

**Statement of Dan Tonsmeire
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**United States Senate
Committee on Commerce, Science, and Transportation
Field Hearing**

Effects of Water Flows on Apalachicola Bay: Short and long Term Perspectives

August 13, 2013

Chairman Rockefeller, Ranking Member Thune and members of the Committee, thank you for the opportunity to testify on Effects of Water Flows on Apalachicola Bay: Short and Long Term Perspectives. I would also like to thank Senators Nelson and Rubio for holding this vitally important field hearing. Apalachicola Riverkeeper greatly appreciates the opportunity to offer our views on the importance of freshwater flows to the health of the Apalachicola River and Bay and the importance of Congress enacting legislation to require the U.S. Army Corps of Engineers (Corps) to manage the Apalachicola-Chattahoochee-Flint (ACF) river system to ensure that the river and bay receive the freshwater flows they need to support, restore, and reestablish a thriving ecosystem, healthy populations of fish and wildlife, and a vibrant resource-based economy.

Apalachicola Riverkeeper is a 501c3 non-profit organization founded in 1998. Our mission is to provide stewardship and advocacy for the protection of the Apalachicola River and Bay, its tributaries and watersheds, in order to improve and maintain its environmental integrity, and to preserve the natural, scenic, recreational, and commercial fishing character of these waterways. Thousands of people including oyster harvesters, seafood workers, shrimpers, crabbers, and other commercial fishers of the region and state depend upon the health of the Apalachicola River Floodplain and Bay and the Eastern Gulf of Mexico for their livelihoods.

Apalachicola Riverkeeper calls on Congress to act now to prevent the demise of the Apalachicola River and Bay and to prevent the loss of the incredibly important role that this system plays in maintaining a thriving Eastern Gulf of Mexico, regional seafood and tourism industries that are essential for our local, regional, and statewide economy. To do this we urge Congress to act now to require the Corps to manage the ACF projects to ensure that the river, floodplain, and bay receive the freshwater flows needed to sustain a healthy functioning natural system and fisheries that are key to a vibrant economy. The Water Resources Development Act currently being considered by Congress and Water Control Manual update by the Corps of Engineers offer a rare and critically important opportunity for enacting such language. We strongly urge you to ensure that the freshwater flows provision discussed in this testimony is included in any final Water Resources Development Act that becomes law.

SIGNIFICANCE OF APALACHICOLA BAY

Apalachicola Bay is one of the most productive estuaries in the Northern Hemisphere. Historically it has supported oysters, shrimp, crabs, grouper, snapper, redfish, and multitudes of baitfish escaping to the Gulf. It is home to one of the last of Florida's renowned commercial fishing communities which cannot be replicated. It is nourished by flows from the Apalachicola River and Floodplain, which have the highest documented biological diversity of any river system in North America. It provides 35% of the freshwater flow to the Eastern Gulf of Mexico and is one of the primary drivers of productivity of the fisheries in the Eastern Gulf. Dr. Felicia Coleman of the FSU Marine Lab has clearly drawn the linkages of fisheries productivity in the Eastern Gulf to flows from the ACF Basin in the context of a Green River flowing over 250 miles out into the Gulf from Apalachicola Bay. Her findings were based in part on the research contained in the report: Morey, S.L., Dukhovskoy, D.S., and M.A. Bourassa. "Connectivity of the Apalachicola River flow variability and the physical and bio-optical oceanic properties of the northern West Florida Shelf." *Continental Shelf Research* 29 (2009) 1264–1275. The point is driven home further in the attached letter from Representative Kathy Castor to the Gulf Coast Ecosystem Restoration Council.

The attached analysis of the 2011 NOAA report: (<http://www.st.nmfs.noaa.gov/Assets/economics/documents/feus/2011/FEUS%202011-Revised.pdf>) finds that the Commercial and Recreational "Wild Caught" Fisheries to West Florida create \$5.6 billion in sales revenues and support 55,000 jobs.

Because of these characteristics and high value, the Bay has international, national, and state designations that are intended to highlight and protect its unique and special place in our nation and state. These designations include:

- United Nations UNESCO Man in the Biosphere Reserve
- National Estuarine Research Reserve
- Outstanding National and Florida Water
- State Aquatic Preserve
- Highest Priority Water on NFWFMD Surface Water Improvement and Management (SWIM) Program
- Class II Shellfish Harvesting Area

The collapse of the Bay last summer heralds the beginning of the end of this Last Great Bay and National Treasure. The scientific reports concluded that the primary cause of the problems is a result of lack of freshwater flows.

WRDA LANGUAGE

Over the past 30 years as litigation and state negotiations have gone on and on, an entire generation of fishermen have seen their livelihoods dwindle to unsustainable levels. Their nets and tongs come up with less and less than the hauls pulled in by their fathers' families and grandfathers' families before them. At the same time, upstream users have reaped the benefits of the waters of ACF system. As the devastating impacts to the Floodplain and Bay have grown, so

have our calls for help to stop the steady loss of freshwater flows to the largest and most abundant river and bay in Florida. Time is not on our side and the increasing loss of flows to our River and Bay must be reversed.

During development of the Water Resources Development Act (WRDA) of 2007, Senator Nelson and Congressman Alan Boyd attempted to address the lack of attention the Corps of Engineers paid to our River and Bay. I have 15 letters Senator Nelson and Representative Boyd sent regarding the ACF issue. During his first election campaign, now-President Obama said “Rather than continue to waste time and money on further litigation, it was time for national leadership on this issue so we resolve it fairly once and for all.” Despite these efforts, the Corps has not changed its management to recognize the needs of our River and Bay.

WRDA 2007 did not include language that addressed Florida’s needs. Shortly after passage of WRDA 2007, Apalachicola Riverkeeper, National Wildlife Federation, and Florida Wildlife Federation again reached out to Senator Nelson for help in restoring Florida’s right to water, a right that had been lost when Congress gave the Corps of Engineers authority to manage the Apalachicola-Chattahoochee-Flint system to benefit upstream states at the expense of Floridians.

In response, Senator Nelson developed legislation that would require the Corps to operate the Apalachicola-Chattahoochee-Flint projects in a manner that ensures the maintenance of freshwater flows needed to support and reestablish thriving and resilient fisheries in the Apalachicola River and Bay, and to support and sustain a vibrant economy. The language would ensure that Floridians receive the water we need to sustain our economy, our way of life, and our natural resources. The Freshwater Flows legislation is strongly supported by the Apalachicola Riverkeeper, Seafood Management Assistance Resource and Recovery Team (SMARRT) (see attached letters), National Wildlife Federation, Florida Wildlife Federation, and many others.

Senator Nelson then introduced this Freshwater Flows language as an amendment in Committee to S.601, the Water Resources Development Act of 2013. A copy of this amendment is attached. Apalachicola Riverkeeper and many others in the conservation and fishing community are deeply grateful to Senator Nelson for developing and filing this critical amendment.

That amendment was carefully crafted to ensure that it does not constitute an earmark. As a technical matter, the Freshwater Flows language is not an earmark because it: (1) does not increase the budgetary impact of managing the ACF; (2) does not authorize funding for a new activity; (3) does not require the Corps to carry out an activity that it is not already required to do (*e.g.* undertake a new study, construct a new project, construct a new project element); and (4) is justifiable as a technical modification to an existing authorization. The Freshwater Flows language is also not an earmark because it reaches across state lines and will produce tremendous regional and national economic benefits, including those derived from a healthy fishery in the Gulf of Mexico. The Freshwater Flows provision will also save millions of dollars that would otherwise go to litigation and will initiate a collaborative process with stakeholder input to resolve these long standing water allocation issues.

Unfortunately, the Freshwater Flows provision was not adopted by the Senate Environment and Public Works Committee, in part because it was not supported by Committee member Senator

Jeff Sessions (R-AL). Additional language has been developed that would help address concerns raised by Alabama, provide benefits to users in the middle and lower Chattahoochee River, and ensure that the Corps of Engineers does not impose an unfair burden on Alabama if the Freshwater Flows language is enacted into law. A copy of this revised language is attached at the end of these comments.

While Alabama offered no opposition to this revised language they also were not willing to support it. Instead Alabama has opted to focus on legislation that would amend the Water Supply Act in an effort to stop the Corps from giving favorable treatment to Georgia. That legislation would amend the Water Supply Act to require congressional approval before the Corps grants additional allocations to Georgia for water supply from Lake Allatoona and Lake Lanier. While the proposed changes to the Water Supply Act might provide some degree of protection to Alabama, the proposed changes do little, if anything, to help Florida. The proposed changes would not change the status quo – which is starving Florida of the water it needs – and would not require the Corps to send more water to Florida.

Apalachicola Riverkeeper has also reached out to other key stakeholders including Alabama and Georgia Power Companies. Neither has officially responded but discussions indicated that they would not likely oppose the Freshwater Flows language because the Federal Energy Regulatory Commission (FERC) license they operate under does not provide them license to determine the equity of downstream user needs. Their concerns would address how the releases from Lake Lanier might be changed to impact the arrival of flows at their facility to meet peak power demands as the timing of flows is critical to their operations.

IMPACTS TO APALACHICOLA RIVER FLOODPLAIN AND BAY

Dr. Robert Livingston (Livingston, R.L. 2008. “Importance of River Flow to the Apalachicola River-Bay System.”) and others have related the importance of Freshwater Flows to Apalachicola Bay. Greg Munson, the Deputy Director of Water Policy in Florida’s Department of Environmental Protection, recently testified to Congress about the vital importance of freshwater flows to the Apalachicola River and Bay:

“The River and Bay ecosystem, and thus, the men and women of this region, are entirely dependent on timely freshwater flows to remain healthy and productive. The Apalachicola River is the main source of freshwater inflow to the Bay. That freshwater inflow regulates salinity in the Bay in a way that maintains the biological integrity of sensitive oyster habitats. Equally important is the fact that the Apalachicola River discharges nutrient-rich water into the Bay, which provides the building blocks of the Bay’s food chain. In these ways, the River is the lifeblood of this extraordinarily productive estuarine system, which sustains oyster harvesting, shrimping, crabbing, and fishing. Therefore, the productivity of the Bay is strongly influenced by the amount, timing, and duration of the freshwater inflow from the Apalachicola River. It is important to restore historic flow patterns. Otherwise, the ecosystem and, indeed, the very way of life for generations of Floridians will be devastated.

Unfortunately, Florida cannot control the volume of water entering the State. Its destiny is subject to upstream influences that are working to undermine the foundation of the region. The amount of water flowing in the River and ultimately to Apalachicola Bay is a function of Georgia's consumption on the Chattahoochee and Flint Rivers and Corps reservoir operations on the Chattahoochee. Since the 1970s, Georgia consumption has grown substantially on both systems and the Corps implemented its "Draft" Water Control Plan to prioritize municipal and industrial water supply operations elevating them above all other uses in 1989.

As a consequence, Apalachicola River flows have been lower and low flows have occurred more frequently and for longer durations than at any time in recorded history. The problem has been most acute in the last 10 years, and is creating long-lasting impacts to the River and Bay. In 2012, Florida experienced widespread damage to its oyster resource resulting from two years of prolonged low-flow conditions. Indeed, last year set a record for the least amount of water delivered to the Bay since records were started in 1923, although this was not the year with the least rainfall. The corresponding reduction in freshwater inflow elevated salinity levels in the Bay well beyond tolerable thresholds, and the continued lack of inflow precluded any opportunity to mitigate salinity levels. It is well documented that elevated salinity leads to increased incidence of oyster mortality through disease and predation.

State agencies and local fisherman have documented a severe decline in the oyster harvests. Drastic declines in all age classifications of oysters suggest that a collapse of the fishery has occurred. In the latest state agency reports, the oyster production estimates on commercially important oyster reefs are the lowest estimates in the past 20 years. The data suggests that many of the stocks are not sufficiently abundant to support commercial harvesting, devastating the livelihoods of the men and women who make their living directly harvesting oysters or processing oysters on Florida's Gulf Coast.

It is clear that the Apalachicola River needs more flow to help recover from the devastating oyster mortality in the Bay that occurred in 2012, as well as the previous massive die-offs of endangered mussels, decline in fisheries, and drying of the floodplain forest that has occurred in recent years."

(July 22, 2013 Testimony of Greg Munson, Deputy Secretary of Florida Department of Environmental Protection on "Oversight of Army Corps of Engineers Water Management in the Apalachicola-Chattahoochee-Flint River (ACF) and the Alabama-Coosa-Tallapoosa (ACT) River Systems" before the United States Senate Committee on Environment and Public Works.)

During the past 30 years Florida has suffered from a 30 to 40 percent decline in Spring and Summer flows during dry and drought times. At the most critical time of year for reproduction and productivity of the Apalachicola River Floodplain and Bay, the Corps' management and needs of upstream users are taking an especially heavy toll on the volume and timing of flows to the Apalachicola. While some of that change is due to changes in rainfall patterns, management

of flows by the Corps of Engineers is a critical factor as demonstrated by a comparison of the comparable mid 1950s drought flows with those of 2007 and 2012. (See attached Palmer Drought Severity Index figures for Drought comparisons). Flows during the most recent drought were over 30% less than the severe drought of 1950s and only 1/3 that of the average flow for the entire period of record. See flows based on USGS records below.

1922 - 2012 Annual Average Flow	21,400 CFS
1955 Annual Average Flow	11,200 CFS
2007 Annual Average Flow	9,700 CFS
2012 Annual Average Flow	7,600 CFS

CORPS OPERATIONS AND MANAGEMENT

Except for providing a 5,000 CFS minimum flow level, the Corps now holds reservoir levels high without consideration of the needs of Apalachicola River Floodplain and Bay. The Corps' interpretation of its Congressional authorization for managing the ACF and its resistance to even assessing the needs of Florida have contributed significantly to the Corps' refusal to provide Florida with the water it needs.

Indeed, even after three Scoping opportunities for the current Water Control Manual EIS – where many comments urged the Corps to fundamentally reevaluate its operations to account for the needs of the Apalachicola River and Bay – the Corps of Engineers continues to state that the ongoing update will essentially validate the current operating plan. That plan, the Revised Interim Operations Plan, does not include any consideration of flows needed to sustain the Apalachicola River Floodplain and Bay. The plan's sole objective for maintaining fish and wildlife populations is tied to the minimal flows needed to satisfy the federal Endangered Species Act. The plan does this by establishing minimal flow target releases to the Apalachicola from Jim Woodruff Dam needed to keep the three federally listed mussels and the federally listed Gulf sturgeon alive.

Some of the Corps' top leaders, including General Schroedel, Major General Semonite, and Colonels Keyser, Jorns and Roemhildt have expressed concerns about the management of the ACF projects and the need to consider Apalachicola needs. At a 2009 meeting of the National Academy of Sciences, General Schroedel stated that the ACF Basin was already over-allocated and that there was not enough water in the ACF Basin to meet all demands. Despite their individual recognitions of the problems we face on the Apalachicola, Florida's needs remain unaddressed.

Apalachicola Riverkeeper, SMARRT, and many in the conservation community see only one way to change this dynamic: Congress must require – in very specific terms – that the Corps of Engineers manage the ACF projects to ensure that Florida receives the water it so desperately needs. The Freshwater Flows provision developed by Senator Nelson would provide this clear direction and ensure that the best available science is used to determine the amount, timing, and duration of the needed flows.

STATES' RIGHTS AND APPROACHES

All three States have been driven by litigation for so long it appears to be impossible for them to think outside the “litigation box”. During the recent Senate Committee Hearing on ACF that Senator Sessions held, the “ifs and buts” given by the 3 states made clear that an interstate water compact will not be reached in time to save the Apalachicola Bay and the jobs that depend on it. After 30 years of disagreement, and the failed attempts of the late 1990s and early 2000s, it is clear to us that the states are not prepared to enter into – and are not seriously considering entering into – meaningful compact negotiations. Even if the states were so inclined, each state uses different data, different models, and their technical advisors provide their policy makers with different answers as to what impacts will result from different management practices and flow regimes. There is no wonder they cannot reach an agreement on sharing water.

Working in a collaborative dimension offers opportunity for forward movement and resolution, but it is apparent that the playing field must be leveled by Congress to induce the States to negotiate in good faith. With this legislation, that level playing field will be created and the possibility that negotiations or compact discussions could be productive in achieving equitable sharing of water.

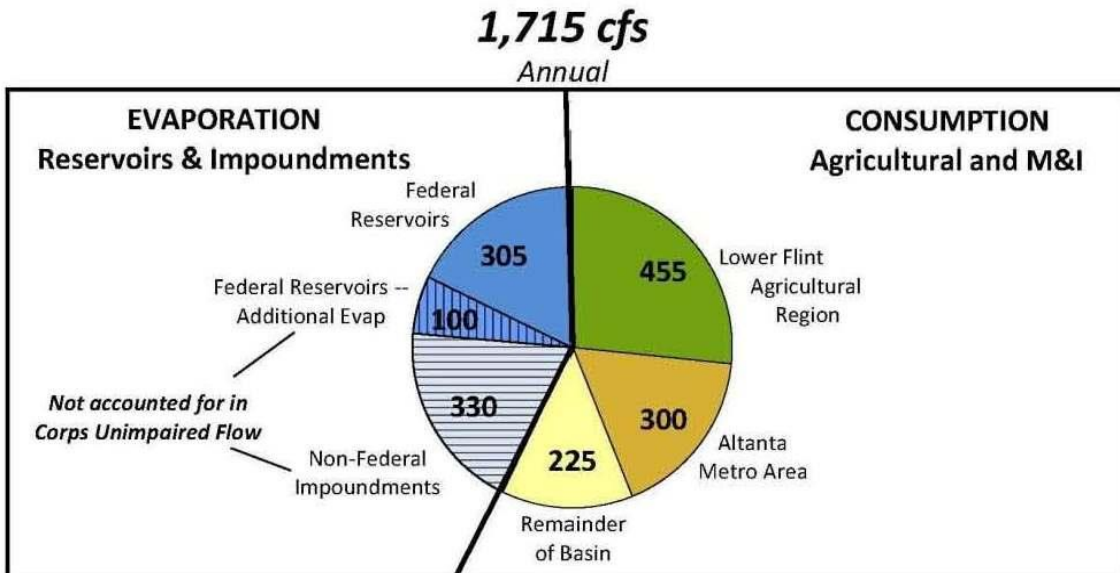
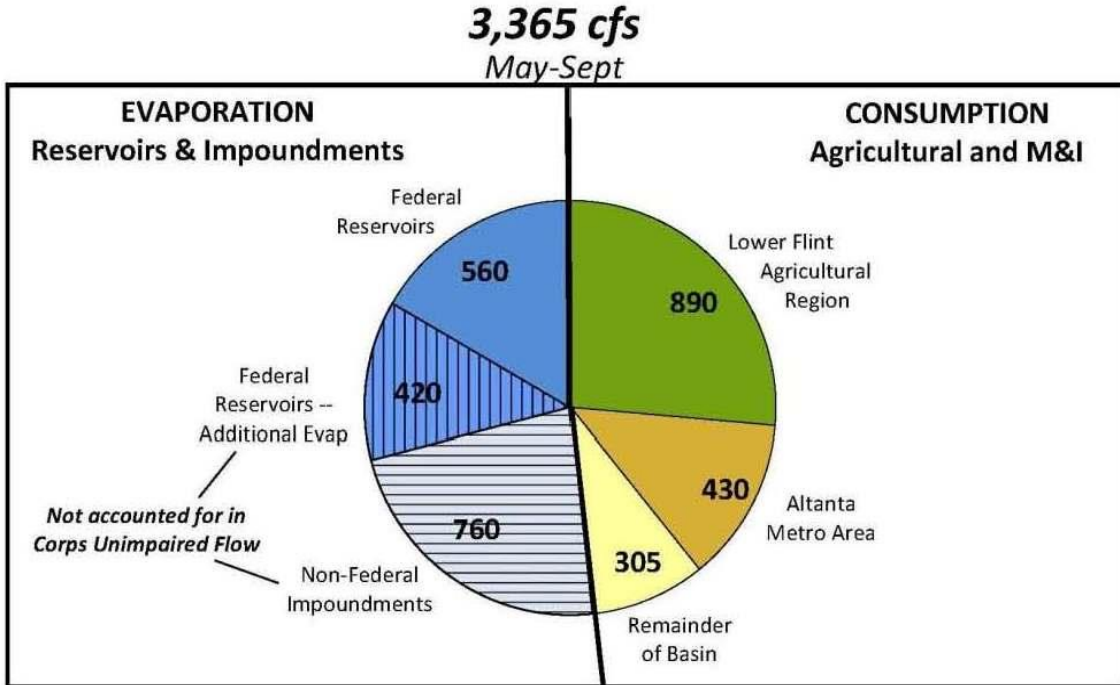
Georgia has long claimed that it is not the cause of the low flow problems facing Apalachicola River and Bay. During the recent drought Georgia’s Governor Deal declined to institute more aggressive water conservation measures, telling Florida’s Governor Scott that Georgia had a mandate from the Courts to meet his water needs. Furthermore, increases in consumptive water use for agricultural irrigation have been significantly increased in recent years despite drawdown of the Floridian aquifer.

While we strongly dispute Georgia’s position and believe that stronger conservation measures in Georgia would benefit all three states, it is clear that the allocations for water supply from Lake Lanier are just one part of the problem facing Florida. There are many other activities that are driving the low flows reaching the Apalachicola River Floodplain and Bay. For example, on a hot summer day the net evaporation from the 5 Federal Reservoirs in the ACF system exceeds the water use by Atlanta and agricultural irrigation is as much as 2-3 times municipal and industrial use.

The diagram below, prepared by the State of Florida using data being used by the Corps of Engineers, shows the impact on river flows from all uses in the ACF basin. As this diagram makes clear, addressing water supply allocations from Lake Lanier is just one part of the solution. We need a management perspective that will consider operations of all reservoirs, and water uses in the ACF basin.

Figure 1. 2007 Depletions

Net 2007 depletions, in cfs, upstream of Woodruff Dam. Cross-hatched depletions (not accounted for in Corps Unimpaired Flow) were visually estimated from preliminary data in Figs 3.19.7 and B.2 in Draft UIF Report by GWRI/GT (2012). All other numbers are from Corps ProAction2 model, May 2012. Depletions may be higher than shown because of underestimated agricultural withdrawals in dry years and other uncertainties in Corps model (GWRI/GT, 2012), and large increases in impervious surfaces and other land use changes.



As discussed above, Alabama is currently focused on legislative language that will not address this full suite of activities, and will not address Florida's needs.

For years, Florida's focus has been on litigation surrounding water supply withdrawals from Lake Lanier which likewise will not address the full suite of activities affecting low flow levels in the Apalachicola River and Bay. The litigation has cost millions of dollars of Florida funds and appears to have prevented the state from taking additional steps forward in resolving the water crisis that is devastating Apalachicola River Floodplain and Bay. Even while we know the Georgia agricultural use is having impacts, our own Northwest Florida Water Management District continues to issue agricultural irrigation well permits in the Apalachicola Basin, albeit small compared to Georgia's use.

While our Governor has made significant gestures to help the community and focus attention on the Bay's collapse, stakeholders have not been included in strategy decisions and our recommendations and advice have not been heeded. The six counties along the Apalachicola portion of the basin have formed the Riparian County Stakeholder Coalition to work together to help resolve the issue with our upstream neighbors to undertake a River and Bay Assessment to better understand the needs of the Floodplain and Bay.

CONCLUSION

The most important aspect of the Freshwater Flows language is that it restores the rights of Floridians to water that their very survival depends on, not just water from Lake Lanier, but from all portions of the basin from the top to the bottom.

It is our understanding that current draft language in the House version of WRDA does not include the Freshwater Flows language. Without this language our citizens will be off work as you now see them here today, not to attend a Hearing, but due to a lack of jobs and business, due to a lack of fresh seafood, and the permanent loss of our position as seafood port renowned as a distributor of the best oysters and seafood worldwide.

Our future lies in Representative Southerland overcoming the politics and including the Freshwater Flows language in the House WRDA bill; and in our entire Florida delegation working to ensure its passage into law. Our community cannot wait for yet another WRDA, another Water Control Manual, or another lawsuit. We desperately need Congress to take this action now, not after our fisheries, economy and way of life that are destroyed like the Chesapeake, Delaware, San Francisco, Florida Bays and so many others before us. Time is of the Essence.

SEC. ____ APALACHICOLA, CHATTAHOOCHEE, AND FLINT RIVER PROJECTS.

(a) DEFINITIONS.—In this section:

(1) APALACHICOLA-CHATTAHOOCHEE-FLINT PROJECTS.—The term “Apalachicola-Chattahoochee-Flint projects” means the Federal water resources projects on the Apalachicola, Chattahoochee, and Flint Rivers in the States of Alabama, Florida, and Georgia authorized by section 2 of the Act of March 2, 1945 (59 Stat. 17, chapter 19; 60 Stat. 635, chapter 595) and section 203 of the Flood Control Act of 1962 (76 Stat. 1182), including—

- (A) Buford Dam and Reservoir;
- (B) West Point Dam and Reservoir;
- (C) George W. Andrews Dam and Reservoir;
- (D) Walter F. George Dam and Reservoir; and
- (E) Jim Woodruff Dam and Reservoir.

(2) FRESHWATER FLOWS.—The term “freshwater flows” means the quality, quantity, timing, and variability of freshwater flows required—

(A) to support and reestablish—

(i) the physical, chemical, biological, and overall ecological integrity of the components, functions, and natural processes required for a thriving and resilient Chattahoochee River, Apalachicola River, Apalachicola River floodplain, and Apalachicola Bay;

(ii) commercial and recreational fisheries dependent on freshwater flows into Apalachicola Bay and adjacent waters, including the Gulf of Mexico; and

(iii) thriving and diverse fish, wildlife, and plant populations having species composition, diversity, adaptability, and functional organization similar to those found in the Chattahoochee and Apalachicola River ecosystems prior to construction of the Apalachicola-Chattahoochee-Flint projects;

(B) to restore and recover species that are endangered, threatened, or at risk; and

(C) to prevent significantly harmful adverse impacts to the Chattahoochee and Apalachicola River ecosystems.

(b) PROJECT MODIFICATION.—Notwithstanding any authorized purpose of the Apalachicola-Chattahoochee-Flint projects, the Secretary shall operate the Apalachicola-Chattahoochee-Flint projects in a manner that ensures the maintenance of freshwater flows. Operational modifications needed to maintain freshwater flows shall be achieved, to the maximum extent practicable, while providing system-wide balance in conservation storage through the maintenance of water levels within the same action zone for each of the Apalachicola-Chattahoochee Flint project reservoirs.

(c) REVISION OF WATER CONTROL MANUALS.—

(1) IN GENERAL.—Not later than 18 months after the date of enactment of this Act, the Secretary shall complete the ongoing revision of the water control manuals for the Apalachicola-Chattahoochee-Flint projects and issue revised water control manuals for those projects that ensure the maintenance of freshwater flows.

(2) INDEPENDENT PEER REVIEW OF WATER CONTROL MANUALS.—

(A) IN GENERAL.—The Secretary shall enter into an arrangement with the National Academy of Sciences under which the National Academy of Sciences shall carry out an independent peer review of each revised water control manual, as required under section 2034 of the Water Resources Development Act of 2007 (33 U.S.C. 2343).

(B) COMPLIANCE.—Each independent peer review under this paragraph shall comply with section 2034 of the Water Resources Development Act of 2007 (33 U.S.C. 2343).

(3) FINAL APPROVAL.—Before a final water control manual may be issued, the Secretary shall obtain written approval of each water control manual developed under this subsection from—

- (A) the Administrator of the Environmental Protection Agency;
- (B) the Director of the United States Fish and Wildlife Service;
- (C) the Director of the National Oceanic and Atmospheric Administration; and
- (D) the Director of the United States Geological Survey.

(d) APPLICABILITY OF OTHER FEDERAL AND STATE LAWS.—Except as provided in subsection (b), nothing in this section waives, limits, or otherwise affects the applicability of any provision of Federal or State law that would otherwise apply to the Apalachicola-Chattahoochee-Flint projects