

No. 142, Original

In The
Supreme Court of the United States

STATE OF FLORIDA,
Plaintiff

v.

STATE OF GEORGIA
Defendant

Before the Special Master

Hon. Ralph I. Lancaster

UNITED STATES' POST-TRIAL BRIEF AS *AMICUS CURIAE*

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INTRODUCTION

The Special Master has requested that the United States file a brief as *amicus curiae* “addressing specifically the issue of the Army Corps of Engineers’ operations in the ACF River Basin.” At trial, the parties sharply disputed, with conflicting expert testimony, whether additional flow in the Flint River produced by a consumption cap on Georgia would increase the flow into the Apalachicola River or would instead be “offset” by the Corps’ operation of the federal projects on the Chattahoochee River for their authorized purposes. In doing so, the parties relied on the Corps’ 2012 Revised Interim Operating Plan, or RIOP, which currently governs the Corps’ releases from Jim Woodruff Dam into the Apalachicola River. On December 8, 2016, the Corps released its final environmental impact statement (“FEIS”) and Water Control Manual for the ACF Basin, which is expected to be published as available in the December 16, 2016, edition of the Federal Register, beginning a 30-day state and agency review period. In response, the Special Master requested that the United States also address “the extent to which (if at all) the FEIS and [Water Control Manual] materially changes the operations of the Corps as presented by the parties during the recently completed evidentiary hearing.”

In this brief, we describe the Corps’ current operating procedures under the RIOP and the proposed operations under the updated Water Control Manual. We explain generally how the Corps’ operations would treat additional basin inflow under varying conditions. And we provide additional perspective on the likely

consequences for flow regimes in the ACF basin based on the timing and duration of substantial additional basin inflow.

In short, a decrease from current consumption in Georgia that produces an increase in streamflow in the Flint River will increase the total “basin inflow” above Jim Woodruff Dam. Under the Corps’ operating procedures—both current and proposed—an increase in basin inflow above Jim Woodruff Dam would result in either an increase of pass-through flow into the Apalachicola, no immediate increase of flow into the Apalachicola but additional storage of water in the federal projects, or both, depending on the month and the overall levels of the reservoirs. Except in flood conditions, additional basin inflow will generally benefit the Corps’ ability to meet the federal project purposes and comply with the requirements of the Endangered Species Act (“ESA”) and other federal statutes. Additional basin inflow would be expected to, in some measure, delay the onset of drought operations (in which releases to serve authorized purposes are reduced), extend the Corps’ ability to meet all project purposes—including the 5,000 cfs minimum release from Jim Woodruff Dam—during an extended drought, and quicken the resumption of normal operations after a drought ends. Whether Florida has proven that a consumption cap on Georgia would produce enough additional basin inflow to make those likely benefits of sufficient magnitude and duration to remedy Florida’s alleged harms and

justify the cost of the cap is a factual dispute for the Special Master, and ultimately the Supreme Court, to resolve.¹

BACKGROUND

I. Federal Projects in the ACF Basin

In 1939, the U.S. Army Corps of Engineers transmitted a report to Congress recommending development of the ACF Basin for multiple purposes, including navigation, hydroelectric power, national defense, commercial value of riparian lands, recreation, and industrial and municipal water supply. H.R. 342, 76th Cong., 1st Sess. 77 (1939). Congress approved the Corps' plan in the River and Harbor Act of 1945, Pub. L. No. 79-14, § 2, 59 Stat. 10, 17 (1945). In 1946, the Corps recommended several changes to the original plan, including moving one of the proposed hydropower generating dams and reservoirs further upstream from Atlanta to its eventual location in Buford, Georgia. H.R. 300, 80th Cong., 1st Sess. 27-28 (1947). Congress authorized the modified plan in the River and Harbor Act of 1946, Pub. L. No. 79-525, § 1, 60 Stat. 634, 635 (1946). In 1962, Congress authorized the construction of an additional dam at West Point, Georgia. *See* Flood Control Act of 1962, Pub. L. No. 87-874, § 203, 76 Stat. 1173, 1182 (1962).

¹ At the motion to dismiss stage, we explained that “in considering the shaping of the judgment and the adequacy of relief, the United States intends to lend its views and expertise to inform the Court of the line between relief that will prejudice the United States and relief that will not.” We remain of the view that a cap on Georgia’s consumption would not be likely to adversely affect the Corps’ operations.

The Corps currently operates five federal dams in the ACF Basin for the purposes authorized by Congress. The northernmost dam is Buford Dam, which is north of Atlanta and forms Lake Sidney Lanier. Next is West Point Dam, followed by Walter F. George Dam and then George W. Andrews Dam, each of which is located on the Chattahoochee along the Georgia-Alabama border. The southernmost dam is Jim Woodruff Dam, at the confluence of the Flint and Chattahoochee Rivers. Water is released from Jim Woodruff Dam into the Apalachicola River in Florida.

The Corps operates the system of dams in the ACF Basin pursuant to a Water Control Manual governing all projects in the Basin and separate reservoir regulation manuals for each individual dam. In addition to operating the dams to accomplish their congressionally authorized purposes, the Corps operates the system to comply with the ESA and other federal statutory requirements. *See, e.g.*, 16 U.S.C. § 1531 *et seq.*; Water Supply Act of 1958, 43 U.S.C. § 390b; Fish & Wildlife Coordination Act of 1958, 16 U.S.C. § 661-667e; Flood Control Act of 1944, 16 U.S.C. § 460d; 33 U.S.C. § 708. The Corps is currently engaged in an administrative process for updating the Water Control Manual and the individual reservoir regulation manuals. *Id.* at 1. On December 16, 2016, the Corps will publish in the Federal Register its notice of availability of the FEIS as required by the National Environmental Policy Act of 1969, 42 U.S.C. § 4321 *et seq.*² The Water

²The FEIS and Water Control Manual is currently available on the Corps' website at: <http://www.sam.usace.army.mil/Missions/Planning-Environmental/ACF-Master-Water-Control-Manual-Update/ACF-Document-Library/>.

Control Manual is not yet final, and publication in the Federal Register triggers a thirty-day review period by state and federal agencies. The Corps expects to issue a record of decision with final approval and implementation of a Water Control Manual by March 2017.

II. Corps Operating Procedures

Since 2012, the Corps has made decisions regarding the releases from Jim Woodruff Dam using the RIOP. The RIOP is summarized and explained at various places in the record; here we refer to the May 2012 Biological Opinion, before the Court as JX072, and the Corps' draft EIS for the water control manual revision, at JX124. The proposed Water Control Manual ("proposed Manual") was developed by the Corps, then examined in consultation with the Fish and Wildlife Service in its September 2016 Biological Opinion, JX168. If the Water Control Manual is adopted in the form recently proposed, the Corps' operating procedures would change as set forth below. The summary of the proposed operations under the proposed Manual is based on the FEIS and Manual, referred to in note 2 above, and the September 2016 Biological Opinion, at JX168.

A. The RIOP

The RIOP, adopted in May 2012, has guided the Corps' coordinated operations and releases from the system to produce flows from Jim Woodruff Dam as established in the RIOP. The RIOP sets the minimum flow from Jim Woodruff Dam under varying conditions, as well as the maximum fall rate, which is the daily vertical drop in river stage. The RIOP keys the Corps' release decisions from the

upstream reservoirs necessary to achieve the Woodruff Dam flows to three variables: the time of year, the combined amount of water in the Corps' reservoirs, and the current basin inflow.

There are three seasons under the RIOP—spawning (March-May), non-spawning (June-November), and winter (December-February). In general, the guide curves of the RIOP (and the proposed Manual), which represent the desired surface elevation of the reservoirs at a given point in time, prescribe lower reservoir levels in the winter for flood control capacity, and higher levels in the summer. The refill period begins in late winter and into the “spawning season” and the drawdown period is in the fall.

The amount of usable water in the system is the second factor governing the Corps' release decisions. Each of the three reservoirs with significant storage capacities—Lake Sidney Lanier, West Point Lake, and Walter F. George Lake—are divided into storage pools that are distinguished by their elevation above sea level. At the top of Lake Lanier and West Point Lake is flood storage, which is usually empty, and at the bottom of all three reservoirs is the inactive pool, which is generally not used to meet project purposes.³ In the middle is the conservation storage pool, which is used to meet all project purposes other than flood risk management. The conservation storage pool in each of the individual storage

³ Walter F. George Lake does not have a formally designated flood control pool, but the Corps has historically drawn down that lake as well to provide capacity for flood risk management in the winter months.

reservoirs is divided into four operational zones. The zones are based on the elevation of the water level and the time of year. FEIS 5-52 to 5-54.

Because the Corps operates its reservoirs as an integrated system, it uses what is called “Composite Conservation Storage” to make decisions on releases under the RIOP. Composite Conservation Storage is calculated by combining the conservation storage—again, the storage pools used to meet project purposes—of Lake Lanier, West Point Lake, and W.F. George Lake. That system-wide Composite Conservation Storage is similarly divided into operational zones. FEIS at 5-55. The Composite Conservation Storage Zones are derived by adding the conservation storage available in each zone for each of the three storage reservoirs. *Id.* At any given time, the amount of the Composite Conservation Storage being used to store water is calculated by adding the existing levels of the three reservoirs together. That number is used to determine which of the Composite Conservation Storage Zones the system is in. Below Composite Conservation Storage Zone 4 is the Drought Zone (roughly equivalent to the inactive storage in Lake Lanier, West Point Lake, and Walter F. George Lake, plus Zone 4 storage in Lake Lanier).

The third factor governing the Corps’ release decisions is the basin inflow above Jim Woodruff Dam. “Basin inflow” is defined as the amount of water that would flow by Jim Woodruff Dam if all of the Corps’ reservoirs were kept at their then-existing surface elevation. FEIS at 4-27. Basin inflow reflects the influences of reservoir evaporative losses, inter-basin water transfers, and consumptive water uses. FEIS at 4-27. Accordingly, basin inflow will vary as consumptive water use

rates change. The Corps estimates basin inflow daily, and the RIOP and proposed Manual both use a seven-day moving average of daily basin inflow calculations for daily release decisions.

The RIOP’s minimum discharge schedule for Jim Woodruff Dam, applying those three factors, is summarized in the following table, which is in the record at JX124, Table 2.1-5.

**Table 2.1-5.
May 2012 RIOP for Jim Woodruff Lock and Dam, Apalachicola River Minimum Discharge from Woodruff Lock and Dam by Month and by Basin Inflow (BI) Rates**

| Months | Composite conservation storage zone | Basin inflow (BI) (cfs) | Releases from Jim Woodruff Lock and Dam (cfs) | BI available for storage ^a |
|-------------------|-------------------------------------|--|---|---|
| March–May | Zones 1 and 2 | ≥ 34,000 ≥ 16,000 and < 34,000 ≥ 5,000 and < 16,000 < 5,000 | ≥ 25,000 ≥ 16,000+50% BI > 16,000 ≥ BI ≥ 5,000 | Up to 100% BI>25,000 Up to 50% BI>16,000 |
| | Zone 3 | ≥ 39,000 ≥ 11,000 and < 39,000 ≥ 5,000 and < 11,000 < 5,000 | ≥ 25,000 ≥ 11,000+50% BI > 11,000 ≥ BI ≥ 5,000 | Up to 100% BI>25,000 Up to 50% BI>11,000 |
| June–November | Zones 1, 2, and 3 | ≥ 22,000 ≥ 10,000 and < 22,000 ≥ 5,000 and < 10,000 < 5,000 | ≥ 16,000 ≥ 10,000+50% BI > 10,000 ≥ BI ≥ 5,000 | Up to 100% BI>16,000 Up to 50% BI>10,000 |
| December–February | Zones 1, 2, and 3 | ≥ 5,000 < 5,000 | ≥ 5,000 (Store all BI > 5,000) ≥ 5,000 | Up to 100% BI > 5,000 |
| At all times | Zone 4 | NA | ≥ 5,000 | Up to 100% BI > 5,000 |
| At all times | Drought Zone | NA | ≥ 4,500 ^b | Up to 100% BI > 4,500 |

Sources: USACE, Mobile District 2012; USFWS 2012

Notes:

^a Consistent with safety requirements, flood risk management purposes, and equipment capabilities.

^b Once composite conservation storage falls below top of Drought Zone, ramp-down to 4,500 cfs will occur at a rate of 0.25 ft/day.

The flow rates included in the table above are minimum flow rates and not targets.

The Corps may release more than the minimum releases in the table as required to meet other project purposes, such as hydropower, or to maintain the fall rate, or in the interests of flood risk management. JX072 at 10.

Under the RIOP, the amount of water released and stored varies with basin inflow as long as the reservoirs remain in Composite Conservation Storage Zones 1-3. Once the Composite Conservation Storage falls below the top of Zone 4, the Corps begins drought operations on the first of the following month. The term “drought operations” refers to more conservative operations that are intended to enable the Corps’ to operate its reservoir projects more effectively as drought conditions arise. See FEIS at 6-99. Under drought operations, the Corps will maintain a minimum release from Jim Woodruff Dam of 5,000 cfs and may store up to 100% of basin inflow above that amount, regardless of season, until the Composite Conservation Storage leaves Zone 2 and enters Zone 1. During drought operations, maximum fall rates are suspended after the flow rate at Jim Woodruff Dam reaches 5,000 cfs, allowing the Corps, for example, to continue to store water after locally significant rainfall events raise the stage of the river. Fall rates under drought operations would be managed to match the fall rate of the basin inflow. The Corps may release more than the minimum required flow during drought operations, and to store less than 100% of basin inflow above 5,000 cfs to serve the project purposes. When composite conservation storage falls into the Drought Zone, the minimum release from Jim Woodruff Dam is 4,500 cfs and any basin inflow above 4,500 cfs can be stored.

Once Composite Conservation Storage rises to the bottom of Zone 1, normal operations under the RIOP resume. When the reservoir levels are at the top of Zone

1—the levels at which the Corps would ideally keep the reservoirs—any additional inflow is passed through to maintain empty space in the reservoirs for flood control.

B. The Proposed Water Control Manual

The proposed Manual, if adopted in its current form, retains the same basic framework as the RIOP, with a few alterations.⁴ First, the Corps proposes to redefine both the action zones within each reservoir and the composite action zones. FEIS at 5-52. Second, drought operations will no longer begin at the top of Zone 4. Instead, on the first of each month the Corps will initiate drought operations if Composite Conservation Storage falls into Zone 3. Maximum fall rates are suspended after flow at Jim Woodruff Dam reached 5,000 cfs during drought operations. Finally, the proposed Manual also suspends the maximum fall rates in times of prolonged low flows even if drought operations are not triggered, defined to mean thirty consecutive days of Jim Woodruff releases of 7,000 cfs or lower. Fall rates under drought operations and prolonged low-flow operations would be managed to match the fall rate of the basin inflow.

The changes to drought operations in the proposed Manual reflect “a more proactive approach to conserve reservoir storage as drier conditions develop in the basin, while continuing to meet downstream commitments and needs.” FEIS at 6-

⁴ Those changes are part of a much larger suite of proposed changes to Corps’ operations in the ACF Basin. For example, the Corps also proposes to provide additional water supply storage to Georgia in the Atlanta area, enhance the navigational capabilities of the system, and change the current hydropower generation schedule at Buford Dam during drought operations.

99; *see also* FEIS at 6-99, table 6.1-13; FEIS at 6-102 to 6-103. The revised drought operations “could trigger slightly constrained operations more frequently and over slightly longer periods, and the extent of those constrained operations would gradually increase only as worsening drought conditions may dictate over time.” *Id.* If adopted, the proposed Manual would trigger drought operations, and the flows they require, 11% more often than the RIOP. FEIS at 6-100. But the proposed Manual would also reduce the total amount of time the reservoirs are in zones 3 and 4, and “Composite Conservation Storage values for the reservoirs would tend to remain higher for a greater portion of the modeled period.” FEIS at 6-102.

Overall, the proposed Manual is “likely to have no appreciable incremental effect on flow conditions in the Apalachicola River compared to the [RIOP].” Low flow periods would be increased somewhat, as under the proposed Manual, the percentage of days in which flows in the Apalachicola are greater than or equal to 6,000 cfs would be reduced from 95.8% to 95.3%. Conversely, the number of days in which the flows are greater than 12,000 and 16,000 cfs are expected to increase. FEIS at 6-93, Table 6.1-12.

Below is a table from the FEIS for the proposed Manual describing the proposed operational procedures for releases from Jim Woodruff Dam.

**Table 5.4-3.
Jim Woodruff Lock and Dam, Apalachicola River Minimum Discharge for Federally Listed Species
by Month and by Basin Inflow Rates**

| Months | Composite Conservation Storage Zone | Basin Inflow (cfs) | Min. Releases from Jim Woodruff Lock and Dam (cfs) | Basin Inflow Available for Storage^a |
|----------------------|--|--|---|---|
| March–May | Zones 1 and 2 | ≥ 34,000 ≥ 16,000 and < 34,000 ≥ 5,000 and < 16,000 < 5,000 | = 25,000 = 16,000+50% BI > 16,000 = BI = 5,000 | Up to 100% BI>25,000 Up to 50% BI>16,000 |
| | Zone 3 | ≥ 39,000 ≥ 11,000 and < 39,000 ≥ 5,000 and < 11,000 < 5,000 | = 25,000 = 11,000+50% BI > 11,000 = BI = 5,000 | Up to 100% BI>25,000 Up to 50% BI>11,000 |
| June–November | Zones 1, 2, and 3 | ≥ 22,000 ≥ 10,000 and < 22,000 ≥ 5,000 and < 10,000 < 5,000 | = 16,000 = 10,000+50% BI > 10,000 = BI = 5,000 | Up to 100% BI>16,000 Up to 50% BI>10,000 |
| December–February | Zones 1, 2, and 3 | ≥ 5,000 < 5,000 | = 5,000 = 5,000 | Up to 100% BI > 5,000 |
| If Drought Triggered | Zone 3 | NA | = 5,000 | Up to 100% BI > 5,000 |
| At all times | Zone 4 | NA | = 5,000 | Up to 100% BI > 5,000 |
| At all times | Drought Zone | NA | = 4,500 ^b | Up to 100% BI > 4,500 |

Notes:

^a. Consistent with safety requirements, flood risk management purposes, and equipment capabilities.

^b. Once composite conservation storage falls below the top of the Drought Zone, ramp down to a minimum release of 4,500 cfs at rate of 0.25 ft/day based on the USGS gage at Chattahoochee, Florida (02358000).

ARGUMENT

As is evident from the RIOP and proposed Manual, whether the Corps will “offset” additional basin inflow from the Flint River by storing more water on the Chattahoochee River depends on the time of year and the Composite Conservation Storage Zone. For example, from June to November of a year in which flows are low but drought operations have not been triggered, any additional basin inflow between 5,000 and 10,000 cfs would generally be passed straight through to Florida. If, for example, the conservation measures advocated by Florida as part of a consumption cap actually resulted in an increased flow in the Flint River of 2,000

cfs, *see* Pre-Filed Direct Testimony of David Sunding, Ph.D. at 44, Table 4, then flows into Florida would also increase by roughly that amount.⁵ On the other hand, if drought operations have begun, that same increased basin inflow at that same time of year would generally result in a net increase in storage upstream until drought operations ceased, maintaining flow into Florida of roughly 5,000 cfs.

We describe four scenarios below. In each scenario, we provide a snapshot of the basin at a particular point in time, with the focus on what the Corps' operational procedures will require for additional water produced at that time. The snapshots are useful to examine the impact of additional basin inflow as an individual operational matter. But they are hypotheticals to demonstrate and explain how the Corps' operational procedures work, not attempts to precisely quantify any particular effect on flows in the Apalachicola River from any particular amount of additional water in the Flint River. The Court has received significant expert testimony from both States attempting to model and quantify the effects on the Apalachicola River of additional basin inflow in particular climatic conditions, and we take no position on the resolution of that factual dispute. Finally, focusing too closely on any one snapshot risks missing the full beneficial impact that substantial increases in basin inflows could have on the ACF system during non-

⁵ For ease of reference, when describing the scenarios in the text we assume an increase of 2,000 cfs of additional flow in the Flint River. We take no position on whether Florida has proven that a consumption cap is warranted or would result in any particular amount of additional flow.

flood events. We therefore begin by describing the general beneficial impact increased basin inflow has on the ACF system as a whole.

General Benefits from Increased Flow and Increased Storage: The amount of water stored in the Corps' reservoirs is a critical component of the amount of water flowing into the Apalachicola River. When the Corps has more water available to it to store in normal operations, then, depending on the amount of additional basin inflow, the Corps may be able to keep the reservoirs in Zones 1 through 3 longer when climatic conditions become drier. That has a benefit of delaying the onset of drought operations. We discuss opportunities to store more water during normal operations in scenarios 1 and 2 below.

Similarly, once drought operations begin, if the Corps does not have to release as much water from storage to meet the minimum flow requirement from Jim Woodruff Dam, as described in scenario 3, it may be able to extend the amount of time that it can meet the 5,000 cfs minimum flow requirement, as well as shorten how long drought operations persist, because reservoir levels will be higher when the drought ends. Thus, while the opportunity to store more water during drought operations does not immediately increase the flow from Jim Woodruff Dam, reducing the amount of time that the system is in drought operation will increase the amount of time that the Corps operates to provide higher flows into the Apalachicola.

Finally, in scenario 4 we describe a situation in which additional flow on the Flint River will be passed through Jim Woodruff Dam, providing an immediate increase in flows to Florida during low-flow periods.

The operational procedures under the proposed Manual for each of the scenarios is highlighted in this chart, with scenario 1 in yellow, scenario 2 in pink, scenario 3 in green, and scenario 4 in blue. The RIOP is the same, except that drought operations would not be triggered until zone 4.

| Months | Composite Storage Zone | Basin Inflow (BI) (cfs) ^a | Releases from JWLD (cfs) ^b |
|-----------------------------------|--------------------------------|--------------------------------------|--|
| March - May | Zones 1 and 2 | $\geq 34,000$ | = 25,000 |
| | | $\geq 16,000$ and $< 34,000$ | = 16,000 + 50% BI $> 16,000$ |
| | | $\geq 5,000$ and $< 16,000$ | = BI |
| | | $< 5,000$ | = 5,000 |
| | Zone 3 | $\geq 39,000$ | = 25,000 |
| | | $\geq 11,000$ and $< 39,000$ | = 11,000 + 50% BI $> 11,000$ |
| | | $\geq 5,000$ and $< 11,000$ | = BI |
| | | $< 5,000$ | = 5,000 |
| June - November | Zones 1,2, and 3 | $\geq 22,000$ | = 16,000 |
| | | $\geq 10,000$ and $< 22,000$ | = 10,000 + 50% BI $> 10,000$ |
| | | $\geq 5,000$ and $< 10,000$ | = BI |
| | | $< 5,000$ | = 5,000 |
| December - February | Zones 1,2, and 3 | $\geq 5,000$ | = 5,000 (Store all BI $> 5,000$) |
| | | $< 5,000$ | = 5,000 |
| IF Drought Triggered ^c | Zone 3 | NA | = 5,000 (Store all BI $> 5,000$) ^d |
| At all times | Zone 4 | NA | = 5,000 (Store all BI $> 5,000$) |
| At all times | Corps Exceptional Drought Zone | NA | = 4,500 (Store all BI $> 4,500$) ^e |

- Scenario 1
- Scenario 2
- Scenario 3
- Scenario 4

- a. Basin inflow for composite conservation storage in Zones 1, 2, and 3 are calculated on the basis of the 7-day moving average basin inflow. Basin inflow for composite conservation storage in Drought Operations, Zone 4 or lower (Drought Zone) is calculated on the basis of the one-day basin inflow.
- b. Consistent with safety requirements, flood risk management purposes, and equipment capabilities.
- c. Drought plan is triggered when the composite conservation storage falls into Zone 3, the first day of each month represents a decision point
- d. Once drought operation triggered, reduce minimum flow to 5,000 cfs following the maximum ramp rate schedule
- e. Once composite storage falls below the top of the Drought Zone ramp down to 4,500 cfs at rate of 0.25 ft/day

Scenario 1 (High Flow): In the first scenario, we consider the operations when flow is high and the Corps is operating normally (that is, drought operations have not been initiated). In that case, Jim Woodruff Dam has a minimum discharge requirement that is a fixed amount when the seven-day basin inflow is greater than a threshold flow set by the Corps, as reflected in the chart above. For example, with a June basin inflow of 22,000 cfs, releases from Jim Woodruff Dam are at least 16,000 cfs, with all of the inflow over 16,000 cfs available for storage. Thus, if a consumption cap were to increase basin inflow from 22,000 cfs to 24,000 cfs, then the Corps' ability to store water would increase from 6,000 cfs to 8,000 cfs, because the additional water on the Flint River will be used to meet the 16,000 cfs flow requirement at Jim Woodruff Dam. Apalachicola River flows will likely remain the same unless no storage space is available in the reservoirs. If the conservation pools of the reservoirs are full, Apalachicola River flow will increase by the amount the Flint River flow increases.

Scenario 2 (Moderate Flow): Again, for scenario 2 we assume the Corps is in normal operations but basin inflow is somewhat less than in scenario 1. Under that scenario, the minimum discharge requirement at Jim Woodruff Dam is to release a

set threshold flow plus half of the basin inflow above that threshold. For example, with a May basin inflow of 16,000 cfs, the Corps will release 16,000 cfs from Jim Woodruff Dam. If a consumption cap were to increase the basin inflow to 18,000 cfs, the Corps would store an additional 1,000 cfs, and the release from Jim Woodruff Dam would be 17,000 cfs. Thus, flows in the Apalachicola River will increase by roughly half of the amount the Flint River flow increases.

Scenario 3 (Extreme Low Flow) In this scenario we describe how the Corps would operate assuming that drought operations have already been triggered (the operations would be functionally the same in the winter months, even in normal operations). In that situation, the Corps would operate to satisfy the minimum discharge at Jim Woodruff Dam of 5,000 cfs (or 4,500 cfs in the drought zone), with additional discretionary releases as necessary to meet other project purposes, like hydropower generation and flood risk management.

During drought operations, if basin inflow without a consumption cap were 3,000 cfs, the Corps would release 2,000 cfs from storage in the three upstream reservoirs to meet the minimum flow requirement of 5,000 cfs at Jim Woodruff Dam. If a consumption cap produced 2,000 cfs of additional flow on the Flint River, and basin inflow thereby increased to 5,000 cfs, then the Corps would not need to release water from storage to meet the minimum flow requirement and would not do so as a matter of course. Thus, in drought operations additional water can be stored in the reservoirs because any additional water from the Flint River will be used to meet the 5,000 cfs minimum flow. The Corps expects in an extreme low flow

scenario that Apalachicola River flows would be very similar with or without a consumption cap until enough water is stored to return the system to normal operations.

Scenario 4 (Low Flow): In this final scenario, we consider low flows of between 5,000 and 10,000 cfs during a time when the reservoirs have not yet reached a level to trigger drought operations. In that situation, the releases from Jim Woodruff Dam will match the basin inflow during the spawning and non-spawning seasons. Thus, in July of a year where basin inflows are 6,000 cfs, the Corps will release 6,000 cfs from Jim Woodruff Dam. If a consumption cap increases basin inflow by 2,000 cfs, then the Corps will release 8,000 cfs from Jim Woodruff Dam. No additional water will be stored into the federal projects because any additional water from Flint River will be used to match the seven-day basin inflow. The flow in the Apalachicola River will therefore increase by the same amount that the Flint River flow increases.

CONCLUSION

In our amicus brief at the motion to dismiss stage, we said that “[i]t is at least plausible that a cap on Georgia’s consumption, particularly with respect to the Flint River, which is unregulated by the Corps, would increase the basin inflows and thereby increase the amount of water flowing into Florida” when the Corps is operating to match basin inflows. We also noted that it “is also plausible that an increased flow during wet times would provide a cushion during low-flow periods, so that it would be possible to maintain a flow rate of greater than 5,000 cfs for a

longer period of time without any alteration of the Corps' operations." As we have explained, it remains plausible that those things are true. In our judgment, reductions in consumption on the Flint River would not be likely to adversely affect the Corps' operations, and could—depending on the amount—have beneficial impacts on the system by making more water available for various purposes during times of low flow. The United States takes no position on whether Florida has proved that a consumption cap would produce enough additional basin inflow at the right times to redress Florida's alleged harm and justify the cost of imposing a consumption cap in this case.

Respectfully submitted,

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In The
Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff

v.

STATE OF GEORGIA

Defendant

Before the Special Master

Hon. Ralph I. Lancaster

CERTIFICATE OF SERVICE

This is to certify that the foregoing United States' Brief as *Amicus Curiae* has been served this 15th day of December, 2016, in the manner specified below:

| For State of Florida | For State of Georgia |
|---|---|
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