

SECTION 404(B) (1) EVALUATION
FOR
MAINTENANCE DREDGING AND DISPOSAL PLAN
SMALL BOAT ACCESS CHANNELS IN THE
ALABAMA AND COOSA RIVER SYSTEM, ALABAMA

1. PROJECT DESCRIPTION:

a. Location. Alabama River, Alabama (Figures 1 and 2).

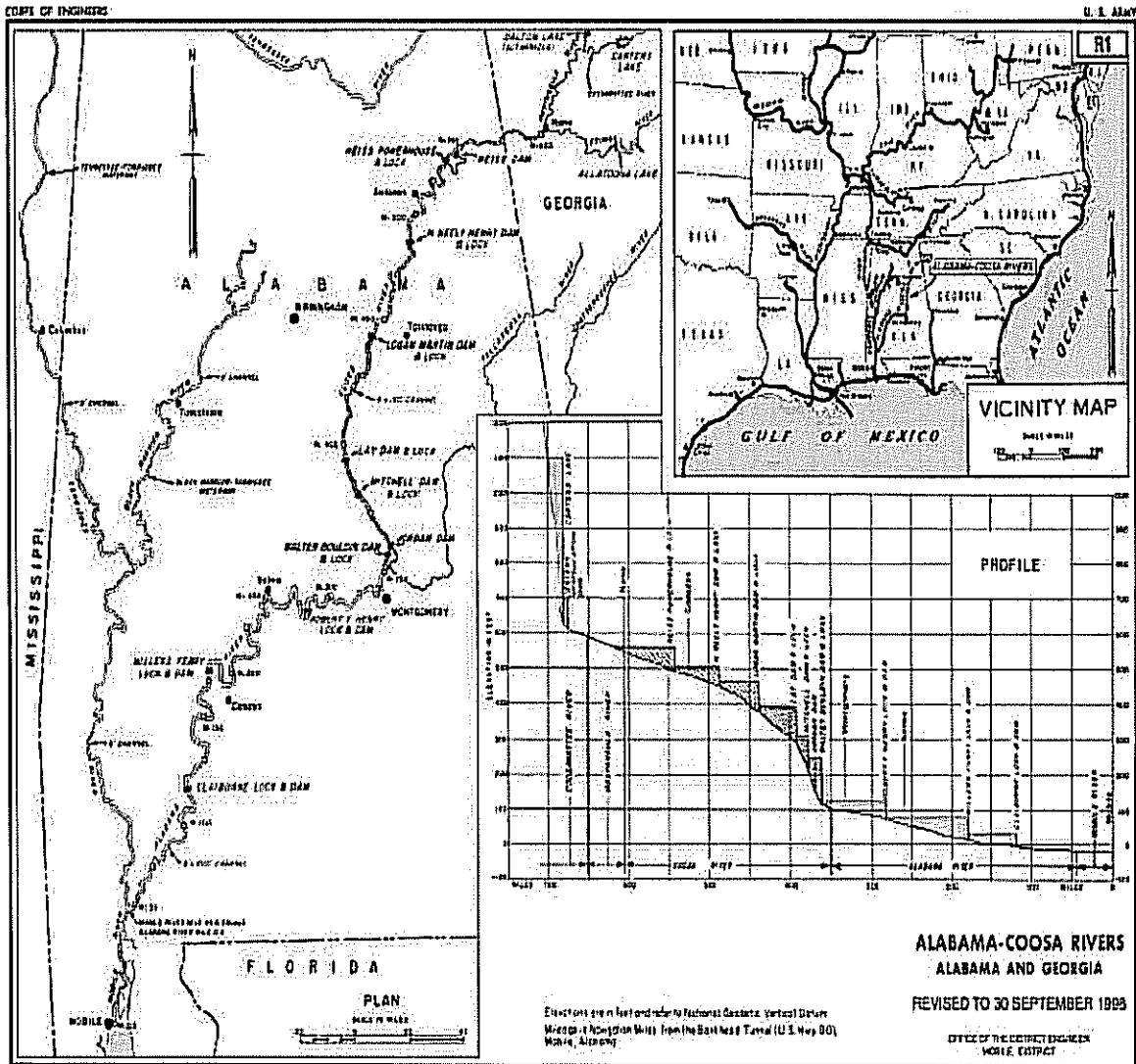


Figure 1: Vicinity Map

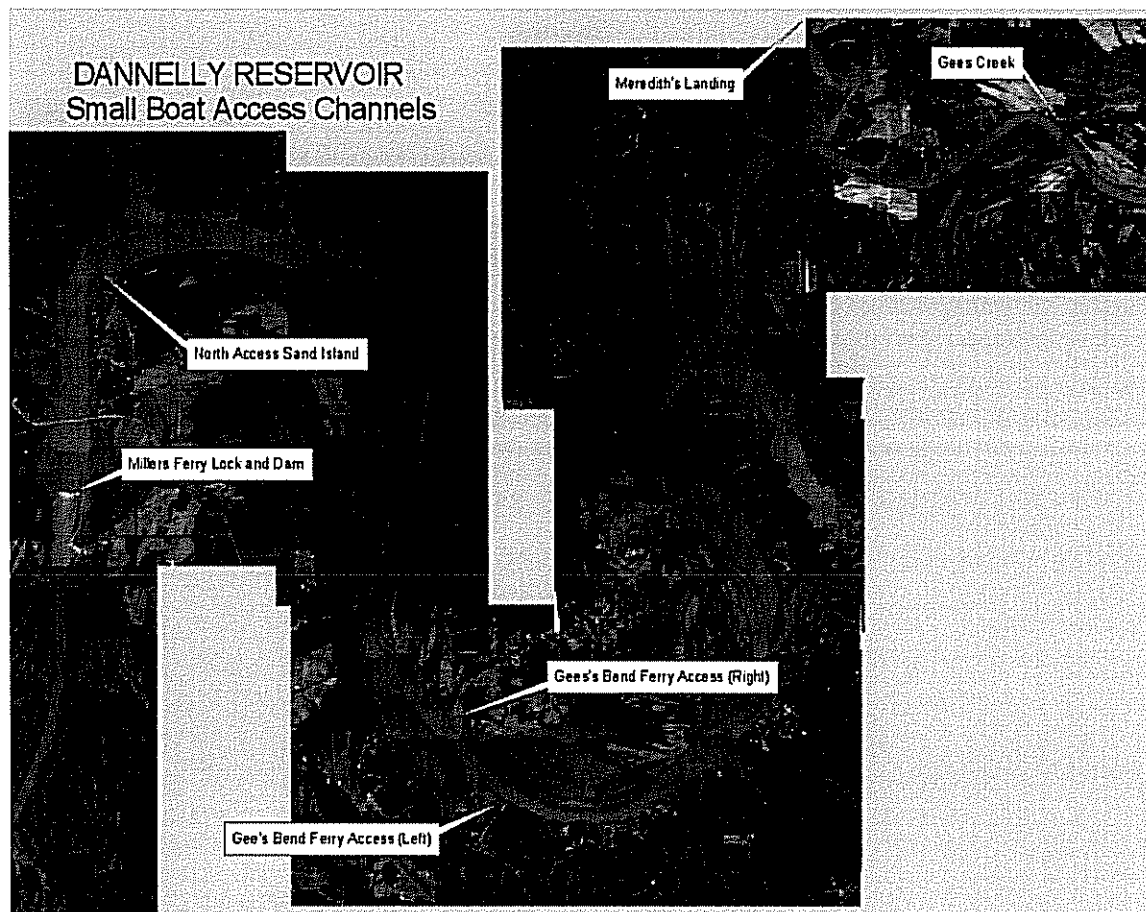


Figure 2: Small Boat Access Channels

b. General Description. Dredging will take place to open the mid-stream access channels to boat ramps and sloughs and will be dredged on an as-needed basis to a channel depth of approximately 3-5 feet at mean low water (reference Table 1). Each site will require 3-21 days during May-December for completion of maintenance and dredging. Hydraulic pipeline, dredge, dragline, or clamshell will be used to perform the work. Disposal will be in approved open-water disposal sites.

c. Authority and Purpose. Operation and maintenance on the Alabama-Coosa River system (ACR) and its tributaries provides for development of navigation, flood control, power, and recreation. The ACR project was authorized by Public Law 14, 79th Congress, in accordance with the River and Harbor act of 1899, on March 2, 1945.

d. General Description of Dredge or Fill Material.

(1) General Characteristic of Material. The material proposed for removal and disposal are alluvial deposits. These deposits are generally thick sands, silts and mud that are indigenous to the river and its tributaries.

(2) Quantity of Material. Refer to attached Table 1.

(3) Source of Material. Dredge/fill materials will be excavated from four small boat access channels on the Alabama River and its tributaries.

e. Description of the Proposed Discharge Site.

(1) Location. The discharge site for material removed from each small boat access channel would be in the Alabama River adjacent to the navigation channel.

(2) Size. Reference Table 1.

(3) Type of Site. The disposal sites would be open-water disposal areas. Open-water sites are scoured riverbed near the river thalweg.

(4) Type of Habitat. Open-water disposal sites are riverine channels.

(5) Timing and Duration of Discharge. Sites would be dredged on an as-needed basis subject to availability of funds. Dredging and disposal would typically occur during low water periods (May-December), and be completed in 3-21 days. However, dredging may occur at any time during the year as water levels and dredging needs necessitate.

f. Description of Disposal Method. Hydraulic pipeline dredge, dragline, or clamshell will perform the work.

II. Factual Determinations:

a. Physical Substrate Determinations.

(1) Substrate Elevation and Slope. Disposal in open-water sites may cause temporary elevations of the river bottom; however, long-term alterations are not anticipated. The river current would suspend and distribute dredged materials during flooding and high water conditions, allowing disposal sites to return to approximate pre-project elevations and slopes.

(2) Sediment Type. Fill materials would consist mainly of alluvial sands, silts and mud indigenous to the river and its tributaries that have deposited within the boundaries of the four small boat access channels. Material placed at these sites would be from the same source as the disposal site and not significantly different.

(3) Dredged/Fill Material Movement. Fill placed in open-water areas would erode naturally.

(4) Physical Effects on the Benthos. Benthic communities at the open-water disposal sites would be covered by dredged material. Benthic communities in dredged areas would be destroyed. The infrequency of dredging will permit benthic organisms from adjacent communities to recolonize disposal sites and dredged areas.

(5) Actions Taken to Minimize Impacts (Subpart H). Mitigative measures have been described in the Final Supplement to the Environmental Impact Statement, Alabama and Coosa Rivers, Operations and Maintenance, dated September 1987.

b. Water Circulation, Fluctuation, and Salinity Determinations.

(1) Salinity. Not applicable.

(2) Water Chemistry. Water chemistry would not be significantly impacted.

(3) Clarity. Water clarity would be temporarily decreased in the vicinity of the dredge/fill activities. These impacts would be eliminated upon completion of the activity.

(4) Color. Color would not be significantly impacted.

(5) Taste. Taste would not be significantly impacted.

(6) Dissolved Gas Levels. Dissolved gas levels would not be significantly impacted.

(7) Nutrients. Nutrient levels would not be significantly impacted.

(8) Eutrophication. Eutrophication would not be significantly impacted.

c. Water Circulation, Fluctuation, and Salinity Gradient Determinations:

(1) Current Patterns and Circulation.

(a) Current Patterns and Flow. There would be no significant adverse impacts to current patterns and flow. Dredging of these four small boat access channels would improve water circulation patterns in these tributary and slough areas.

(b) Velocity. Increases in water velocities may result due to slight narrowing of the watercourse cross-sections in areas of disposal operations. Increases that occur in the main channel of the Alabama Rivers are anticipated to be minimal (probably immeasurable due to the small change in channel cross-sectional area). Velocities would resume their natural rate as the material is eroded.

(2) Stratification. There would be no impacts on water stratification.

(3) Hydrologic Regime. There would be no impacts on the hydrologic regime of the Alabama River.

(4) Normal Water Level Fluctuations. There would be no impacts on water level fluctuations.

(5) Salinity Gradients. Not applicable.

d. Suspended Particulate/Turbidity Determinants.

(1) Expected Changes in Suspended Particulate and Turbidity Levels in Vicinity of Disposal Sites. A temporary increase in suspended particulates and turbidity levels would occur during dredge/fill operations. These impacts would cease when the activities are completed.

(2) Effects on Chemical and Physical Properties of the Water Column.

(a) Light Penetration. Increases in suspended solids concentrations would be nominal and temporary. No significant impacts to light penetration are anticipated.

(b) Dissolved Oxygen. Historically, dissolved oxygen levels in the Alabama River have been normal. The proposed activities would have no effect on dissolved oxygen levels. Based on profile data for Dannelly Reservoir forebay dissolved oxygen (DO) during August 2005 had various ranges from approximately 8.8 milligrams per liter (mg/L) to approximately 5.9 mg/L from water depths of 0 to approximately 17.6 meters. However, the subject areas are located upstream of the locations of the profiles and in shallow waters not subject to the lower DO levels found in the deeper waters.

(c) Toxic Metals and Organics. Water chemistry analyses were performed in 1987 to ascertain presence and levels of ortho phosphorus, magnesium, iron, manganese, zinc, lead, chromium, cadmium, barium, nickel, copper, arsenic, mercury, total organic carbon pesticides, and polychlorinated biphenyls. There were no indications of impacts to water quality that might translate into impacts to the water column. No activities or processes resulting in toxic metal or organics contamination are part of this project.

(d) Pathogens. There would be no significant impacts on pathogen levels.

(e) Aesthetics. The area would be impacted during dredge/fill activities. Aesthetics would return to pre-project conditions upon completion of the dredging operation.

(3) Effects on biota. No significant impacts to biota are anticipated.

(a) Primary Production, Photosynthesis. Temporary, localized impacts to primary production or photosynthesis levels may result from turbidity plumes generated by dredge activities. These effects would be localized and would cease with activities in the water.

(b) Suspension/Filter Feeders. Suspension/filter feeders may be temporarily affected during the dredge process. These effects would subside upon completion of the operation and not be significantly affected by this action.

(c) Sight Feeders. Sight-dependent species may be temporarily affected during the dredge/fill process. These effects would subside upon completion of the operation and not be significantly affected by this action.

(4) Actions taken to Minimize Impacts (Subpart H). Mitigative measures would be placement of material such that impacts are minimized.

e. Contaminant Determinations. The Alabama River was evaluated for levels of alkalinity, turbidity, Kjeldahl nitrogen, nitrate-nitrite nitrogen, total ammonia nitrogen, total phosphorus, calcium and hardness in 1987. Water quality in the Alabama River was generally good and did not translate into impacts to biota.

f. Aquatic Ecosystem and Organism Determinations.

(1) Effects on plankton. Plankton would not be significantly affected by the proposed project.

(2) Effects on Benthos. Benthic organisms in the immediate vicinity of the dredge/fill activities would be smothered, destroyed or washed downstream. Adjacent benthic communities would repopulate the area within a short time. No significant impacts would result from this project.

(3) Effects on nekton. Nekton would not be significantly affected by this project.

(4) Effects on Aquatic Food Web. This project would pose no significant impacts to the aquatic food web.

(5) Effects on Special Aquatic Sites.

(a) Sanctuaries and Refuges. No sanctuaries or refuges would be affected by this project.

(b) Wetlands. No wetland vegetation would be affected by this project.

(c) Mud Flats. No mud flats would be affected by this project.

(d) Vegetated Shallows. No vegetated shallows would be affected by this project.

(e) Coral Reefs. Not applicable.

(f) Riffle and Pool Complexes. No riffle or pool complexes would be affected by this project.

(6) Threatened and Endangered Species. The proposed dredging and disposal action is located within the reported range of several Federally listed endangered and

threatened animal species that are under the protection of the Endangered Species Act. The species with potential to be impacted by the proposed project are the bald eagle (*Haliaeetus leucocephalus*); wood stork (*Mycteria americana*); Red Hills salamander (*Phaeognathus hubrichti*); Gulf sturgeon (*Acipenser oxyrinchus desotoi*); Alabama sturgeon (*Scaphirhynchus suttkusi*); southern combshell (*Epioblasma othcaloogensis*); heavy pigtoe mussel (*Pleurobema furvum*); tulotoma snail (*Tulotoma magnifica*) and Georgia rockcress (*Arabis georgiana*).

The U.S. Fish and Wildlife Service (FWS) was consulted for concerns regarding potential impacts that may result from the proposed project. Prior coordination efforts with the FWS for similar work within the project areas did not identify any issues with federally listed species at these sites within the Millers Ferry Lake area. Therefore, the U.S. Army Corps of Engineers (Corps) determined the proposed action may effect but not likely to adversely effect federally listed species and /or their habitat in the proposed project area. However, to allay concerns of the FWS, the U.S. Army Corps of Engineers (Corps) agreed to consider the need for operational changes to avoid impacting threatened, endangered and commercial mussel species, including avoiding dredging and/or placement of dredged material on mussel beds. The Corps will inform the FWS 10 days in advance of initiating work when it is not possible to implement the 300-foot buffer. Section 7 consultation under the Endangered Species Act will be initiated whenever it is determined that hard bottom substrates, Gulf sturgeon spawning habitat or mussel beds will be affected. Dredging will be minimized between March 15 and May 30 whenever possible.

(7) Other Wildlife. No impacts to wildlife are anticipated.

(8) Actions to Minimize Impacts. Impacts to the species will be minimized by avoidance of the animal's habitat. Dredging and disposal of dredged material would avoid mussel beds. Consultation with the U.S. Fish and Wildlife Service and the Alabama Department of Conservation and Natural Resources would be initiated whenever a known mussel bed could potentially be impacted.

Dredging operations would be restricted during the Gulf sturgeon's spawning season. Dredging and disposal operations would be avoided March 15 – May 30 to accomplish this. Only areas that are critical to navigation channel availability would be dredged or used in disposal during March 15 – May 30. This precludes any dredging in small boat access channels because these areas are not critical to maintain navigation. Any new dredging or disposal operations that impacts rocky bottomed substrate that has not been impacted previously would require consultation with the U.S. Fish and Wildlife Service.

g. Proposed Fill Site Determination.

(1) Mixing Zone Determination. This activity does not require a mixing zone determination. The nature of the dredged material and constituent concentrations preclude the need for a mixing zone determination.

(a) Depth of water at the disposal site. Depth of water is 10+ feet.

(b) Current velocity, direction, and variability at the disposal site. The proposed operations and maintenance activities would not affect the current velocity, variability and direction within the Alabama River and its sloughs.

(c) Degree of turbulence. Turbulence at the site is minimal and would not be impacted by the proposed project.

(d) Stratification attributable to cause such as obstructions, salinity or density profiles at the disposal site. Not applicable.

(e) Discharge vessel speed and direction, if appropriate. Discharge vessel would be stationary.

(f) Rate of discharge. The rate of discharge is approximately 10 feet per second. Energy dissipaters would be utilized to reduce discharge velocities if a hydraulic dredge is utilized.

(g) Ambient concentration of constituents of interest. Not applicable.

(h) Dredged material characteristics, particularly concentrations of constituents, amount of material, type of material (sand, silt, clay, etc.) and settling velocities. Dredged materials would consist of thick sands, silts and mud. Dredge/fill materials are indigenous to the Alabama River, and tributaries. These materials are primarily alluvium but can be naturally occurring water bottoms.

(i) Number of discharge actions per unit of time. Each dredging reach is anticipated to require dredging no more than once every 5 – 10 years for a period of 3 – 21 days.

(2) Determination of Compliance with Applicable Water Quality Standards. Water quality certification for dredging of small boat access channels was most recently issued by the State of Alabama on March 31, 2009.

(3) Potential Effects on Human Use Characteristics.

(a) Municipal and Private Water Supply. This project would not significantly impact municipal or private water supplies.

(b) Recreation and Commercial Fisheries. Fishing activities at the sites to be dredged would be temporarily interrupted during the dredge/fill operation. No long-term impacts are anticipated to result from this project.

(c) Water Related Recreation. The proposed action would temporarily disrupt water-related recreation at each dredge/fill site; however, no negative, long-term effects

are anticipated from the action. Recreation opportunities associated with small boat access channels would be enhanced by the proposed actions.

(d) Aesthetics. Aesthetics would be temporarily impacted during the dredging and disposal operations. Aesthetics would return to normal when the project is complete.

(e) Parks, National and Historic Monuments, National Seashores, Wilderness Areas Research Sites, and Similar Preserves. Not applicable.

(f) Other Effects. Not applicable.

(4) Determination of Cumulative Effects on the Aquatic Ecosystem. Repeated use of the disposal sites may result in cumulative impact in those areas. However, the dredged material would be placed to enhance its suspension into the Alabama River water column and would erode between dredging events. The time and distance between each dredge/fill operation would reduce the cumulative impacts.

(5) Determination of Secondary Effects on the Aquatic Ecosystem. Temporary and localized impacts may occur in the areas of dredge/fill activity.

III. Findings of Compliance or Noncompliance with the Restrictions on Discharge.

a. No significant adaptations of the guidelines were made relative to this evaluation.

b. The proposed discharge represents the least environmentally damaging practicable alternative that would accomplish the project objectives.

c. The planned disposal of dredged material would not violate any applicable State water quality standards; nor will it violate the Toxic Effluent Standard of Section 307 of the Clean Water Act.

d. Use of the proposed disposal sites would not jeopardize the continued existence of any Federally listed endangered or threatened species or their critical habitat.


e. The proposed discharge of dredged material would not contribute to significant degradation of waters of the United States. Nor would it result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreation and commercial fishing; life stages of organisms dependent upon the aquatic ecosystem; ecosystem diversity, productivity and stability; or recreational, aesthetic or economic values.

f. Appropriate and practicable steps to minimize potential adverse impacts of the discharge on the aquatic ecosystem include:

(1) Locations, times and duration of the project have been selected to minimize potential adverse impacts to the aquatic ecosystem.

(2) An interdisciplinary team has evaluated sites, and project design altered per their recommendation.

DATE: 9 JUN '09



Byron G. Jorns
Colonel, Corps of Engineers
District Commander

ALABAMA-COOSA RIVERS
SMALL BOAT ACCESS CHANNELS

Table 1

RM.	BANK	AREA	LAKE	EST.CY	Existing WQC
73.3	Left	Issac Creek - Mouth & Ramp	Claiborne	1500	Yes
76.0	Right	Silver Creek	Claiborne	8000	Yes
77.0	Left	Mabin Creek	Claiborne	5000	Yes
82.0	Right	Cane Creek	Claiborne	4500	Yes
84.5	Left	Haines Island	Claiborne	850	Yes
86.8	Left	Bailey Creek	Claiborne	8000	Yes
90.6	Left	Bells Landing	Claiborne	4500	Yes
90.8	Right	Tallahatchee	Claiborne	8000	Yes
91.0	Left	McCall's Creek	Claiborne	2000	Yes
101.0	Left	Black Creek	Claiborne	850	Yes
124.8	Right	Clifton Ferry	Claiborne	100	Yes
133.2	Left	Millers Ferry Damsite	Dannelly	8000	Yes
134.0	Right	Shell Creek #1	Dannelly	10000	Yes
134.0	Right	Shell Creek #2	Dannelly	10000	Yes
134.3	Left	East Bank Dannelly - Campsites	Dannelly	4350	Yes
136.2	Left	North Access of Sand Island Slough	Dannelly	2500	Yes
143.0	Left	Alligator Slough	Dannelly	1000	Yes
147.0	Right	Gee's Bend	Dannelly	1000	Yes
147.1	Right	Gee's Bend Ferry Access	Dannelly	2500	Yes
147.4	Left	Ellis Landing	Dannelly	4000	Yes
147.9	Left	Gee's Bend Ferry Access	Dannelly	2500	Yes
150.4	Left	Bridgeport Park - Mouth & Ramp	Dannelly	4000	Yes
150.6	Left	Roland Cooper State Park	Dannelly	5000	Yes
150.7	Left	Roland Cooper Ramp Slough	Dannelly	5000	Yes
151.0	Right	Gold Mine Slough	Dannelly	2500	Yes
158.3	Right	Chilatchee Creek - 3 areas	Dannelly	6000	Yes
160.6	Right	River Oaks Subdivision Slough	Dannelly	1000	Yes
160.7	Right	River Oaks Subdivision Slough	Dannelly	1000	Yes
160.8	Right	River Oaks Subdivision Slough	Dannelly	1000	Yes
161.5	Right	River Oaks Subdivision Slough	Dannelly	1000	Yes
161.6	Right	River Oaks Subdivision Slough	Dannelly	1000	Yes
161.8	Right	River Oaks Subdivision Slough	Dannelly	1000	Yes
161.8	Right	River Oaks Marina/Arrington's Lodge	Dannelly	2000	Yes
162.0	Right	River Oaks Subdivision Slough	Dannelly	1000	Yes
162.5	Right	River Oaks Subdivision Slough	Dannelly	1000	Yes
162.9	Left	Rum Creek	Dannelly	1500	Yes
164.4	Right	Gee's Creek	Dannelly	2500	Yes
168.5	Left	Elm Bluff	Dannelly	3900	Yes
188.8	Right	Old Cahaba	Dannelly	6000	Yes
190.8	Right	McDowell Landing	Dannelly	900	Yes
194.2	Left	Six Mile Creek	Dannelly	2000	Yes

RM.	BANK	AREA	LAKE	EST.CY	Existing WQC
197.1	Left	Bethel Branch	Dannelly	800	Yes
203.9	Right	Selma City Marine	Dannelly	1000	Yes
206.3	Right	Beech Creek Marina	Dannelly	1000	Yes
223.6	Right	Steeles Landing	Dannelly	1500	Yes
233.7	Left	Benton Access Area	Woodruff	1200	Yes
237.6	Left	Prairie Creek PUA - 2 areas	Woodruff	2000	Yes
241.5	Right	Jones Bluff Park (Ivy Creek)	Woodruff	3900	Yes
243.2	Right	Cooper Howard Creek	Woodruff	400	Yes
250.8	Left	Holy Ground Battlefield Park	Woodruff	1000	Yes
251.9	Right	Molly Branch	Woodruff	750	Yes
242.8	Left	Henderson's Landing	Woodruff	1500	Yes
255.7	Right	Strickland Landing - 2 areas	Woodruff	6200	Yes
255.7	Right	Swift Creek - 2 areas	Woodruff	4000	Yes
260.3	Left	New Port	Woodruff	3600	Yes
266.3	Left	Tallahassee Creek	Woodruff	1050	Yes
268.9	Left	Pintlala Creek	Woodruff	4500	Yes
272.8	Left	Gunter Hill Park	Woodruff	4000	Yes
275.2	Right	Autauga Creek	Woodruff	200	Yes
279.6	Right	R.M. 279.6 River bank	Woodruff	500	Yes
280.2	Right	Cooters Pond Park - 2 areas	Woodruff	10500	Yes
281.0	Left	R.M. 281.0 Left bank	Woodruff	2000	Yes
284.6	Left	Maxwell AFB	Woodruff	500	Yes
286.1	Left	Powder Magazine	Woodruff	2000	Yes
298.6	Left	Jackson Lake Access	Woodruff	1000	Yes
6.0	Left	Tallahassee and Dead River	Woodruff	1000	Yes
6.4	Left	Fort Toulouse Natl. Historic Park	Woodruff	16000	Yes