



DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

November 1, 2007

REPLY TO
ATTENTION OF

Inland Environment Team
Planning Environmental Division

Ms. Gail Carmody
Ecological Services
U.S. Fish and Wildlife Service
1601 Balboa Avenue
Panama City, Florida 32405-3721

Dear Ms. Carmody:

This letter is to request the initiation of formal consultation pursuant to Section 7 of the Endangered Species Act of 1973 (ESA), on the U.S. Army Corps of Engineers (Corps), Mobile District proposed drought contingency management operations for the Apalachicola, Chattahoochee, Flint Rivers (ACF) projects, and the associated releases from Jim Woodruff Dam to the Apalachicola River. Mobile District completed Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) on September 5, 2006 for our Interim Operations Plan (IOP) at Jim Woodruff Dam in support of federally-listed species and critical habitat on the Apalachicola River. The findings of this consultation was that the proposed operations, as defined in the IOP, would not result in jeopardy of the federally-listed species, or adverse modification or destruction of critical habitat, and an Incidental Take Statement was issued to allow a limited amount of potential take of mussels under certain flow conditions.

The Biological Opinion (BO) issued for the completed consultation included a Reasonable and Prudent Measure No. 3 (RMP3) requiring the development of modifications to the IOP that would provide for higher desired minimum flows when hydrological and climatic conditions would allow, and identification of a "drought provision" that would determine when it would be reasonable and prudent to revert to the required minimum flow of 5,000 cfs (as required in the current ACF water control plan) in order to conserve storage for prolonged low flow conditions. A "drought provision" modification to the IOP was submitted by Mobile District on February 16, 2007, and the modified IOP operation was approved by the USFWS on February 28, 2007.

The IOP was developed to accommodate drought conditions within the basin, based on previous modeling of hydrological conditions associated with previous droughts of record. However, the severe and prolonged drought conditions being experienced in the ACF basin this year have been determined to represent an exceptional drought, and we are experiencing impacts to the basin and composite storage within the basin that were unanticipated by the previous IOP modeling. Therefore, in accordance with the adaptive management provisions of RPM1 of the BO, Mobile District has identified additional drought contingency measures we believe are necessary to prepare the reservoir system to continue to provide support for the multiple project purposes in the basin, including continued support to listed endangered and threatened species and critical habitat.

The Apalachicola River is known to support three federally listed species: Gulf sturgeon (*Acipenser oxyrinchus desotoi*), fat threeridge mussel (*Amblema neisleri*), and purple bankclimber mussel (*Elliptioideus sloatianus*). The Chipola slabshell mussel (*Elliptio chipolaensis*) has also occasionally been found on the river. The USFWS and National Marine Fisheries Service (NMFS) listed the Gulf sturgeon as threatened on September 30, 1991 (56 FR 49653). The USFWS listed the fat threeridge mussel as endangered and the purple bankclimber mussel as threatened on March 16, 1998 (Federal Register, vol. 63, no. 50, pp. 12664–12687). The USFWS and NMFS designated critical habitat for the Gulf sturgeon on March 19, 2003 (Federal Register, vol. 68, no. 53, pg. 13370). Critical Habitat Unit 6 includes the main stem of the Apalachicola River from the Jim Woodruff Lock and Dam, Gadsden and Jackson Counties, Florida, downstream to its discharge at East Bay or Apalachicola Bay, Franklin County, Florida. Critical habitat was also proposed by USFWS on June 6, 2006 for seven mussels within four Northeast Gulf Drainages (Federal Register, vol. 71, no. 108, pp. 32746-32795). Critical Habitat Unit 2 on the Chipola River (proposed for the fat threeridge and Chipola slabshell) and Unit 8 (on the Apalachicola River (proposed for the fat threeridge mussel and purple bankclimber mussel) occur within the action areas for the subject project operations. A final listing of critical habitat for the mussels is expected to be published before the end of this year.

Jim Woodruff Dam was constructed in 1957 and represents the most downstream Federal reservoir project within the Apalachicola, Chattahoochee, Flint Rivers (ACF) system. The reservoir projects in the ACF system include Jim Woodruff Dam (Lake Seminole), George W. Andrews Dam and Lake, Walter F. George Dam and Lake, West Point Dam and Lake, and Buford Dam (Lake Sidney Lanier). The ACF system is authorized and operated for multiple project purposes, including flood control, hydropower generation, navigation, water quality, fish and wildlife conservation, water supply and recreation. The Mobile District operates the reservoirs within the ACF system in a balanced manner in an attempt to benefit all project purposes. Retention of water in reservoir storage is used for the benefit of these multiple project purposes. Storage also provides a source for augmentation flows in support of downstream needs during periods of extended dry conditions or drought. The Jim Woodruff project is essentially a “run-of-river” project with very limited storage capabilities. Therefore, storage in

upstream reservoirs must often be released in order to make controlled releases from Jim Woodruff Dam to meet downstream flow needs. Current operations under the draft ACF water control plan require a minimum flow of 5,000 cfs on the Apalachicola River to meet minimum water supply and fish and wildlife needs during low flow conditions. This 5,000 cfs minimum flow is also incorporated into the approved IOP operations.

The ACF basin is experiencing the second year of severe drought conditions within the basin. The National Weather Service has classified significant portions of the basin as in exceptional drought, and predictions are that drought conditions will likely continue throughout the winter and spring of 2008. As a result of the significantly reduced inflows to ACF Basin and continued releases necessary to meet minimum flow requirements downstream, there is concern that Lake Lanier may deplete its conservation storage if severe drought conditions continue through the end of the year and into 2008. The two lower storage projects in the basin (West Point Lake and Walter F. George Lake) are already essentially at the bottom of their conservation storage. Therefore, in September, the Corps and USFWS initiated discussions regarding the need to temporarily modify the IOP in response to the exceptional drought conditions and rapidly declining conservation storage in the system. Our intensive discussions and shared modeling of the basin and predicted conditions have led to formulation of a proposed drought contingency modification to the IOP, which we have termed the Exceptional Drought Operations (EDO).

The proposed EDO represents a temporary modification of the existing IOP approved by USFWS on February 28, 2007. The intent of this modification to the IOP is to minimize adverse impacts to listed species in the Apalachicola River due to drought conditions while making allowances for increased storage opportunities and/or reductions in the demand on composite storage in order to conserve storage which can be used to provide continued support to authorized project purposes and minimize impacts to other water users during a severe multi-year drought.

Consistent with the existing IOP which uses Composite Storage to trigger whether the desired minimum flow (6,500 cfs) or the required minimum flow (5,000 cfs) is maintained; the proposed action also uses Composite Storage to determine when it is reasonable and prudent to activate the EDO. Composite Storage is calculated by combining the storage of Lake Sidney Lanier, West Point Lake, and Walter F. George Lake. Each of the individual storage reservoirs consists of four Zones. These Zones are determined by the operational guide curve for each project. The Composite Storage utilizes the four-Zone concept as well. Composite Zone 4 indicates that all federal storage reservoirs have reached a critical storage level. While in Zone 4, the most conservative operation is enacted and releases are only made for water supply and water quality. Navigation is not supported and hydropower demands will be met at minimum levels.

Additional generation solely to meet system hydropower demands will not be made. The EDO is “triggered” whenever the Composite Storage falls below the bottom of Zone 3 into Zone 4. At that time the temporary provisions of the IOP are suspended and management decisions are based on the provisions of the EDO. The provisions of the EDO remain in place until conditions improve such that the Composite Storage reaches a level above the top of Zone 3 (i.e., within Zone 2). At that time, the EDO provisions are suspended, and the provisions of the IOP are re-instated. As described above the EDO is triggered by the status of composite storage within the basin, not by any determination on drought status by the National Weather Service or other drought indicators.

The EDO includes the following provisions and triggers:

- Immediate suspension of all IOP provisions including seasonal storage limitations, down ramping restrictions, and minimum flow thresholds, and volumetric balancing accounting whenever the Composite Storage falls below the bottom of Zone 3 into Zone 4;
- Immediate reduction of the 5,000 cfs minimum flow requirement in the Apalachicola River, as measured at the Chattahoochee gage, to a 4,150 cfs minimum flow requirement (the reduction in flows would be implemented gradually consistent with the IOP maximum ramping down rate schedule);
- Implementation of a monthly monitoring plan that tracks Composite Storage in order to determine the appropriate water management operations (the first day of each month will represent a decision point) and whether EDO triggers are applied;
- Re-instatement of the 5,000 cfs minimum flow requirement, but none of the other IOP provisions, once conditions improve such that the Composite Storage reaches a level above the top of Zone 4 (i.e., within Zone 3);
- Suspension of all EDO provisions and re-instatement of the normal IOP provisions once conditions improve such that the Composite Storage reaches a level above the top of Zone 3 (i.e., within Zone 2).

Composite Storage is currently within Zone 4. For the 63 year simulated period used in our modeling analyses, there were only two other previous severe drought years (1986 and 2000) that would have resulted in Composite Storage below Zone 3 for which the proposed EDO operations would have been enacted.

The proposed EDO provides a means to minimize adverse impacts to the species on the Apalachicola River while providing continued support to other critical basin water uses during an exceptional basin-wide drought. The EDO should enhance the probability for the reservoirs in the basin to refill and improves the probability that we will be able to sustain minimum basin

needs into next year in the face of a multi-year drought. Although the EDO will be tracking composite storage to measure benefits of the drought contingency measures, our modeling indicates that the most benefit from the EDO will be potential for refill of the downstream reservoirs, West Point Lake and Walter F. George Lake, which will allow these reservoirs to again provide support for the downstream augmentation flow needs. Lake Lanier will benefit to some degree due to relief from providing sole support for downstream flows, but would still be burdened to provide water supply and water quality flows below the dam. Other critical basin water resource needs would continue to be met, including municipal and industrial water supply, wastewater assimilation for water quality, and power plant cooling waters. If implemented, the EDO would still be able to provide some level of flow augmentation support and will likely avoid the potential for more severe impacts that would occur to the listed species in the event composite storage within the basin becomes depleted and augmentation flows can no longer be sustained. This scenario is predicted by our models to occur in 2008 if no drought contingency measures are implemented and if the severe drought conditions continue as predicted.

Due to the exceptional drought conditions and impacts already being experienced on composite storage within the basin, the Corps and USFWS have agreed to expedite the formal consultation procedures to reach a BO as early as November 15, 2007. Both agencies are continuing to jointly consult on the proposed Exceptional Drought Operation and are sharing modeling results and data on resource impacts as it is being developed. We have enclosed a Biological Assessment (BA) including our evaluations completed to date of impacts on the listed species and the primary constituent elements of critical habitat. We intend to continue our intensive consultation discussions and sharing of additional information as it becomes available as we continue through the expedited consultation process. We have determined in the enclosed BA that our proposed EDO operations will likely adversely affect Gulf sturgeon and listed mussels, and host fish for listed mussels. Efforts by the Mobile District to continue to augment flows to maintain a minimum flow above the basin inflow will provide mitigation for declining basin inflow and will benefit the federally protected species. There will, however, be trade-offs between minimal impacts to Gulf sturgeon spawning activities or critical habitat area, or to host species life cycle needs during the spring or summer months, in order to conserve sufficient storage in upstream reservoirs to provide for future augmentation flows in the summer or fall months to protect listed mussels from exposure. There would also be adverse impact to mussels for certain hydrological conditions. Mobile District believes that any such trade-off impacts will be less severe than potential impacts that could occur in the event exceptional drought condition continue and no action is taken to conserve storage and avoid depletion of composite storage within the system. However, it is understood that our consultation discussions over the next couple of weeks could identify additional reasonable and prudent measures that could provide for additional minimization of harm to the species, including the consideration of incremental reductions in the flow.

We request you review of the enclosed information with respect to ESA compliance and provide your biological opinion, and any necessary conference report. We will continue our close coordination over the next couple of weeks to assist in concluding the consultation process and reaching consensus on any reasonable or prudent measures that may be appropriate. Should you have any questions, comments, or recommendations, please contact Ms. Joanne Brandt at (251) 690-3260 or Mr. Brian Zettle at (251) 690-2115.

Sincerely,

A handwritten signature in black ink, appearing to read "Curtis M. Flakes", with a long horizontal flourish extending to the right.

Curtis M. Flakes
Chief, Planning and Environmental
Division

Enclosures