in accordance with 40 CFR § 122.21 and 40 CFR § 122.62. Similarly, any TMDL that was based on a flow value of 750 cubic feet per second (cfs) should be reevaluated to determine if it needs to be revised. Under NEPA, the need to reevaluate NPDES permits and TMDLs and thereby potentially ratchet down limits and allocation loads should be fully disclosed.

Response to ACF188 – EPA

O. The final EIS uses the more recent information on NPDES permittees. The rationale for considering a seasonal flow at Peachtree Creek (750 cfs from May–October and 650 cfs from November–April) is explained in section 4 of the draft EIS. The final EIS contains additional discussion of potential flow levels and GaEPD's potential need to reevaluate NPDES permit and total maximum daily loads.

Recommendations: The EPA recommends that a more complete and accurate list of permittees be included, including both major and minor facilities. The EPA recommends that the need to reevaluate NPDES permits and TMDLs be fully disclosed.

Water Quality Modeling

The DEIS evaluates water quality impacts using HEC ResSim (hydrologic model) and HEC5-Q (water quality model). According to the USACE, the HEC 5-Q model is used because of its "ability to simulate the entire riverine and reservoir system in a single model" and it includes both point source and nonpoint source loads." However, the results from the models are inconsistent with actual hydrologic and water quality conditions that have been observed (by the EPA and the States). It is unclear why more dynamic (site specific) water quality models that have already been calibrated, verified and used by Federal Agencies are not used to evaluate water quality impacts within the ACF Basin, particularly in areas of high concern and interest in the reservoirs located in the ACF Basin. Site-specific sophisticated modeling frameworks were developed by Federal and State Agencies to ensure that appropriate water quality decisions are made. The EPA provided similar comments on the Allatoona–Coosa-Tallapoosa Water Control Manual FEIS and efforts were not made to fully consider site-specific modeling, especially in critical areas of the Basin.

P

Recommendation: Since a more generic and less precise modelling framework was used for the DEIS analysis – one lacking the spatial and temporal specificity, and mechanistic precision, to determine impacts of the action on water quality standards – the EPA strongly recommends the USACE fully disclose the likely water quality impacts of the ACF WCM, particularly in the reaches that have established TMDLs, known water quality impairments, and/or NPDES permit holders that may require permit modifications due changes in flows. This additional analysis should employ either the existing water quality modeling framework used for deriving water quality criteria, TMDLs, and NPDES permit limits (using linked watershed, 3D hydrodynamic and water quality models) or a modeling framework with similar precision. Model outputs should be expressed with adequate spatial and temporal specificity to demonstrate that the authorized use of water quality will be balanced under the WCM, as measured by the magnitude, duration and frequency components of the water quality standards applicable under the CWA, particularly for the chlorophyll-a and dissolved oxygen parameters.

Modeling for Water Supply Needs

The EPA understands that the Water Management Measures were formulated and combined to form Water Management Alternatives. Water Supply Measures were formulated separately and then combined with Water Management Alternatives to form the final suite of alternatives. It appears that modeling (for hydropower, recreation, water supply, etc.) was conducted early during the Water Management Alternatives phase of the alternatives analysis. The EPA understands that Glades Reservoir and the 2013 Georgia request were modeled to disclose impacts, however, it is unclear as to how the modeling for Glades Reservoir and the 2013 Georgia request were integrated into the final array of alternatives and there is no explanation as to the methodology for disclosing these impacts.

Q

Response to ACF188 – EPA

P. Section 6.1.2 of the EIS presents the effects various alternatives have on state water quality standards. The EIS was updated to more explicitly define where changes to existing total maximum daily loads (TMDLs) might be necessary. Those changes would need to be made by agencies with the regulatory authorities responsible for defining TMDLs (i.e., EPA and the states). The assimilative capacity of a water body defined by a TMDL is based on state water quality standards; therefore, by reviewing where violations of the water quality standards could occur in each alternative that do not occur in the NAA, USACE does consider effects to existing TMDLs. It is the responsibility of EPA and the states to define NPDES permits and issue surface water withdrawal permits. USACE considered point source loads and the proposed water supply withdrawal options. The comparison of water management alternatives (Alternative 1 and Alternative 7) and water supply options (Alt7I, Alt7J, Alt7K, Alt7L, and Alt7M) allows those agencies to decipher the influence of water management activities versus the effects of return loads from NPDES permittees.

Q. The draft EIS considered several measures, other than reallocation for Lake Lanier, that could provide water supply to communities currently withdrawing water from Lake Lanier (see draft EIS sections 5.1.2 and 5.1.3), including Glades Reservoir and new surface water sources. The GAEPD letter dated January 29, 2016, stated that Hall County's certification of need for water supply from Glades Reservoir has been rescinded. Accordingly, USACE has revised the water supply options presented in the final EIS to exclude Glades Reservoir as a reasonably foreseeable action with regard to water supply. While Glades Reservoir was carried over in the final EIS to show continuity, no alternatives except the previous PAA in the draft EIS include Glades.

Recommendation: The EPA recommends the USACE better explain how Glades Reservoir and the 2013 Georgia allocation request was integrated into the final suite of alternatives. The EPA also recommends the USACE explain how Glades Reservoir and the 2013 Georgia allocation request was modeled to disclose impacts to Congressional authorized project purposes and related environmental and socioeconomic impacts.

Integration of Water Management Measures and Water Supply Measures

It appears that modeling (for hydropower, recreation, water supply, etc.) was conducted during Water Management Alternatives phase of the alternatives analysis. As written, the DEIS does not explain how the Water Supply Measures were integrated into the Water Management Alternatives. As written, it is also unclear whether modeling was conducted for the final array of alternatives (Water Management Alternatives combined with Water Supply Measures). R

Recommendation: The EPA recommends the USACE better explain modeling to determine impacts on project authorities (as defined on pg. ES-1 to include water quality and threatened and endangered species) and environmental consequences for all proposed alternatives (including the No Action alternative).

Navigation

Several objectives for the update to the WCM were developed, including increasing the reliability of navigation on the ACF system. "Measures considered by USACE for navigation included: continuing the current operations in support of navigation; periodic navigation based upon the number of opportunities during the year when sufficient flows would be available to provide channel depths of 7-ft or 9-ft; defined navigation seasons such as December–May, January–April, and January–May; defined navigation season (variable), which would specify the navigation season as four months in duration or, when sufficient water is available, five months; and year-round navigation" (ES12-13). However, the DEIS states that the "Apalachicola River was designated as a low use navigation project in Fiscal Year 2005 which greatly reduces the likelihood of receiving funding for maintenance dredging" (p. 7-20). The EPA is unclear why changes to the operation of the ACF basin are proposed in order to meet navigation purposes when the USACE has designated sections of the basin as "low use navigation." In addition, the EPA notes that the DEIS states the "USACE has not dredged on the Apalachicola River since 2001 for a multitude of reasons, including Florida's denial of water quality certification for dredging in 2005" (page 4-21 (2.2.6). The DEIS does not discuss the "multitude of reasons" nor elaborates on the reasons Florida denied the permit. It is the EPA's understanding that USACE initiated a report (The 1998 Operation and Maintenance (O&M) Cost Savings Initiative report) that established benchmark values for project performance (output and cost) and identified projects in which performance did not meet the benchmark. The EPA understands that the Apalachicola navigation project did not meet the benchmark and subsequently did not receive funding for navigation. S

Recommendation: The EPA recommends the FEIS provide additional detail on why operational changes are being proposed in the ACF WCM to meet navigational needs in the basin given the determination that the Apalachicola River is a "low use navigation project" and has not been allocated funding for navigation in recent years, Specifically, identification of the stakeholders

15

Response to ACF188 – EPA

R. The EIS considered several measures, other than reallocation for Lake Lanier, that could provide water supply to communities currently withdrawing water from Lake Lanier (see EIS sections 5.1.2 and 5.1.3), including Glades Reservoir and new surface water sources. The GAEPD letter dated January 29, 2016, stated that Hall County's certification of need for water supply from Glades Reservoir has been rescinded. Accordingly, USACE has revised the water supply options presented in the final EIS to exclude Glades Reservoir as a reasonably foreseeable action with regard to water supply. While Glades Reservoir was carried over in the final EIS to show continuity, no alternatives except the previous PAA in the draft EIS include Glades.

S. Navigation is an authorized project purpose for the ACF system. As the result of a change in hydrology and the lack of dredging in the Apalachicola River, USACE is not able to maintain a 9-ft. channel in the river as intended in the original congressional authorization. USACE modeling maintained a 9-ft. channel in this reach of the river all year, and model results show that it could not be done even if the reservoirs were completely drained. Therefore, USACE solicited input from the navigation interests in the basin. Those stakeholders submitted comments in both the scoping and the draft EIS phases. The comments and stakeholder identities are included in the EIS. Based on those comments, USACE discovered that there was a desire and need for a 7-ft seasonal channel. USACE can provide a 7-ft channel 4–5 months of the year during most years of record under the operations system contained in the updated WCMs. Regardless of whether it is a low-use system, navigation remains a project purpose authorized by Congress and USACE must provide for navigation on the Apalachicola River to the extent possible, while balancing all authorized purposes. The circumstances for which USACE was denied a water quality certification from the State of Florida can be found in section 2.1.1.2.4.3 of the final EIS.

supporting improved navigation in the basin, their reasoning for improved navigation, and the economics behind improved navigation between Columbus and Apalachicola. The EPA also recommends the FEIS elaborate on the circumstances for which the USACE was denied a water quality certification from the state of Florida.

Georgia 2013 Request -Water Demand and Population Forecast Data

Use of most recent water demand and population forecast data: The EPA acknowledges that the State of Georgia's 2013 allocation request is of great importance as metro Atlanta's population continues to grow. The EPA supports the consideration of sustainable solutions to future water supply needs. However, the Metro North Georgia Water Planning District (MNGWPD) released updated water demand projections in August, 2015 that indicate metro Atlanta will need 25% less water in 2050 than previous analysis (2009) projected. The Georgia Office of Planning and Budget (OPB) also released population projections that indicate that the Hall County 2050 population projections are 318,828 and not the original projections of 729,192, which is far less than anticipated. Given when the new water demand projections and population projections were released, understandably, the latest numbers are not included in the state of Georgia's 2013 allocation request and nor are they within the current DEIS. T

Recommendation: Given the substantial difference in the numbers and the potential effect on the analysis, the EPA recommends that the FEIS include the most recent data on water demand and population growth projections and base its final analysis on those newer projections.

Drought Operations

On page 5-31, the USACE discusses extreme drought operations and discusses the establishment of action zones (1A, 2A and 3A) in the inactive storage pool within the reservoirs. However, the USACE does not discuss the triggers to activate or suspend each action zone within the inactive storage pool. Also, in Figure 5.4-1, the USACE identifies Zone 1A, 2A and 3A as well as list water supply, water quality and endangered species in bullets under each action zone, but does not explain its meaning. U

Recommendation: The EPA recommends the USACE elaborate on how the inactive storage action zones will be implemented and provide an explanation for Figure 5.4-1.

Recreation

The EPA notes that recreation is only considered within the USACE reservoir projects and impacts related to recreation downstream of the projects and/or within non-federally operated lakes/reservoirs are not considered. There is also no consideration of recreation impacts within the Chattahoochee National Recreation Area, which would be directly impacted by operational changes to Buford Dam. The EPA understands that the Chattahoochee National Recreation Area provides a significant positive economic impact to the region. V

Recommendation: The EPA recommends the DEIS evaluate operational and economic impacts on recreation not only within the USACE projects, but also downstream. It should disclose

Response to ACF188 – EPA

T. The revised population growth and water demand numbers were included in the final EIS. Unfortunately, the numbers were not available before publication of the draft EIS. The PAA in the final EIS was based on the updated numbers.

U. Figure 5.4-1 in section 5 of the EIS presents the action zones at Lake Lanier that are included in the PAA. The development of those action zones is explained in section 4.1.2.2.2.2 of the draft EIS. Section 7-03 of the drought contingency plan included as an exhibit to the WCMs in appendix A of the EIS provides details on the proposed use of the inactive storage in the Buford, West Point, and Walter F. George reservoirs in the event that system conservation storage is fully used. The system is managed to rely on releases from Buford Dam and Lake Lanier once conservation storage from the West Point and Walter F. George reservoirs has been completely used. When Buford's conservation storage also is completely used, authorized project purposes can no longer be met at the designed levels. When the remaining composite conservation storage is about 10 percent of the total capacity, additional emergency actions might be necessary and the extreme drought conditions operations will be initiated. The inactive storage action zones are designed to maintain a continuously balanced system operation to meet public health and safety while maintaining the structural integrity of the projects. The emergency operation will include coordination with stakeholders to meet critical water use needs.

V. Downstream recreation is not a congressionally authorized project purpose for the ACF Basin or the Buford project. To the extent that it can be captured or teased out with existing information, however, the final EIS contains economic impacts to downstream recreation from the alternatives. Optimum flow regimes for the Chattahoochee River National Recreation Area are displayed in Table 6.1-7 of the final EIS. Those flow regimes were developed as part of the MAAWRS in the 1980s. In 2000, CH2M Hill developed a recreational flow preference for the NPS that was similar to the previous effort. Riverine flows are evaluated in various reaches between Buford Dam and West Point Dam and also in the middle and lower Chattahoochee River. Figure 6.1-24 in the final EIS displays flows of the NAA and PAA below Buford DAM. Flows exceeded 1,000 cfs approximately 75 percent of the time under the NAA compared to 73 percent of the time under the PAA. For higher flows that would support kayaking (6,000 cfs), there was a negligible difference between the NAA and the PAA over the period of record. Given the minimal-to-negligible difference in flows between the NAA and the PAA, any economic impacts would likely be the same.

impacts to other non-federally owned reservoirs. Specifically, the EPA recommends the USACE analyze impacts associated with the Chattahoochee National Recreation Area.

Climate Change /Greenhouse Gases

The EPA notes that the DEIS contains some analysis of the potential effects of climate change on ACF reservoir operations and a limited discussion of greenhouse gas (GHG) emissions. The DEIS discusses existing climate conditions in Alabama, North Florida, and Georgia, including areas associated with the ACF Basin. According to the DEIS, "none of the alternatives evaluated would have any direct or indirect effects on the climate nor would there be any GHG emissions associated with either the No Action Alternative or the Proposed Action (PAA), and neither would contribute to global warming or changes in climate." The DEIS also states that, "(a)lthough regional GHG emissions are partially a function of population and land use, for the purposes of this EIS, population and land use throughout the basin are not expected to change appreciably due to the proposed updates. As a result, it is assumed that any changes in GHG emissions would have occurred under the No Action Alternative…. As a result, "climate change as a potentially affected resource was not carried forward for detailed analysis in this DEIS. However, climate change has been carried forward in section 6.8 of the DEIS to facilitate a discussion of the Proposed Action within the framework of future climate scenarios." The EPA believes that in fact there may be differences in GHG emissions between the no action and action alternatives. Under the PAA, navigation is expected to increase. However, the additional GHG emissions associated with increased navigation activity do not appear to have been quantified and considered. W

Recommendations: The EPA recommends that the USACE provide estimates of the potential GHG emissions associated with the alternatives. EPA notes that there is an expanding body of literature on the greenhouse gas contributions (CO2, CH4, N2O) of reservoirs and recommends that the USACE consider estimating emissions from the reservoirs in the FEIS (Varis, Kummu, Härkönen, & Huttunen, 2012). For example, emissions pathways include flux across the air-water interface, from supersaturation in the sediment, releases immediately below the turbines and further downstream (Diem, Koch, Schwarzenbach, Wehrli, & Schubert, 2012). Recent research indicates that shallow embayments may be a particular hotspot for methane production in reservoirs and may be substantially impacted by reservoir operations (particularly the range of pool elevations) which are managed under the WCM. Recent research also indicates that temperature reservoirs may be a source of greenhouse gases on par with the previously acknowledged contributions of tropical reservoirs.

Glades Reservoir

The Glades Reservoir (Glades) is proposed as a new impoundment on Flat Creek in Hall County, Georgia. The proposed Glades Project has changed considerably (from pumped storage to treatment via Cedar Creek Reservoir, to pass-through to Lake Lanier, to other possible piping and treatment options since the 2011 proposal was submitted for CWA Section 404 permitting). The EPA notes that the proposed Glades project is included in a number of the alternatives and there are some key differences in the Glades project described in the WCM DEIS and the recently proposed Glades Reservoir DEIS. The EPA recommends that the USACE review and consider climate models that predict changes in precipitation, seasonal patterns of rainfall, X

Response to ACF188 – EPA

W. Greenhouse gas emissions are discussed, as appropriate, in section 6.8 of the EIS.

X. After the draft EIS was made available for public commit, Georgia rescinded the certification of need for Glades Reservoir. It is now not reasonably foreseeable that Glades Reservoir will be permitted and built. Therefore, USACE conducted additional modeling for the final EIS and developed additional alternatives to include the entire amount of Georgia's water supply request coming directly from Lake Lanier. To the extent that Glades Reservoir is maintained in some of the alternatives in the final EIS, only for consistency between versions, USACE provided additional discussion on the assumptions that were used for the modeling. The modeling for the Glades Reservoir permit application is a separate and distinct action and any information associated with that action should be requested from USACE, Savannah District.

greater frequency of intense storms, and extended droughts and the effects those changes may have on the operation of the system.

Inconsistency between Glades Reservoir DEIS and the ACF WCM DEIS: The EPA is concerned that pertinent information (for the ACF WCM) recently published in the Savannah District's Glades Reservoir DEIS [1]was not disclosed in the ACF WCM DEIS. The Glades Reservoir DEIS's NAA includes the assumption that the Mobile District will grant the state of Georgia the full 297 mgd withdrawal allocation. As a part of modeling for all alternatives (including the NAA), the Glades Reservoir DEIS states, on page 4-232, "On average," the Glade Reservoir will result in, "an estimated 1-foot decrease for daily pool level at Lake Lanier; and a 0.05-foot decrease in daily pool level at West Point Lake…A decrease of approximately 5.5 feet in the Lake Lanier minimum daily pool level during a critical drought period similar to the 2007-2009 drought."

In the Glades Reservoir DEIS, the NAA assumes that Hall County will be granted 60 mgd of the 297 mgd requested by Georgia. The NAA including the 60 mgd allocation was modeled to show the daily pool elevation of Lake Lanier. On page 4-66 of the Glades Reservoir DEIS, it states that, "There is a 1-foot decrease to Lake Lanier's water surface level going from the Baseline Conditions (L18) to 2060 conditions (including the Proposed Project, all action and NAA). The 1-ft decrease, again, is a result of the overall system demand increase in the future (discussed further in the Cumulative Effects Section) rather than the effects of adding the reservoir to the ACF system." The EPA understands that the ACF DEIS modeled impacts to Lake Lanier pool elevation using 128 mgd (which includes the last official water contract agreement of 20 mgd from Lake Lanier). During discussion about the alternative that considers just the State of Georgia's water allocation request (Alternative 7D) on page 6-15 (ACF WCM DEIS, section 6.1.1.1.1.6), the USACE states, "…daily water surface elevations at the 90-percent exceedance level (Figure 6 1-4) are essentially the same, except that median daily water surface elevations in July through early September would likely range up to 0.5 ft. lower than the elevations under the NAA." Later when the USACE discusses Alternative 7E (Georgia allocation request plus Glades Reservoir) the USACE states, "This alternative is identical to Alt7D except that the reallocation of storage in Lake Lanier would be reduced to support 237 mgd and an additional 40 mgd would be available from Glades Reservoir..."

X

The EPA is concerned that there is an inconsistency between the modeled water supply impacts at Lake Lanier between the Glades Reservoir DEIS (1' elevation loss during the dry season) and the ACF WCM DEIS (.5' elevation loss during the dry season). The EPA understands that should the Georgia 2013 request be implemented with or without Glades it could cause up to a 0.5 ft. of elevation loss from Lake Lanier during the dry season (July through September). This is a loss of 524,700 acre-feet of water. The EPA is concerned that this elevation loss is not fully discussed. The EPA also notes this is not consistent with the modeling conducted by Savannah District.

Storage in System: A key question is whether storing water in an additional new reservoir such as Glades actually represents a gain or loss to the system. The impoundment of these waters would be less than one mile upstream of Lake Lanier. Without Glades that water would

[1] US Army Corps of Engineers, Savannah District, *Glades Reservoir Draft Environmental Impact Statement*, Oct. 2015. P.2-35

otherwise flow into Lake Lanier. Could the same volume of water be withdrawn directly from Lake Lanier by Hall County without incurring the impacts of the impoundment? (The EPA notes that one version of the Glades project proposed a pass-through scenario whereby water stored in Glades would simply be released back to the Chattahoochee River to flow into Lake Lanier from which it would be withdrawn.). The impacts of construction of the Glades reservoir include the loss of over 90,000 linear feet of stream, 39 acres of wetlands, loss of water from the system due to inactive storage in an additional reservoir, as well as evaporative losses from the impoundment. Given that the DEIS considers a range of allocation and withdrawal options, it seems entirely possible that the volume of supply sought for Hall County could be stored in and then withdrawn directly from Lake Lanier. Alternatives 7D and 7F (without Glades) include a Lanier withdrawal value of 297 mgd; Alternative 7E uses a Lanier withdrawal value of 257 mgd. These are 112 mgd and 72 mgd greater than the 185 mgd Lanier withdrawal value used for the PAA (in association with 40 mgd assumed for Glades). This appears to validate the feasibility of storing the full supply needed for Hall County (beyond that coming from Cedar Creek Reservoir, already in existence) in Lake Lanier without incurring additional adverse impacts to aquatic resources for conversion of streams and wetlands to impounded waters.

Description of Glades Reservoir and Pass through Transmission: The EPA notes that there is not an adequate description of the proposed Glades Reservoir within the ACF WCM DEIS. Since Glades Reservoir was treated as an integral part of the Preferred Action Alternative (PAA), the EPA thinks a more robust description of the Glades Reservoir and the Savannah District's DEIS should be included within the FEIS. Most notably, the EPA is concerned that the pass-through transmission scenario[2] concept as proposed by Hall County in the Section 404 permit application and described in the Glades Reservoir DEIS is not disclosed. The EPA understands that the Mobile District must approve this pass-through scenario and it could potentially require a USACE policy change to implement; however, there is no discussion regarding this in the ACF WCM DEIS.

X

In addition, the DEIS refers (in Section 2.1.1.1.6.10) to the Glades Reservoir proposed safe yield of 72.5 mgd. This represents a projected 2060 supply-demand gap of 42.4 mgd, but it should be noted includes an assumed 18 mgd supply from Lake Lanier, as well as supply from Cedar Creek Reservoir and groundwater. (Note: this is also ten years beyond the 2050 demand used elsewhere in the ACF DEIS). The ACF DEIS also notes that the iteration of Glades Reservoir assumed that water would be transported by pipeline to Gainesville for treatment and distribution with return flows to Lake Lanier. However, this is not the current proposal. Other piping and treatment strategies could involve returns in different locations; the potential configuration should such a reservoir project go through is currently under review.

Impacts of Glades Project: The DEIS acknowledges (Section 5.1.2) that, "Since this project is still in the permitting process, it is not known whether or when the project will be implemented." The DEIS also states, "The assumption that Glades Reservoir would be constructed is made for analytical purposes only and does not constitute an agency decision on the merits of the project," The inclusion of the Glades Reservoir in an interim form could appear to imply a preference for the project, without considering the impacts of its construction and operation. Glades could potentially impact 39 acres of wetlands and over 90,000 linear feet of streams just in terms of

[2] US Army Corps of Engineers, Savannah District, *Glades Reservoir Draft Environmental Impact Statement*, Oct 2015, p. 2-35

direct impacts. These are being considered in a separate review for the project itself, but this ACF WCM Update DEIS includes the construction of Glades in the PAA without taking those impacts into account. Statements such as, "Glades Reservoir, together with a reallocation to support a withdrawal of 165 mgd under the PAA, would satisfy a substantial portion of Georgia's 2040 water supply need" imply a qualitative judgement that construction of Glades Reservoir is favored, and circumvents the comprehensive environmental and public interest review currently underway.

Current Demand Forecast: The demand forecast released in August 2015 by MNGWPD calls for additional consideration of the accuracy of supply needs, given that actual demand does not appear to be on the trajectory used for Glades. That Hall County's 2050 water demand is forecast to be 31-34 mgd rather than 68 mgd leads to a considerably lower demand than the demand identified in the Glades DEIS (72.9 mgd). Meeting Hall Counties demand by allocating water from Lanier appears to be the least environmentally damaging approach.

X

Recommendation: The EPA recommends the USACE (Mobile and Savannah Districts) more consistently evaluate Lake Lanier pool elevation, storage, water supply and related impacts within their respective FEISs. The EPA supports a more consistent approach (between the two USACE Districts) to modeling and evaluating Glades Reservoir impacts on storage within Lake Lanier. For disclosure, of data and information from the Glades Reservoir, the EPA recommends the current modeling and project configuration for the Glades Reservoir be discussed in the ACF WCM FEIS. The EPA also recommends the USACE comprehensively describe the current configuration of the Glades Reservoir project in the FEIS as well as discuss the pass-through concept and Mobile District's approval role. In addition, the EPA recommends the USACE more fully describe the Glades project and properly disclose the impacts associated with the construction and operation of the project. Most importantly, the EPA strongly recommends the USACE consider the updated demand forecast and population projects released in August 2015 by MNGWPD and disclose how this these new forecast impacts the PAA and the feasibility of the Glades project.

Aquatic Life and Endangered Species

The EPA notes that the U.S. Fish & Wildlife Service (FWS) has been actively engaged in the review of the WCM and has submitted various comment letters to the USACE regarding the protection of threatened and endangered species within the Basin. The EPA notes that the FWS provided specific comments to the USACE in August 2013 that recommended measures to protect aquatic resources in the Basin. The EPA also notes the USACE did not incorporate many of the FWS recommendations during the screening of the alternatives. Of particular concern are salinity conditions in the Apalachicola Bay that do not appear to be fully considered in the screening of the alternatives. The EPA understands that the FWS developed an independent alternative.

Y

Recommendations: The EPA principally defers to FWS recommendations for the protection of threatened and endangered species on this project and encourages the USACE to include full consideration of the FWS recommendations. The DEIS emphasizes the importance of water quality to aquatic life in the ACF Basin: "Water quality degradation is a frequently cited concern for the riverine-dependent species included in the Comprehensive Study's Protected Species Report (Ziewitz et al., 1997). It is quite likely that water quality is a limiting factor for several of

Response to ACF188 – EPA

Y. As part of USACE coordination with the USFWS under the Fish and Wildlife Coordination Act, USFWS performed salinity modeling for Apalachicola Bay. The results of that modeling are included in the final EIS as an appendix to the USFWS's draft Fish and Wildlife Coordination Act report in appendix J of the EIS. USACE also worked closely with the USFWS on endangered species in the ACF Basin in the developing the interim operating plan (IOP), revised IOP, and modified IOP. Our 15-plus-year partnership has provided valuable information on how to operate the system in compliance with the Endangered Species Act (ESA). In devising alternatives, USACE incorporated several USFWS suggested measures and maintained at least the current level of operations for protecting threatened and endangered species in the ACF Basin in each alternative. Those measures are discussed in section 4.1.2.8 of the EIS. USACE consulted USFWS under the ESA on the PAA, submitted a biological assessment, and accepted a biological opinion. USACE will comply with the provisions of the biological opinion, which is included in the final EIS in appendix J. In evaluating all alternatives, USACE made sure that its water quality responsibilities at Buford Dam, Peachtree Creek, West Point Dam, and below its projects are met.

the species, including many of the 16 federally listed mussels listed in Table 2.5-11. Any actions that could alter water quality should address effects on the protected species."

Monitoring and Adaptive Management Plan

The EPA is concerned regarding the lack of a monitoring and adaptive management component within the DEIS. Given the significant risk and uncertainty associated with the operation of the ACF Basin and climate change (i.e., changes in rainfall patterns, extended droughts), the EPA is concerned that there are no mechanisms or framework in place to ensure responsive changes to the operation of the ACF system. The EPA notes the uncertainty associated with the proposed alternatives analysis, metrics used for alternative selection and the lack of specificity in the water quality modeling tools used for the DEIS. Therefore, the EPA remains concerned about the potential impacts to water quality and other aquatic resources/species.

Recommendation: Given the uncertainty associated with how various metrics were used to develop the alternatives analysis and the water quality modeling tool, the EPA supports the formation of an Federal Interagency Workgroup (IWG) consisting of the National Parks Service, the USFWS, the National Marine Fisheries (NOAA), the Southeastern Power Administration, the EPA and the USACE to fully assess the potential water quality impacts due to changes in Reservoir Operations. The IWG would help develop a monitoring and adaptive management plan that would provide a forum to refine the reservoir operations along the rivers to more effectively balance the water requirements of the stakeholders. We support a process that uses functionally defined metrics as proposed by the Fish and Wildlife Service as a basis for future decision-making.

Z

The recommended Federal IWG could include a subgroup to evaluate and analyze how to incorporate water quality into the metrics for alternatives analysis so that it would meet the congressionally authorized purposes of all Agencies. This could include an analysis of the most appropriate models to use for evaluating the impacts of operations of the dams on water quality and the potential for any improvements that could be made to the operation of the dams to include components of naturalized flow. There are a wide range of over a hundred large scale dam re-regulations that have been conducted both in the US and around the world that have resulted in improved aquatic life in riverine sections below large dams while maintaining congressionally authorized purposes. The EPA would assist in evaluating the effects of the WCM operations on water quality standards, with a particular emphasis on physiochemical endpoints such as dissolved oxygen, biological endpoints such as sensitive aquatic species and physical endpoints that protect the designated aquatic life use, including adequate flows to maintain the physical integrity of habitat. The EPA would also be willing to help develop an adaptive management approach to implement the WCM's in the future.

USACE Institute for Water Resources Guidance: The USACE Institute for Water Resources developed "Converging Waters: Integrating Collaborative Modeling with Participatory Processes to make Water Resources Decisions (2011)" that provides guidance for water management decision making. This document provides guidance for a modeling process that emphasizes "collaborative development of performance measures, agreement on modeling data and methods, joint development of the models in an open and transparent process, and agreement on the initial alternatives to be modeled" (p. 62). The USFWS provided suggestions for developing performance measures to the USACE for alternatives analysis, but many of the recommendations

Response to ACF188 – EPA

Z. Section 3.2 of the EIS includes the following statement: "The Mobile District continually reviews the WCM as needed to ensure that the best use is made of available water resources." In addition, the section refers to USACE, South Atlantic Division Regulation No. RBT-2 (*Water Control Management in South Atlantic Division* [2010]), which mandates that "at a minimum, Districts should review their water control manuals/plans every 5 years." Those reviews provide the basis for determining whether formal updates are needed and include any formal or informal input received from agencies and stakeholders. The process for future WCM updates would include appropriate technical analysis, public involvement, and environmental compliance activities. If, at some point in the future, the states of Georgia, Alabama, and Florida develop an interstate agreement or compact for managing the waters of the ACF Basin, future WCM updates would be coordinated in accordance with established USACE regulations.

Updating WCMs for projects is an inherent USACE function. It is important to distinguish that the Savannah Harbor expansion project and the Everglades restoration project were feasibility studies and that the Master WCM update is not a study, but only a change to operation of existing constructed projects. During the past 26 years USACE has attempted to update its WCMs for the ACF Basin. During that time, USACE has participated in interagency working groups, comprehensive studies, interstate compacts, settlement discussions, meetings between state governors, litigation, and negotiations led by the U.S. Secretary of the Interior. EPA and USFWS were involved in several of those cooperative efforts. USACE has addressed EPA's comments as well as the comments of other agencies and stakeholders in its efforts to update the WCMs, but does not think another attempt at an interagency working group is needed or that it would improve the current process. USACE may consider interagency working groups on future studies.

USACE reviewed all of the information provided during the extended comment period and requested any additional modeling results that EPA has done on the system. USACE addressed and considered all additional information that EPA provided. USACE also used its peer reviewed and approved basinwide model for evaluating water quality impacts.

provided in their 2010 Planning Aid Letter (PAL) and Coordination Act Report of 2011 have been largely overlooked in the DEIS. These recommendations are referenced in the more recent PAL of 2013 as still applicable because they had not yet been integrated.

Recommendation: The EPA recommends that in order to provide for collaborative development of performance measures, the USACE consider integrating USFWS performance metrics for floodplain connectivity. USFWS suggest using frequency of days an event is exceeded over an annual period percent of years that can exclude months that were exceeded by lumping them together as frequency of years. The EPA suggests that rather than using the following indicators "percent of years with days < flow, median number of days per year < flow, median consecutive days per year < flow, annual maximum 30-day growing season floodplain connectivity (acres)" (page 4-68), the USACE should integrate the USFWS suggested performance measures, such as: "maximum number of days per year < flow; maximum number of consecutive days per year < flow; frequency (% of days) of growing season floodplain connectivity (acres)" (USFWS, Coordination Act Report, 2011). The EPA believes that incorporating frequency of these events over annual periods (rather than using percent of years) would more adequately represent the frequency, duration, and magnitude of these events rather than simply the median value or annual maximum value of floodplain connectivity.

Response to ACF189 – Georgia Power Company

From: Blalock, Tanya D.
Sent: Monday, February 01, 2016 1:42 PM
To: ACF-WCM
Subject: [EXTERNAL] Georgia Power Comments on Draft ACF Water Control Manual
Attachments: Ga Power Draft Comments ACF Water Control Manual 020116.pdf

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Please accept the attached comments on the Draft ACF Water Control Manual. A copy of these comments was also sent by overnight mail.

Thanks,
Tanya Blalock
Georgia Power
Environmental Affairs General Manager
Water, Land and Biological Services

Environmental Affairs
Bin 10221
241 Ralph McGill Boulevard NE
Atlanta, Georgia 30308-3374

Tel 404.506.2102

GEORGIA POWER
A SOUTHERN COMPANY

February 1, 2016

Submitted via Federal Express and electronically at

Commander, U.S. Army Corps of Engineers
Mobile District

Re: Draft Environmental Impact Statement for Updated Water Control Manuals for the Apalachicola-Chattahoochee-Flint River Basin

Dear Mobile District Commander:

Georgia Power Company ("Georgia Power" or the "Company") appreciates the opportunity to submit these comments on the draft Environmental Impact Statement ("EIS") and the draft Water Control Manual ("Manual") for the Apalachicola-Chattahoochee-Flint River Basin ("ACF Basin"). The U.S. Army Corps of Engineers' ("Corps") issuance of the draft EIS, the draft Manual and the associated draft water control plans for each of the federal hydropower facilities along the ACF Basin is an important step toward the achievement of needed certainty for ACF Basin stakeholders about future operation of the federal hydropower facilities and the basin as a whole. Development of a robust EIS and updated Manual will help ensure that the region's water resources are managed in a sustainable manner to support the region's economy, to protect public health and natural systems, and to enhance the quality of life for all citizens.

Georgia Power is the largest subsidiary of Southern Company (NYSE: SO), one of the nation's largest generators of electricity. Value, Reliability, Customer Service and Stewardship are the cornerstones of the Company's promise to 2.4 million customers in all but four of Georgia's 159 counties. Committed to delivering clean, safe, reliable and affordable energy at rates below the national average, Georgia Power maintains a diverse, innovative generation mix that includes nuclear, 21st century coal and natural gas, as well as renewables such as solar, hydroelectric and wind.

Water resources are vital to our core business, and power generating facilities within the ACF Basin are critical components of Georgia Power's fleet. Georgia Power appreciates the Corps' incorporation of actual withdrawal amounts from Georgia Power's existing facilities into the HEC-ResSim model for the "No Action Alternative" in the draft EIS, which is consistent with Georgia Power's comments during the scoping period. In addition to existing generating facilities, however, the Corps' EIS should consider water needs to support projected increases in generating capacity in the region in its analysis. A

As the nation recovers from the Great Recession, the State of Georgia is fortunate to be in a position of growth, and population increases are projected for Georgia in the coming years. As the State's population grows, so will its need for electricity to support expansion of municipal, industrial and other sectors. Georgia Power must plan for future generation of electricity to meet this growing

Response to ACF189 – Georgia Power Company

A. The purpose of the EIS is to support the update to the Master WCM in determining how the USACE projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to implement those operations through updated water control plans and manuals. Because of the 11th Circuit Court ruling of June 2011 and the USACE legal opinion in 2012, updating the water control plans and manuals includes making a decision on Georgia's water supply request. Accordingly, the EIS considers not only operations for all authorized purposes, but also an expanded range of water supply alternatives associated with the Buford Dam/Lake Lanier project, including current levels of water supply withdrawals and additional amounts from Lake Lanier and downstream for Metro Atlanta that Georgia requested in 2015. Forecasting water demands for parts of the ACF Basin other than Metro Atlanta is outside the scope of Master WCM update process and this EIS.

demand throughout the State and region. In fact, while more recent projections are publicly available, the draft EIS acknowledges that up to 7,100 MW of energy capacity is projected to be added to the larger Southeast Electric Reliability Council (SERC) region by 2028. Draft EIS, Vol. 1 at 2-227. However, despite acknowledging that additional generating capacity will be needed in the larger SERC region, the Corps' draft EIS does not discuss the additional water that could be needed to support potential future generating capacity in the ACF basin as part of its analysis.

B

The Electric Power Research Institute (EPRI) provides approximate water requirements for a range of generating technologies that could be utilized to provide future energy needs. Water withdrawals may range from approximately 230 – 1100 gallons per megawatt-hour, depending on the generating technology of choice (i.e., combined cycle, steam cycle, etc.). *See* Water & Sustainability (Volume 3): U.S. Water Consumption for Power Production – the Next Half Century, EPRI Technical Report (2002) ("2002 EPRI Report").[1] Based on those water use estimates, 7,100 MW of generating capacity across the SERC region could require a range of approximately 39 – 187 additional MGD in water withdrawals. While it is difficult to predict exact locations of future generating facilities, it is reasonable to assume that water needed to serve such facilities would be met in major river basins within the SERC region, including the ACF Basin.

Based on more recent projections issued by the Energy Information Administration (EIA), the southeast portion of the SERC region is expected to add 5,880 MW of additional generating capacity by 2040. *See* Annual Energy Outlook 2015, issued April 14, 2015 (referencing the southeast portion of the Southern Electric Reliability Council region).[2] Even at this scaled back projected growth, up to 155 MGD could be needed throughout the southeast SERC region to support reliable water withdrawals for the range of available generating technologies. *See* 2002 EPRI Report. It should be noted that population growth and associated demand could also increase at a faster rate than recent projections. As a result, the Company suggests the Corps incorporates an appropriately conservative estimate of future water withdrawals to support increased generating capacity needs.

Georgia Power appreciates the opportunity to submit these comments on the draft EIS and looks forward to continued participation in the Corps' process for updating the Manual in the future. If you have questions or comments please feel free to contact me directly at (404) 506-7026 or George Martin of my staff at (404) 506-1357.

Sincerely,

Tanya Blalock

Tanya Blalock
General Manager Environmental Affairs

[1] EPRI Product ID 1006786 is available for public download at http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=000000000001006786

[2] Available at https://www.eia.gov/forecasts/aeo/tables_ref.cfm (accessed December 21, 2015).

Response to ACF189 – Georgia Power Company

B. See response to comment A above.

From: Peter Savitz
Sent: Friday, January 29, 2016 10:31 AM
To: ACF-WCM
Cc:
Subject: [EXTERNAL] Water Control Manual comments

Commander, U.S. Army Corps of Engineers

I am writing today as a concerned Lake Lanier land owner.

I am urging the Corps to revise the navigation plan to avoid the severe impact to the Lake that the proposed plan will have on Lanier's water levels. Further I would urge the Corps to incorporate rigorous drought prediction that will trigger changes in the reservoir operations to preserve lake levels during drought periods. A

In addition I would hope that the Corps would manage the reservoirs to retain maximum storage levels in the reservoirs so that drought conditions will not have the devastating impact that was experienced in December of 2007. B

I also would request that the Corps study, model, and plan for the possibility of raising the Lake Lanier full pool level to 1073. This could add significant water storage capacity and help prevent draught issues in the future and provide more water for downstream uses. C

Thanks for considering these concerns.

Margo and Peter Savitz

1

Response to ACF190 – Margo and Peter Savitz

A. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

B. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

C. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

January 28, 2016.

Commander, U.S. Army Corps of Engineers,
Mobile District,
Attn: PD-EI (ACF-DEIS)

Dear Commander,

Having just read the submission to you by the Lake Lanier Association, regarding the Corps' Water Control Manual, I feel compelled to heartily endorse LLA's position in this matter. I ask that you seriously reconsider your intention to lower Lake Lanier's levels to those proposed in your navigation plan.

As the Lake Lanier Association submission reports, some of the calculations made by the Corps of Engineers may be based on inaccurate statistics. It would make sense, therefore, to re-examine the navigation plan in order to avoid the possibility of having a severe impact on the lake's water level. A

It would seem logical to maintain a water elevation close to full pool, particularly when forecasts indicate that a drought is imminent. Should the structural integrity of dams and water retention structures not be in question, for a level of 1073 feet, the tremendous amount of extra water volume stored would greatly ameliorate supply problems resulting from those droughts. B

The supply of water is so important to the well being of this region that any consideration of allowing low levels advocated in the Corps navigation plan should be treated with great caution. C

Sincerely,

Tom Baldwin

Response to ACF191 – Tom Baldwin

A. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

B. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

C. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.

From: Dan Graveline
Sent: Friday, January 29, 2016 10:29 AM
To: ACF-WCM
Subject: [EXTERNAL] Water Control Manual

Ladies & Gentlemen,

I am writing to offer my comments on the Corps' proposed new Water Control Manual for Lake Lanier. Specifically there are four issues I believe to be of concern and merit further analysis. These are primarily concerns regarding the potential impact of drought conditions on Lake Lanier as follows:

I am concerned the proposed navigation plan for the Chattahoochie River could have severe impact on lake levels during severe drought periods. A

I would encourage steps be taken to revise reservoir operations to maintain adequate lake levels during drought periods. B

Ideally, I would like to see the lake retain maximum storage levels in an effort to minimize the impact of droughts. C

I would also encourage consideration of possibly raising Lake Lanier's full pool level to 1072 feet. D

Thank you for offering an opportunity for those of us who have property on Lake Lanier and utilize the lake frequently to offer our input as you develop your Water Control Manual for this wonderful asset.

Sincerely,

Dan Graveline

Response to ACF192 – Dan Graveline

A. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

C. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

D. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

Response to ACF193 – David Ruppenicker

From: David Ruppenicker
Sent: Friday, January 29, 2016 10:28 AM
To: ACF-WCM
Cc: Larson, Sally
Subject: [EXTERNAL] Water Control Manual (WCM)

Commander, U.S. Army Corps of Engineers
Mobile District

Attn: PD-EI (ACF-DEIS)

Dear Commander:

I am writing in response to the revised navigation plan being proposed by the Corps of Engineer's in the Water Control Manuel (WCM). I bought a home (primary residence) on Lake Lanier in May of 2013. Several months later, I received a welcome letter from the Hall County Tax Assessor's office informing me that my annual property taxes were being raised by more than $1K. I would have preferred an apple pie. It is my understanding that taxes on homes that do not have a dock permit were not increased. I guess my point is that if the Corps is allowed to drop Lake Lanier by more than 4-feet in a drought, inlets will dry up, property values on and off the lake will no doubt decline and most, if not all of the boat ramps at the many public parks will be closed. I shutter to think how many family businesses on the lake will be adversely affected by this proposal. As a positive, all of this may ultimately result in lower property taxes. A

A. Comment noted.

It seems like a more common sense approach would be for the Corps to come up with a plan that would effectively raise the lake level from 1071 to 1073. Permanently increasing the the level for full pool would no doubt enable the Corps to better manage lake levels so that drought conditions will not have the devastating impact that was experienced in December, 2007. B

B. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

Maybe it is our own fault but many of my neighbors and other stakeholders were unaware of this proposal until recently. For this reason and for the health of the lake, I am asking that the Corps regroup and go back to the drawing board with the WCM proposal. Thank you for your attention to these comments.

Sincerely,

David Ruppenicker
Property Owner

From: Stuart Kyle
Sent: Friday, January 29, 2016 10:07 AM
To: ACF-WCM
Cc:
Subject: [EXTERNAL] Water Control Manual ("WCM") comment period

Dear Colonel Chytka, Commander USACE, Mobile District.

As residents on Lake Lanier, we support of the comments of the Lake Lanier Association on the subject matter. More specifically:

the need for the Corps to:

1. Revise the navigation plan to avoid the severe impact the proposed plan will have on Lanier's water levels. A
2. Incorporate rigorous drought prediction that will trigger changes in reservoir operations to preserve lake levels during drought. B
3. Manage the reservoirs to retain maximum storage levels in the reservoirs so that drought conditions will not have the devastating impact that was experienced in December 2007. C
4. Model and plan for raising Lake Lanier's full pool level to 1073. D

Your respectfully,

Stuart and Karen Kyle

Response to ACF194 – Stuart and Karen Kyle

A. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect

C. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

D. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

From: Aderholt, Tim
Sent: Friday, January 29, 2016 9:57 AM
To: ACF-WCM
Subject: [EXTERNAL] Comments of the Corps Proposed Navigation Plan for Lake Lanier

I am a business owner in Gainesville Ga. Lake Lanier is of vital importance to the economy of our region. In addition to being a business owner, I am an avid boater. I have a houseboat and 2 smaller boats. I spend a large amount of money each year recreating on Lake Lanier. The health of the Lake is of vital importance to me and my family as well as my employees and customers. Please consider raising the lake full pool level to 1073. Also, I feel we need to prepare to avoid another crisis such as happened in 2007 by changing drought prediction and managing the water reservoirs to maximum levels.
Sincerely,

A

B

Tim Aderholt

Response to ACF195 – Tom Aderholt

A. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

B. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

From: James Whitehouse
Sent: Friday, January 29, 2016 9:53 AM
To: ACF-WCM
Cc:
Subject: [EXTERNAL] WCM Proposal

I have been a Lake Lanier resident for the past six years as well as a frequent visitor since the early 1980's. I firmly believe that your proposed navigation plan will have a severe impact on Lake Lanier's water levels. Before implementing this plan, I suggest that other measures be utilized to achieve your goal. First of all, I suggest raising Lake Lanier's current full pool level from 1,071 to 1,073. The cost of revamping some public boat ramps etc. would be far less than the damage caused by the devastating affects of drought experienced during 07'. Secondly, I believe that implementing strong drought prediction measures that affect changes in reservoir operations to maintain lake levels during a drought would be very beneficial. Thirdly, I believe that all reservoirs should be managed to retain maximum storage levels in order to compensate for future drought situations. Lastly, the proposed plan could have significant negative affects on the fish and wild life that thrive both in and around the lake.

A

B

C

D

1

Response to ACF196 – James Whitehouse

A. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

C. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

D. As described in section 4.1.2.8.1 of the draft EIS, fish spawning operations at ACF Basin reservoirs are described in South Atlantic Division Regulation PDS-O-1 (*Project Operations, Lake Regulation and Coordination for Fish Management Purposes* [2010]) and draft USACE, Mobile District Standard Operating Procedure 1130-2-9 (*Reservoir Regulation and Coordination for Fish Spawn Management Purposes* [2005]). During the fish spawning period for each water body, USACE's goal is to operate for a generally stable or rising lake level and a generally stable or gradually declining river stage on the Apalachicola River for approximately 4–6 weeks during the designated spawning period. When climatic conditions preclude a favorable operation for fish spawn, USACE consults with the state fishery agencies and USFWS on balancing needs in the system and minimizing the effects of fluctuating lake or river levels. The PAA includes the existing fish spawn operations and does not appear to have negative impacts on fish in Lake Lanier.

From: Sonny Davis
Sent: Friday, January 29, 2016 9:49 AM
To: ACF-WCM
Subject: [EXTERNAL] The Corps' Water Control Manual(WCM)

I ask that you give consideration to the following as you deal with the new WCM re: Lake Lanier. As a home owner on Lake Lanier for the past thirty years we have experienced a considerable variance in water level on the lake, some of which are Acts of God and others just management. As you consider the new WCM please take in consideration that the water level of Lanier can be raised from 1071 to 1073 adding millions of gallons to the lake. While I'm aware that it will require some additional investment in the lake, I believe it will not endanger any existing property and give you considerably more control of the lake levels. Other areas to consideration are Navigation and Drought Prediction. As a resident I have seen considerable improvement in the lake levels as well as how the lake is being managed. The meeting at Riverside Academy a number of years back has garnered many positive changes. Hopefully we can continue to see improvements that will balance the use of demands on Lake Lanier well into the future.

A

B

Thank You,

H.L. "Sonny" Davis

Response to ACF197 – Sonny Davis

A. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

From: RICHARD I YORK
Sent: Friday, January 29, 2016 9:43 AM
To: ACF-WCM
Subject: [EXTERNAL] ACF Water Control Manual Comments

Thank you for the opportunity to comment on your proposed changes to the ACF Water Control Manual Update. My wife and I have been full time residents on Lake Lanier (Hall County) since 2003. We are regular recreational users of the lake.

First, I would say that I fully support the comments already submitted to you by the Lake Lanier Association in a letter dated January 28, 2016. A

Navigation I feel too much priority is given in your proposed WCM to the needs of navigation compared to the needs of drinking water supply and recreation. While down stream river navigation was originally envisioned as an important activity, reality has proven there are others means available to serve these intended purposes. Drinking water supply and recreation have far more economic impact on the region and should be given a greater priority. B

Recreation Season It is inconceivable to me that you could seriously think that the recreation season on Lake Lanier lasts only from May to July. There are as many recreational users and fisherman on the lake after July as before. The recreation period for Lanier should be no different than for West Point Lake. C

Protection of Mussels The priority given to maintain river flow for mussels in the Apalachicola River is wrong. These mussels have survived variation in river levels for centuries prior to building the ACF facilities and will continue to survive without being given preference for water flow compared to the needs of drinking water supply and recreation. D

Full Pool I strongly support the recommendation to raise the full pool level of Lake Lanier to 1073. This is the most economical means of increasing the water storage capacity of the ACF system. E

Reservoir Operations It is extremely disappointing to me that the proposed WCM does not take into account the recommendations of the ACF Stakeholders. The Stakeholders Proposal represents a very through and fact based evaluation of options and recommendations. It has the support of representative from Florida, Alabama and Georgia. F

Thank you for considering my input.

Richard York

1

Response to ACF198 – Richard York

A. Comments from Lake Lanier Association were considered and addressed, and responses are provided at comment ID number ACF145.

B. The operations described in the WCM are based on balancing all authorized purposes throughout the ACF system. Navigation is an authorized purpose for the system.

C. Additional research into our visitation reporting system did in fact determine that the months with the most visitors to Lake Lanier are May–September. The recreation analysis was revised in the final EIS to reflect that change.

D. The type of prioritization suggested in the comment is contrary to USACE's stated intent to operate the ACF system in a balanced manner to support all authorized purposes. Conservation storage in Lake Lanier, West Point Lake, and Walter F. George Lake is used to support several project purposes such as hydroelectric power, navigation, and fish and wildlife conservation without specifically allocating reservoir storage to any one of them. Operations for fish and wildlife conservation were developed in conjunction with the USFWS under the section 7 consultation process incorporating the best available data and science. As part of the finalization of the WCMs, USACE engaged in section 7 consultation with USFWS and all pertinent documentation has been provided in appendix J of the EIS.

E. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

F. The ACF Stakeholder's sustainable water management plan (SWMP) was received by USACE in early June 2015. USACE received the report and its recommendations too late to be fully evaluated and considered in the draft EIS. Further, the SWMP, as initially submitted to USACE, did not include the necessary supporting technical documentation and underlying assumptions to fully evaluate the recommended management measures. The SWMP recommendations were considered to the extent possible in the final EIS.

From: Diane Rooks
Sent: Friday, January 29, 2016 9:38 AM
To: ACF-WCM
Cc:
Subject: [EXTERNAL] comments

Corps of Engineers,

Thank you for the opportunity to submit comments about our wonderful lake. As a native of Atlanta, I have enjoyed spending time on Lake Lanier since it was created in the late 1950's. I have always loved the beautiful, natural setting for relaxing and having fun. I even remember when the water was considered "drinking quality" and we drank it right out of the lake while camping on the islands in the 60's and 70's.

So much has changed with increased development and usage. I still love to explore the islands with my grandchildren and certainly want to preserve them, but do not like the bright white riprap that is being put around them to control erosion. Isn't there something else that could be used that wouldn't stand out and look so unnatural—perhaps ground colored stone or mesh? A

Another concern I have is the level of the lake during times of drought. Raising the level seems the best way to help with that problem, but why not do it gradually? I suggest raising it to 1072 for several years so homeowners can adjust before raising it to 1073. Nobody wants to see the beaches disappear and this would allow them to expand more naturally. B

As a lake homeowner, I'd like to see some limitation on wakeboards being used near docks. We cannot enjoy using our dock on weekends in the summer because the wakes of boats with wakeboarders are huge and they get so close to our dock. They certainly do not pay attention to the 100' rule and it's actually dangerous to even be on the dock at times. We live on Four Mile Creek and the water in front of our dock looks more like an ocean than a peaceful lake. Perhaps some warning signs would help or markers indicating the water is not suitable for wake boards. How about warning signs posted at marinas and launching ramps and then enforcing the 100' limitation? C

As an LLA member, I want to do everything possible to assure that our lake stays beautiful and natural and safe in the years to come and am willing to participate in projects to make that happen.

Thanks for all you do,

Diane Rooks

Response to ACF199 – Diane Rooks

A. Lakeshore erosion control techniques are outside the scope of the Master WCM update.

B. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

C. Determination of the types and locations of waterborne recreation activities is outside the scope of the Master WCM update. Complaints about the operations of specific motor vessels should be made to USCE project staff or local law enforcement.

From:
Sent: Friday, January 29, 2016 9:32 AM
To: ACF-WCM
Cc: lakeinfo@lakelanier.org; David Lebel
Subject: [EXTERNAL] Plead: Lake Lanier Corp Changes

Importance: High

Dear Commander, U.S. Army Corps of Engineers,

I would like to ask for the Corps to seriously consider the follow:

*Please rethink the navigation plan to help avoid severe impact on the Lake Lanier levels. A

*Create drought predictions with rigorous triggers to change the reservoir operations to preserve lake levels during drought. B

*Manage reservoirs to help maximize storage levels in reservoirs so drought conditions will not have serious impact as it did in December 2007. C

*Please model & plan to raise Lake Lanier full pool to 1073. D

Thank you for your consideration!

Lake Lanier Residents, Ali & Dave
Young Deer Cove

1

Response to ACF200 – Ali and Dave

A. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.
B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

   Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.
C. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.
D. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

From:
Sent: Friday, January 29, 2016 9:21 AM
To: ACF-WCM
Cc: Joanna Cloud; Cherry, Kim
Subject: [EXTERNAL] Corps' Water Control Manual ("WCM") Comments

To: Commander, U.S. Army Corps of Engineers Mobile District
Attn: PD-EI (ACF-DEIS)

Thanks for the open comment period. We have been home owners on Lake Sidney Lanier since 2003. We love everything about the "Lake Life" except for the uncertainty of the lake management by the Corps of Engineers. The manual that we are commenting on below should have been current throughout the decades to ensure relativity. The metro Atlanta and Lake Lanier communities have changed drastically since the last revision was updated and published.

Here are the points that I hope are addressed in accordance with and parallel to the Lake Lanier Association's comments:

1. The navigation plan is irrelevant and unneeded in comparison to the recreational opportunities. Please focus of the recreational needs and delete the navigational plan. A
2. Drought prediction needs to be incorporated to better help preserve the lake levels during a drought. Lake Lanier should never be let down as far as it was in 2007-2009. That was disastrous for the enormous economy now dependent on the lake level. B
3. The downstream reservoirs need to be better managed in anticipation of upcoming dry and drought times. C
4. In our opinion, the is no good reason for not raising the year-round full pool level to 1073. Doing this simple fix would eliminate most of the drought levels scenarios seen in the past, causing little hardship to any lake residents and allowing the governor of Georgia to forgo plans to build a new reservoir north of Lake Lanier. D
5. In our opinion, the downstream mollusks and sturgeon are not impacted as severely as the state of Florida claims. They and/or the EPS have not been able to prove beyond a drought that lower flows (above the minimum required) adversely affect these species. E

Thanks for your serious consideration of the LLA's comments and ours.

With sincerity,

Jim & Kim Cherry

Response to ACF201 – Jim and Kim Cherry

A. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.

B. USACE regulations do not allow use of forecasts in real-time project operations. Forecasted conditions may be used for planning future operations, but releases will follow the water control operations plan based on observed conditions within the watershed to the extent practicable. The Drought Contingency Plan (DCP) sections 3-02 and 3-03 contained as an exhibit in the WCMs in appendix A of the EIS includes discussion of drought identification and National Integrated Drought Information System (NIDIS). An NIDIS pilot program has been established for the ACF River Basin with the goal of developing a regional Drought Early Warning Information System. The system will use key indicators of drought to make timely drought forecast. USACE is a contributor and user of the NIDIS pilot project tools.

C. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

D. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

E. Additional analyses are provided in sections 6.4.3.1.4 and 6.4.3.3 of the final EIS to address comments received during the draft EIS comment period regarding effects on fish and wildlife resources in the Apalachicola River and Bay.

From: Judy Holt
Sent: Friday, January 29, 2016 9:18 AM
To: ACF-WCM
Subject: [EXTERNAL] ACF Water Control Manual
Attachments: Judy L Holt.vcf

Dear Colonel Chytka:

Thank you for the opportunity to submit comments regarding the Corps of Engineers' ("Corps") revision of the Water Control Manual ("WCM") for the Apalachicola-Chattahoochee-Flint River ("ACF") system.

I live on Lake Lanier and work in the Lake Lanier area. I am particularly concerned with preserving the water level and quality of Lake Lanier through the Corps' management. It is obvious that considerable time and effort was invested in the DEIS, and that effort is sincerely appreciated. It is also apparent that much consideration has been given to maintaining Lake Lanier in a healthy and sustainable condition as an integral part of the ACF, which is not only appreciated but crucial to the successful operation of the entire system.

However, I have one area of critical concern and several constructive criticisms of the DEIS that I wish to address. These are Navigation, Projections of Reservoir Levels During Recreation Season, Fall Rates, Unplanned Deviations, Full Pool Level of 1073, Drought Operations, and Reservoir Operations.

I would like to see the Corps:

1. Revise the navigation plan to avoid the severe impact the proposed plan will have on Lanier's water levels. A
2. Incorporate rigorous drought prediction that will trigger changes in reservoir operations to preserve lake levels during drought. B
3. Manage the reservoirs to retain maximum storage levels in the reservoirs so that drought conditions will not have the devastating impact that was experienced in December 2007. C
4. Model and plan for raising Lake Lanier's full pool level to 1073. D

Sincerely,

Judy L. Holt

GEORGIA PAINT & BODY
Judy L. Holt
1155 Highway 23 NW
Suwanee, GA 30024

Response to ACF202 – Judy Holt

A. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

C. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

D. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

Response to ACF203 – Steve and Carol Burrell

From: Burrell, Steve
Sent: Friday, January 29, 2016 9:09 AM
To: ACF-WCM
Cc: lakeinfo@lakelanier.org
Subject: [EXTERNAL] Water Control Manual Concern
Attachments: Letter to Corps.doc

Good Morning!

Attached is a letter to the Commander of the U.S. Army Corps of Engineers, Mobile District, voicing our concerns about the proposed changes to the Water Control Manual.

Steve & Carol Burrell

Steven L. & Carol H. Burrell

January 29, 2016

Colonel Jon J. Chytka
Commander USACE
Mobile District
Attn: PD-EI (ACF-DEIS)
P.O. Box 2288
Mobile, AL 36628

RE: Comments regarding update of ACF Water Control Manual

Dear Colonel Chytka:

Carol and I are very concerned about the Corps of Engineers' plans to revise the Water Control Manual for the Apalachicola-Chattahoochee-Flint River ("ACF") system. We believe that the impact on the water levels of Lake Lanier, both now and in the future, will be very negative.

It is our hope that the Corps will:

1. Revise the navigation plan to avoid the severe impact the proposed plan will have on Lake Lanier's water levels. A
2. Incorporate rigorous drought prediction that will trigger changes in reservoir operations to preserve lake levels during a drought. B
3. Manage the reservoirs to retain maximum storage levels in the reservoirs so that drought conditions will not have the devastating impact that was experienced in December 2007. C
4. Take action to reduce and repair areas where silt has clogged creeks and coves. D
5. Model and plan for raising Lake Lanier's full pool level to 1073. E

We appreciate the opportunity to have our opinions read and considered!

Sincerely,

Steven L. Burrell
Territory Manager
Johns Manville

Carol H. Burrell
CEO
NE Georgia Health Systems

Response to ACF203 – Steve and Carol Burrell

A. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect.

C. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

D. The Buford Dam/Lake Lanier project is a multipurpose reservoir authorized by Congress that was designed to fulfill several authorized purposes. Congress approved a conservation pool that allowed for large changes in elevation. The reservoir receives a varying inflow from the Chattahoochee River and its tributaries upstream of Buford Dam, and varying amounts of water are released during the day, months, and years to serve the multiple authorized water resource needs both within Lake Lanier (e.g., water supply, recreation) and downstream (e.g., flood risk management, hydropower and water supply). As a result of the varying inflows and amounts of water released to support the various authorized purposes, the water surface elevation of Lake Lanier fluctuates. During drier times of the year or drier years, lake levels could decline, exposing unvegetated banks that might erode. Planning for the project accounted for the possibility of erosion and provided storage within the reservoir to accommodate the resulting sediment.

E. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

From: Marilyn Hogan
Sent: Friday, January 29, 2016 8:58 AM
To: ACF-WCM
Subject: [EXTERNAL] Vital Water Flow for Apalachicola River

PLEASE CONSIDER OUR PLEA - an entire industry and way of life is at stake.

The health, productivity and sustainability of the Apalachicola River and Bay are critical to the economy and cultural heritage of Florida and the entire Gulf Coast. The Corps of Engineers must give the same fair and equal consideration to fish and wildlife conservation in the Apalachicola River ecosystem as they do the other authorized purposes of the ACF river system. A

- ***It is imperative that the Corps' rewrite of its manual revises the way it manages the flow of freshwater needed to maintain the extraordinary richness and productivity of the Apalachicola River, Floodplain and Bay ecosystem.*** B

Sincerely,
Guy P. Hogan
Marilyn J. Hogan

Response to ACF204 – Guy Hogan

A. The PAA includes fish and wildlife conservation operations throughout the basin (e.g., the reservoir fish spawn operations, minimum flow provisions in the Apalachicola River, and fish passage at Jim Woodruff Lock and Dam). Section 5 of the EIS provides additional information on the PAA. The EIS considered and disclosed the expected impacts that the PAA could have on fish and wildlife resources in the Apalachicola River and Bay (or elsewhere in the system). If expected impacts to significant resources would be adverse as a result of revised operations, USACE must consider potential measures to mitigate those effects. The analysis presented in section 6 of the EIS indicates that the PAA would have a minimal effect on flow conditions in the Apalachicola River and into the Bay, compared to current reservoir operations under the NAA. Because flow and water quality changes in the Apalachicola River and Bay are not expected under the PAA, no anticipated incremental effect would be expected on fish and wildlife resources in the bay.

B. The authorized purposes of the federal ACF system do not include a specific directive to provide freshwater inflows to Apalachicola Bay to sustain the resources of the bay. USACE does make releases to limit adverse effects to threatened and endangered species downstream of Jim Woodruff Lock and Dam, including Apalachicola Bay. USACE consulted on the PAA and the results are presented in appendix J of the final EIS. In the biological opinion the USFWS concluded that effects to estuarine invertebrate production are insignificant because the PAA provides slightly beneficial effects from increasing the number of freshwater pulses and increasing the number of days greater than or equal to 16,200 cfs in the winter. USFWS also anticipate only minor changes in salinity regimes and estuarine habitat due to the WCM.

Response to ACF205 – Friends of McIntosh Reserve – Jerry Stober

From: Angie Jerry Stober
Sent: Friday, January 29, 2016 2:14 PM
To: ACF-WCM
Subject: [EXTERNAL] FOMR comments on DEIS ACF WCM update
Attachments: FOMR comments to COE DEIS WCM.doc

Please see attached letter from Friends of McIntosh Reserve, Inc. with comments on Draft Environmental Impact Statement for the proposed Apalachicola-Chattahoochee-Flint Water Control Manual update.

Response to ACF205 – Friends of McIntosh Reserve – Jerry Stober

VIA EMAIL

Colonel John J. Chytka
U.S. Army Corps of Engineers
Mobile District
Attn: PD-EI (ACF-DEIS)
P. O. Box 2288
Mobile, AL 36628
Email: ACF-WCM@usace.army.mil

RE: Draft Environmental Impact Statement: Update of the Water Control Manual for the Apalachicola-Chattahoochee- Flint River Basin in Alabama, Florida, and Georgia and a Water Supply Storage Assessment (Oct. 2015)

Dear Colonel Chytka:

The Friends of McIntosh Reserve (FOMR) offer the following comments on the Draft Environmental Impact Statement (DEIS) for the proposed Apalachicola-Chattahoochee-Flint (ACF) *Water Control Manual* (WCM or Manual) update.

The FOMR comments will be focused on the 70 miles of river below Peachtree Creek which for decades was "off limits" for recreational use and enjoyment by the general public downstream from Atlanta. It was only after the Chattahoochee Riverkeeper sued the City of Atlanta that municipal sewage and CSOs were cleaned up over the last 20 years. This water quality improvement has encouraged recreational activities in an area that had been denied for decades. The DEIS does not recognize the assets along this reach of the Chattahoochee River, it is more than a mixing zone for Atlanta's municipal and industrial discharges. A

A. Tables 6.1-35 and 6.1-36 of the EIS show Chattahoochee River flow ranges for the alternatives considered at Whitesburg, Georgia. There is a negligible difference between lower flows or higher flows when comparing the NAA to the PAA over the period of record. Given the negligible differences between flows, there are likely to be negligible differences in the recreation experience between the NAA and the PAA.

The FOMR advocates for the Carroll County Parks System with particular emphasis on historic McIntosh Reserve and Moore's Bridge Parks, both 500 acres in size, located on the Chattahoochee River in Carroll County near Whitesburg, Ga. Carroll County estimates that it has invested over $6,000,000 on these parks and Moore's Bridge Park remains under development. A boat ramp exists at McIntosh Reserve and permits for a second at Moore's Bridge have been secured with construction imminent which will complete a water trail between these parks. The DEIS does not recognize Chattahoochee Bend State Park in Coweta County across the river from McIntosh which has an additional boat ramp. The State of Georgia developed this park with all the amenities at great cost. The existence of these parks in close proximity along the river has shown steady growth in recreational use over the last 10 years as the river water quality has improved. B

B. Tables 6.1-35 and 6.1-36 of the EIS show Chattahoochee River flow ranges for the alternatives considered at Whitesburg, Georgia. There is a negligible difference between lower flows or higher flows when comparing the NAA to the PAA over the period of record. Given the negligible differences between flows, there are likely to be negligible differences in the recreation experience between the NAA and the PAA.

Carroll County Parks is also working with other counties and the National Park Service to develop a Blueway Trail down the river. During the last 20 years following improved treatment of the municipal waste and industrial point sources upstream, the recreational use of the river by kayakers, jet boats, anglers, and wildlife enthusiasts has dramatically increased in Carroll County. With improvement in water quality, the river has become an extremely important recreational resource below Atlanta and we now have two companies operating on the river (Georgia Trail Outfitters supported by Historic Banning Mills and Whitewatergeorgia.com). Carroll County parks are a focal point for much of this growing activity on the river. The DEIS is deficient of recreational use data for this reach of the Chattahoochee. C

C. Tables 6.1-35 and 6.1-36 in the EIS show the Chattahoochee River flow ranges for the alternatives considered at Whitesburg, Georgia. There is a negligible difference between lower flows or higher flows when comparing the NAA to the PAA over the period of record. Given the negligible differences between flows, there are likely to be negligible differences in the recreation experience between the NAA and the PAA.

FOMR advocates the continuation of the 750 cfs minimum flow requirement which has been an operating criterion for the river at Peachtree Creek for over 40 years to provide dilution of the multiple industrial and municipal waste discharges in Atlanta. The Georgia DNR Board recently directed the Georgia EPD to remove the minimum flow criterion. The DEIS preferred minimum flow option (PAA) retains 750 cfs during the dry season from May-October reducing to 650 cfs from November to April during the usual wet season. This might be a reasonable alternative, but we have the following concerns: (1) The Metropolitan North Georgia Water Planning District in 2015 reduced the future water withdrawal requirements for the Metro counties which was not used in the DEIS; (2) a population growth factor has not been considered in the minimum flow requirement to maintain a reasonable minimum dilution of the combined effluents; (3) no instream flow studies have been conducted to determine the adequacy of the proposed minimum flow on water quality or fish and wildlife; (4) arbitrary selection of a minimum flow (650 cfs) requires all point source discharges with NPDES permits to up grade treatment in a timely fashion to maintain the same water quality and avoid backsliding under the Clean Water Act. Many of these issues come under the jurisdiction of Georgia EPD and EPA Region 4, however, they must be addressed to support the analysis required in the DEIS. Since the issues listed above were not addressed in the DEIS the COE needs to balance the bias for water supply with water quality mitigation downstream to achieve a sustainable dilution of the combined effluents and present these results in a Supplemental DEIS.

D

The fish community appears to have responded below Atlanta by showing fewer health effects and high diversity although fish advisories remain due to bioaccumulative contaminants, however, quantitative data are very limited. The DEIS attempts to evaluate the adverse impact on aquatic biota and fish due to degradation of water quality from high nitrogen and phosphorus loading and low dissolved oxygen which may not support fish. The selected alternative (PAA) in the DEIS shows that water quality will decline with increased nitrogen and phosphorus loading and decreased instream flow. Shoal bass are an important unique species in this reach of the Chattahoochee, however, it has been described as showing a slight increase in recruitment if it survives to age 3. We don't think this is a reliable indicator without increased vetting because the indicator is counter intuitive with the negative impacts from reduced water quality and discharge. The DEIS does not attempt to mitigate these impacts on downstream fisheries and water quality which is unacceptable.

E

An option which was disallowed for consideration in the DEIS was the evaluation of the feasibility of increasing the storage capacity of Lake Lanier by two feet to balance water supply and downstream needs. This evaluation needs to be conducted which might carry lower environmental costs and allow long term sustainability on a larger scale than the proposed Glades Reservoir project which was included in the DEIS. We don't think the Glades Reservoir project is cost effective in the long term or could be a significant asset in maintenance of a healthy river below Atlanta.

F

Thank you for consideration of these comments and recommendations.

Sincerely,

Q. Jerry Stober, PhD
Fisheries Scientist, Ret.
Board Member, FOMR, Inc.

Response to ACF205 – Friends of McIntosh Reserve – Jerry Stober

D. GAEPD requested that the minimum flow at Peachtree Creek be reduced to 650 cfs during drought periods. In response to that request, USACE investigated reducing the minimum flow value to 650 cfs from November through April. USACE conducted an environmental assessment in 2008 and concluded that reducing the minimum flow requirement at Peachtree Creek to 650 cfs during that period would not have significant adverse effects on water quality. Over the past decade, USACE has reduced the minimum flow seasonally at Peachtree Creek several times. Monitoring data is available from GAEPD during those periods. The State of Georgia has the responsibility for establishing and regulating water quality standards and should conduct any further analysis that might be required. NEPA requires that USACE capture the impacts to the human environment of any change from the NAA. USACE captured any impacts from the change to a season-varying flow at Peachtree Creek. Modeling in support of the final EIS illustrates the impacts that change would have and confirms that the impacts of reducing flows at Peachtree Creek to 650 cfs from November through April would not have significant adverse effects on water quality. The State of Georgia has indicated its intention to ensure that water quality standards are met at all flows based on revisions in their 2013 triennial review (GAEPD 2014).

E. Section 6.4 of the EIS has been updated to more clearly define water quality impacts associated with water management activities compared with impacts associated with assumptions associated with various water supply options. USACE does attempt to address mitigation requirements that are within its authority.

F. As stated in section 4.1.1, the Master WCM update is being conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect level of flood risk management provided by the project. One of the screening criteria described in draft EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward. In accordance with the GAEPD letter dated January 29, 2016, Hall County's certification of need for water supply from Glades Reservoir has been rescinded. Accordingly, USACE has revised the water supply options presented in the final EIS to exclude Glades Reservoir as a reasonably foreseeable action with regard to water supply.

From: JIM CHILDRESS
Sent: Friday, January 29, 2016 10:46 AM
To: jcloud@lakelanier.org; ACF-WCM
Subject: [EXTERNAL] please address these issues of concerns for Lake lanier

Please address these issues of concerns for Lake Lanier. We love Lake Lanier and would like to see these items addressed

1. Revise the navigation plan to avoid the severe impact the proposed plan will have on Lanier's water levels. A
2. Incorporate rigorous drought prediction that will trigger changes in reservoir operations to preserve lake levels during drought. B
3. Manage the reservoirs to retain maximum storage levels in the reservoirs so that drought conditions will not have the devastating impact that was experienced in December 2007. C
4. Model and plan for raising Lake Lanier's full pool level to 1073. D

Thanks JIM CHILDRESS

Response to ACF206 – Jim Childress

A. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.

B. Navigation is one of several project purposes for which Congress authorized the ACF Basin project, and USACE considers that purpose along with all other authorized purposes when making operational decisions.

Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations provisions in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008. It should be noted that navigation is not supported when drought operations are in effect

C. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

D. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

From: David Whitley
Sent: Friday, January 29, 2016 11:16 AM
To: ACF-WCM
Subject: [EXTERNAL] Water Control Manual comments

I wanted to comment on the proposed Water Control Manual changes. The first item that should be considered strongly is raising the full pool level to 1073 or above. In the recent rain events when the level raised to 1075 we saw little to no impact that would make it unreasonable to raise the full pool level to 1073 ongoing. The benefits of raising the level for everyone it easy to see and should virtually cost nothing to implement. A

I believe that better management of water levels throughout the recreational season (as a minimum) has to be a strong consideration on the part of the Corp. I have noticed that the recreational use of the lake is getting longer and longer especially amongst fishermen. I believe that using environmental predictors of drought should be easy to do and help you better address everyone needs. Taking steps early to minimize the effect on lake levels is in everyone best interests. I also think that if you are making changes to the water level of the lake you should make a public notice to that effect that states why and for how long. We need accountability throughout this process. B

I know there is much contention between the various parties that feel they are entitled to the water, but we cannot have a repeat of the 2007 fiasco that the Corp managed. I feel it could have been managed better and I hope a drought of that magnitude would be better managed in the future. However, I don't see how the lake system can survive properly when over extended periods of time you are releasing many times more water than what the system is bringing in. I know there are considerations down stream from Lake Lanier, but can we say that the mussels in Florida never survived a drought prior to the system went in? I think not and I'm not sure that we don't do harm to the species by not allowing nature to takes its course. C

I hope that the changes in the end are done to protect the system for tomorrow and well into the future.

David Whitley

Response to ACF207 – David Whitley

A. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

B. USACE proposed and evaluated water management measures and alternatives that balance across all authorized project purposes, while considering Georgia's water supply storage request as directed by the 11th Circuit Court of Appeals. USACE regulations do not allow the use of forecasts in planning project operations for drought. The drought contingency plan included in the draft WCMs prescribes measures to be taken in response to drought conditions that become progressively worse to be more protective of remaining reservoir storage. Such measures allow the pools to be maintained at a higher level throughout the prime recreation season.

C. Under section 7 of the Endangered Species Act (ESA), USACE has consulted with the USFWS regarding the effects of existing operations at Jim Woodruff Lock and Dam and releases to the Apalachicola River on federally listed threatened and endangered species and federally designated critical habitat. USACE has conducted multiple section 7 consultations with the USFWS since 2005 regarding releases from Jim Woodruff Dam. Those consultations developed minimum flow provisions for Jim Woodruff Lock and Dam as part of the overall plan established to avoid and minimize impacts on the listed species. There are periods when releasing water from storage is required to meet the established minimum flows. Buford Dam (Lake Lanier) is part of the system of USACE reservoirs that releases water to meet the ESA flow requirements. Reservoir drawdowns similar to those that occurred in 2007 will continue under the PAA in response to similar hydrologic conditions.

From: Bardara Smart
Sent: Friday, January 29, 2016 11:18 AM
To: ACF-WCM
Cc: lakeinfo@lakelanier.org; Dale Smart
Subject: [EXTERNAL] Lake level management

Dear Corp,
We are full time residents on Lanier. We understand there is a proposed navigation plan that would lower the lake level during times of drought. We strongly oppose this plan. A

The 2007 drought severely impacted our Dawsonville area. Lake use and tourism were non-existant. Management of reservoirs and raising the pool to 1073 should be your top priorities in order to help alleviate drought conditions. B

We appreciate your work and your consideration of our concerns.

Thank you,
Dale and Barbara Smart

1

Response to ACF208 – Dale and Barbara Smart

A. As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.
B. As stated in section 4.1.1, the Master WCM update has been conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocating storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in EIS section 1.4.4 was to maintain at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft would not meet this criterion and was not carried forward.

From: marylmcginnis
Sent: Friday, January 29, 2016 11:24 AM
To: ACF-WCM
Cc: lakeinfo@lakelanier.org
Subject: [EXTERNAL] WCM Lanier

In review table 4.2 2.2 recreation Dates

I have lived on Lake Lanier for 21 years and I am very concerned about Lake Lanier water levels in the future.

Recreation dates MAY thru JULY are incorrect.

Boat recreation use is actually from MAY thru SEPTEMBER and fishing thru NOVEMBER.

I am sure if you contacted the DNR, Forsyth County, and Hall County that their patrols would verify that the Lake traffic is busy into SEPTEMBER. A

In addition the larger marinas (Port Royal, Aqualand, Holiday, Gainesville) could verify that recreation date are MAY thru SEPTEMBR.

Thank you for your consideration

Norman G. McGinnis

Response to ACF209 – Norman McGinnis

A. In the final EIS, the period of analysis for the 'summer season' at Lake Lanier was revised May through September.

As shown in Figure 6.1-6 of the EIS, the PAA would likely result in lake levels at Lake Lanier ranging from about 2 to 4 ft lower than those for the NAA. That condition would be expected to occur less than 2 percent of the days over the entire modeled period of record (73 years) during the worst drought conditions for that period. The differences would be attributable largely to increased water supply withdrawals from the lake as well as increased releases from Buford Dam to meet future water supply demands for Metro Atlanta users (i.e., Cobb, Fulton, and DeKalb counties and the City of Atlanta). It should be noted that navigation is not supported when drought operations are in effect.

From: John turner
Sent: Friday, January 29, 2016 11:39 AM
To: ACF-WCM
Cc: lakeinfo@lakelanier.org
Subject: [EXTERNAL] "WCM" Open Openion

Thank you for my privilege to convey my priority opinion.

Manage your resources to:
1. Maintain highest reservoir water level to meet unpredictable causes in meeting the people's safe drinking water , foremost over lessor forms of nature. A
2. Maintain highest reservoir water level for recreation. B
3. Navigation should have a low priority, since it is flexible, adjustable, and may me substituted. C

Sincerely,
John F. Turner.
Sent from my iPad

Response to ACF210 – John Turner

A. Under the drought operations provisions in the PAA, USACE would more proactively manage water resources in the reservoirs as drier conditions emerge in the basin. In the early stages of drought operations, the water management constraints on the projects would be subtle and the effects in the system barely noticeable. Operations would become progressively more constrained as drought conditions become more severe. Conserving storage in that way would enable the projects to continue meeting all authorized project purposes and needs in the basin until drought conditions improve and would promote faster recovery of the reservoirs. Compared to the drought operations in the NAA, the provisions in the PAA would result in improved conditions in Lake Lanier under extreme drought conditions such as occurred in 2007–2008.

B. The storage projects—Lake Lanier, West Point Lake, and Lake Walter F. George—are operated to maintain their lake levels in the same zones concurrently. Because of the hydrologic and physical characteristics of the river system, however, there might be periods when one lake is in a higher or lower zone than another. When that occurs, USACE makes an effort to bring the lakes back into balance with each other as soon as conditions allow. By doing so, effects on the river basin are shared equitably among the projects. As stated in section 4.1.1, the Master WCM update is being conducted to determine how the federal projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws. Raising the top of the conservation pool at Lake Lanier would require reallocation of storage from the flood control pool and would adversely affect the level of flood risk management provided by the project. One of the screening criteria described in draft EIS section 1.4.4 was maintaining at least the current level of flood risk management. Accordingly, raising the conservation pool at Lake Lanier by 2 ft was not carried forward.

C. The purpose of the EIS is to support the update of the water control plans and manuals for the ACF Basin, as directed by Secretary of the Army Pete Geren on January 30, 2008. Specifically, the purpose and need for the federal action is to determine how the USACE projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable laws, and to implement those operations through updated water control plans and manuals. Development of a navigation maintenance plan for dredging the Apalachicola River does not fall within the scope of the Master WCM update process as directed by the Secretary of the Army. Because navigation is one of the congressionally authorized purposes in the ACF Basin, however, it was considered in making operational decisions regarding water management. It is anticipated that little or no dredging of the navigation channel in the Apalachicola River will be possible in the immediate future. Accordingly, USACE explored several options to provide the most reliable navigation season possible within the constraints of water availability and a lack of dredging. USACE used updated channel survey data collected during 2009 for the Apalachicola River in developing management measures for navigation. The PAA includes actions that, when supported by ACF Basin hydrologic conditions, will increase the availability of a navigable 7-ft channel in the Apalachicola River for a portion of the year (January–April/May) by making additional releases. Augmenting flows at other times of the year would jeopardize the ACF Basin projects' abilities to fulfill other authorized project purposes.