U.S. Fish & Wildlife Service

Frequently-Asked Questions Concerning the ACF Biological Opinion

1. What is the U.S. Fish and Wildlife Service's action?

The U.S. Fish and Wildlife Service is releasing its biological opinion on the U.S. Army Corps of Engineers' proposed updated Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida, and Georgia. The Corps is developing its new Water Control Manual for the basin in order to provide guidelines for its coordinated operation of the five federal dams and reservoirs there.

2. Why is it necessary?

As required by the Endangered Species Act (ESA), the Corps must consult with the Service and get its biological opinion on how to limit the Water Control Manual's effect on federally protected species and their critical habitats in the area before proceeding with its planned action. It is the Service's responsibility to ensure that the Corps' proposed actions aren't likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat.

3. What's the status of the species covered under this biological opinion?

The biological opinion is based on the best available science and sees to the protection of these federally listed species: a fish, the "threatened" Gulf sturgeon; three freshwater mussels, the "endangered" fat threeridge mussel; the "threatened" purple bankclimber mussel; and the "threatened" Chipola slabshell mussel. All four have critical habitat designations.

Gulf Sturgeon. The Gulf sturgeon breeds in freshwater after migrating up rivers from marine and estuarine environments. It inhabits coastal rivers from Louisiana to Florida during the warmer months and over-winters in estuaries, bays, and the Gulf of Mexico. It is a primitive-looking fish covered by bony plates or scutes. Adults range from four to eight feet in length, with adult females larger than males.

Its present range extends from Lake Pontchartrain and the Pearl River system in Louisiana and Mississippi east to the Suwannee River in Florida. In several rivers throughout the species' range, dams have restricted sturgeon access to historic migration routes and spawning areas. Currently, seven rivers are known to support reproducing populations of Gulf sturgeon.

The Fat threeridge, **Purple bankclimber** and **Chipola slabshell are Freshwater Mussels.** Mussels are bivalve mollusks, which means they have two valves (shells) surrounding a soft fleshy body. Freshwater mussels are related to snails, oysters, clams and squids. Mussels live in the sand and gravel bottoms of streams and rivers. They require good water quality, stable stream channels and flowing water. Mussels filter their food out of the water. They eat algae, bacteria, and other small, organic particles filtered from the water column.
In the Apalachicola Region, some mussel species have already been declared extinct, while others are rare, protected under the Endangered Species Act, or proposed as candidates for

federal protection. Many of their problems stem from how they live and changes that have occurred to their habitat during the past 200 years.

Why are freshwater mussels so imperiled? Habitat losses from channelization, clearing of riparian and streambank vegetation, siltation, dredging, and dam construction, cause the greatest threat to native mussels. Although water quality has improved in some areas, pollution, especially non-point source pollution, still persists. Mussels are impacted by loss of fish hosts from fish kills or dams that prevent fish migration. Poachers can impact mussels by violating harvest regulations set by conservation agencies.

Fat threeridge. The fat threeridge is a medium-sized, heavy-shelled mussel that reaches a length of about four inches. Large specimens are highly inflated. The dark brown to black shell has seven to nine prominent horizontal parallel ridges.

The Service listed the fat threeridge as an endangered species in 1998. Currently, the fat threeridge is found throughout much of its historical range; however, it is extirpated from localized portions of the Apalachicola and Chipola rivers. The fat threeridge presumably no longer occurs in the portion of the Apalachicola and Flint rivers that is now unsuitable habitat, submerged in the reservoir created by Jim Woodruff Lock and Dam.

Purple bankclimber. The purple bankclimber is a large, heavy-shelled mussel that reaches a length of eight inches. The shell is dark brown to black, quadrate to rhomboidal in shape, and sculptured by several irregular ridges. It has a characteristic purple color on the inside of its shell. Presently, the purple bankclimber occurs in much of it historical range; however, it is extirpated from localized areas, and it has likely been completely extirpated from the Chattahoochee River. The purple bankclimber no longer occurs in the portion of the Apalachicola and Flint rivers that is now unsuitable habitat, submerged in the reservoir created by Jim Woodruff Lock and Dam.

The Service listed the purple bankclimber as a threatened species in 1998. Although past studies have indicated that the species range and abundance are relatively unchanged, we currently consider the species' status to be declining over the short term as a result of the possible poor recruitment and recent mortality due to droughts.

Chipola slabshell. The Chipola slabshell is a medium-sized mussel that reaches a length of a little over three inches. The shell is moderately thin and moderately inflated. The shell exterior is light to dark brown in color and smooth, and typically with dark concentric circles.

The Service listed the Chipola slabshell as a threatened species in 1998. Currently, the Chipola slabshell occurs in nearly all of its historical range, primarily in the main channel of the Chipola River. Recent surveys have documented the Chipola slabshell at many new sites, but generally in relatively low abundance, five or fewer individuals. The Service has no evidence that these populations are currently declining and we consider the Chipola slabshell status to be stable.

4. How did the Service conclude that the Corps' planned action will not jeopardize the continued existence of these species or adversely modify or destroy their designated critical habitat?

The principal factor the Service examined was the flow regime of the Apalachicola River and how the flow regime affects habitat conditions and life history characteristics for the listed species.

5. Will critical habitat designations be affected by this biological opinion, and where is the critical habitat for these mussels and sturgeon located?

This biological opinion won't affect critical habitat designations.

Designated critical habitat for the fat threeridge and purple bankclimber includes most of the Apalachicola River unit, and the downstream-most part of the Chipola River Unit. Designated critical habitat for the Chipola slabshell only occurs within the downstream-most part of the Chipola River Unit. Critical habitat is designated at rivers and bays across the range of the Gulf sturgeon, including the Apalachicola River and the Apalachicola Bay.

6. Is an incidental take statement part of this biological opinion?

Yes. The Service expects a maximum of 34,000 fat threeridge may be exposed in the Apalachicola River, Chipola Cutoff, and Chipola River downstream of the Chipola Cutoff when the minimum flow is reduced to 4,500 cfs and when individuals recolonize habitats greater than 5,000 cfs followed by stranding during subsequent low flows. While these seem like large numbers, this is a small portion of the mussels and habitat affected by these extreme low flow events. Further, the Service anticipates a maximum of 90 purple bankclimbers may be exposed on the rock shoal near River Mile 105 and at a few locations elsewhere in the action area during each of these events. The Service expects a maximum of 106 Chipola slabshell may be exposed in the Chipola River downstream of the Chipola Cutoff and middle Apalachicola during these events. Additionally, fat threeridge and Chipola slabshell may experience harm through reduced recruitment, but the magnitude of this effect is currently expected to be minimal.

The Service anticipates that Gulf sturgeon eggs and larvae will be lost as a result of rapid changes in water level from hydropeaking operations at Jim Woodruff Dam during the spawning season (March 1 - May 31). These changes are predicted to occur on average 32 days per spawning season or up to 160 days in the next five spawning seasons. We also expect that Gulf sturgeon will be affected by Water Control Manual operations that reduce the natural floodplain inundation and estuarine invertebrate production, critical to juvenile sturgeon growth and survival in the first winter of life. Floodplain inundation is critical to production of food resources.

Exceeding this level of incidental take anticipated for any of these species shall prompt a reinitiation of this consultation.