

**Testimony of
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“Effects of Water Flows on Apalachicola Bay: Short and Long Term Perspectives”
United States Senate Committee on Commerce, Science and Transportation
Field Hearing
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Senator Nelson, Senator Rubio and Representative Southerland, I am Jon Steverson, Executive Director of the Northwest Florida Water Management District. As one of five water management districts in Florida, the Northwest District is responsible for managing and protecting groundwater and surface water resources for both the citizens and natural resources of this region, including the Apalachicola River and Bay.

Under the leadership of Governor Scott, the District continues to work in close coordination with other state and local agencies to provide technical support and expertise to ensure the protection of the Apalachicola-Chattahoochee-Flint (also known as ACF) River System.

I would first like to thank you for holding this important hearing about the effects of water flows on Apalachicola River and Bay system. On behalf of the District and the many partners we work with to protect this important water body, I am here today to provide a brief overview on the Apalachicola River and Bay, the ongoing injury to each, and the important economic and environmental impacts.

INTRODUCTION AND SUMMARY

This testimony is intended to provide the committee with information on the effect of reduced freshwater inflows into the Apalachicola River and Bay systems in Florida. These fragile systems

support a unique, historically vibrant and economically important culture that relies first and foremost on the health of its fisheries, particularly the Eastern oyster. The Apalachicola region and its economy continue to be damaged by ever increasing consumptive uses in Georgia, which were too easily allowed by the U.S. Army Corps of Engineers' previous water management decisions. We believe Georgia needs to responsibly reduce and manage its continuously growing consumption of water, and also that the Corps should ensure that Georgia engages in meaningful conservation when updating its master control manual for the ACF system.

BACKGROUND ON THE RESOURCE

To provide a little background, the ACF River Basin covers about 20,000 square miles, most of which is located in Georgia. The Chattahoochee and Flint Rivers both originate in north Georgia, flow south and join in Lake Seminole at the Florida-Georgia line to form the Apalachicola River, which runs unimpeded for 106 miles into the bay. The Apalachicola River's floodplain ecosystem is the largest in Florida and includes over 200 miles of off-channel floodplain, sloughs and streams. Its nontidal floodplain forest exceeds 82,000 acres and is rated among the top 10 biodiversity "hot spots" in the United States. Hundreds of thousands of acres adjacent to the river and bay have been acquired by federal, state, local and private entities to protect this unique environment.

Apalachicola Bay has been one of the most productive estuarine systems in the northern hemisphere and an exceptionally important nursery area for the Gulf of Mexico. Because of its uniqueness, several designations have been granted, signifying the importance of the system. In 1969, the Florida Governor and Cabinet designated 80,000 acres of sovereignty submerged lands as the Apalachicola Bay Aquatic Preserve, and designated the river as an Outstanding Florida Water in

1983. The Apalachicola Bay is also home to the Apalachicola National Estuarine Research Reserve, which is one of only 27 sites so designated by the National Oceanic and Atmospheric Administration (NOAA). It encompasses more than 193,000 acres of land and water and is the largest of all such reserves in the country.

The complex and diverse ecosystem of the Apalachicola River Basin and Bay developed and flourished under unimpaired, natural flows from the Chattahoochee and Flint Rivers. These historic flows created and sustained river channel habitat, interconnected floodplain channels, maintained an appropriate salinity level, and provided essential nutrients to the bay.

The City of Apalachicola and broader Franklin County support many commercial seafood harvesters, processors and dealers whose work contributes substantially to the productivity of the region. The vast majority of local residents make their living from the fishing industry, directly or indirectly. Oysters and other local seafood are the lynchpin of the region's economic infrastructure. Historically, Apalachicola Bay provided approximately 90 percent of Florida's oyster harvest (and 10 percent of the national harvest), supported an active recreational and commercial fishing industry, served as an important nursery area for many marine species, and yielded Florida its third largest shrimp harvest. The bay's ability to continue providing these services is now uncertain.

The river and bay ecosystem, as well as the men and women of this region, depend on timely freshwater flows to remain healthy and productive. The Apalachicola River is the main source of freshwater inflow to the bay. That freshwater flow regulates salinity in the bay in a way that maintains the biological integrity of a variety of sensitive species and habitats that are both ecologically and economically important. Equally significant is the fact that the Apalachicola River

discharges nutrient-rich water into the bay, which provides the building blocks of the bay's food web.

In these ways, the river is the lifeblood of this extraordinarily productive estuarine system, which sustains oyster harvesting, shrimping, crabbing and fishing. The health and productivity of the bay is strongly influenced by the amount, timing, and duration of the freshwater inflow from the Apalachicola River. It is vital that we restore and maintain this historic flow pattern. Otherwise, this ecosystem and this way of life for generations of Floridians will be lost.

ADVERSE IMPACTS

Unfortunately, Florida cannot control the volume of water entering the State. The region's destiny is subject to upstream influences that have undermined the foundation of the area. The amount of water flowing in the river and ultimately to Apalachicola Bay is a direct result of Georgia's consumption upstream on the Chattahoochee and Flint Rivers and the Corps' reservoir operations on the Chattahoochee.

Since the 1970s, Georgia's consumption has significantly increased; so much such that it now uses more than 90 percent of the water withdrawn from the system. By comparison, Florida uses about 2.5 percent. The metro Atlanta area alone uses three times the amount of water for public supply than all 16 counties and municipalities of the Florida Panhandle combined.

Georgia's continuously growing consumption expands beyond the metro Atlanta area. Another example of this dominating use can be seen by comparing the agricultural withdrawals among the

states. As shown in the attached figure (Fig. 1), in 2005, Georgia had nearly 7,200 center pivot irrigation systems, pumping hundreds of million gallons of day, on fields in the lower Flint and Chattahoochee basins. The number of center pivots in Southwest Georgia has continued to increase to an estimated 9,200 today, compared to 239 such systems in the Florida portion of the system.

Even though Florida's consumption in the basin is only a tiny portion of what is used upstream, we are still minimizing our use by implementing a series of conservation measures. This includes working with farmers within the basin to retrofit agricultural irrigation systems for more efficient delivery, as well as introducing incentives for sod-based crop rotation. This year the District will receive State Appropriations to provide additional retrofits within the basin which, combined with programs already in place, is expected to save nearly 9 million gallons per day of water used within the Basin.

At the same time we continue to reduce our already small consumption within the basin, Florida also continues to work to improve the water quality within the river and bay. During the upcoming Fiscal Year, the District has committed \$4.7 million to protecting and restoring the Apalachicola River and Bay, including \$3 million in funding proposed by Governor Scott and approved by the Florida Legislature. This includes \$2.5 million in cooperative funding assistance to the City of Apalachicola to provide stormwater treatment and improve the quality of water flowing into the river and bay.

Despite our best efforts, Apalachicola River flows have been lower and low flows have occurred more frequently and for longer durations than any other time in recorded history. The problem has grown more dire during 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 as a result of two years of prolonged low-flow conditions. In fact, last year set a record for the least amount of water delivered to the bay since record-keeping first began in 1923, although this was not the year with the least amount of rainfall. The corresponding reduction in freshwater inflow raised salinity levels in the bay well above tolerable thresholds, and the continued lack of inflow precluded any opportunity to reduce salinity levels. It is well documented that elevated salinity levels lead to increased 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 classes of oysters suggest that a collapse of the fishery has indeed occurred. The latest state agency reports reveal that oyster production estimates on commercially important oyster reefs are the lowest in the past 20 years. The data suggests that many of the reefs have too few oysters to support commercial harvesting, devastating the livelihoods of the men and women who make their living harvesting, processing or selling oysters on Florida's Gulf Coast.

As a result, Governor Rick Scott requested the Secretary of the U.S. Department of Commerce declare a commercial fishery failure for Florida's oyster harvesting areas in the Gulf of Mexico, pursuant to Section 312 (a) of the Magnuson-Stevens Fishery Management and Conservation Act.

MOVING FORWARD

The Corps operates Buford Dam and Lake Lanier, along with the other downstream dams and reservoirs, as an integral part of the ACF system. Since the 1970s, the Corps has entered numerous contracts with Georgia water suppliers to permit withdrawals from the system for municipal and

industrial uses. In 1989, pursuant to the Draft Water Control Plan, the Corps essentially began prioritizing reservoir operations to support this water supply demand, which has increased dramatically over time. Under the Corps' present operating schedule, each new demand placed on the system upstream is absorbed, not from reservoir storage, but entirely from downstream river flows. In other words, every acre-foot of water that Georgia wants is taken directly from flows that would otherwise reach Alabama and Florida. These practices have deprived downstream interests of basic river flow needs, despite the empirical evidence that such operations are devastating Apalachicola Bay and its oyster population.

It is clear that the Apalachicola River needs more flow to help recover from the devastating oyster mortality that occurred in the bay in 2012, as well as the massive die-offs of endangered mussels, decline in fisheries, and drying of the floodplain forest that have occurred in recent years. The Corps can no longer assume that all needs can be met without proactively insisting on upstream conservation. At a minimum, the Corps should mandate that Georgia develop strict conservation measures as a condition to entertaining any further withdrawals from the ACF system. The Corps' current efforts to revise their Draft Water Control Plan offers an opportunity to restructure the priority system they use in existing operations to assign greater weight to downstream needs and strive to mimic historic flow patterns.

Thank you for the chance to talk to you today about one of Florida's most precious resources, the Apalachicola River and Bay.

FIGURE 1
Center Pivot Irrigation Systems in the ACF Basin

