



DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

28 February 1983

REPLY TO
ATTENTION OF:

DAEN-CWP-G

SUBJECT: Atchafalaya Basin Floodway System, Louisiana

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the Atchafalaya Basin Floodway System. It is accompanied by the reports of the Mississippi River Commission and the reporting officer. These reports were developed in partial response to resolutions from the Committee on Public Works of the U.S. Senate dated 11 June 1968 and 23 March 1972 and to a resolution from the Committee on Public Works of the U. S. House of Representatives dated 14 June 1972.

2. The Atchafalaya Basin Floodway System report developed by the reporting officer contains recommendations for both authorized and unauthorized features. The authorized features are recommended in two feature groups: (1) those features that have already been approved by the Chief of Engineers and for which design and construction may continue; and (2) those features which require approval by the Chief of Engineers. I concur with the recommendation of the Mississippi River Commission regarding these features as follows:

a. The following features of the Atchafalaya Basin project are authorized, have been approved, and will continue to be implemented by the New Orleans District Commander:

(1) Continued operation of the Old River control complex and the new auxiliary structure to maintain an average annual latitude flow division at Old River, Louisiana, of 70 percent Mississippi River/30 percent Atchafalaya River;

(2) Modifications of existing features where required, to pass the project flood, including raising to grade the East and West Atchafalaya Basin Protection Levees and the levees west of Berwick; construction of service roads on levee crowns; modifying Bayou Sorrel, Bayou Boeuf, and Berwick locks; modifying the Charenton and East Calumet floodgates; modifying the Wax Lake East and Wax Lake West drainage structures; modifying culverts in the East and West Bayou Sale levees; and modifying the Upper Pointe Coupee, Centerville, Eilerslie, Franklin and Franklin Enlargement,

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Gordy, Maryland, North Bend, Wax Lake East, Wax Lake West, Bayou Yokely and Bayou Yokely Enlargement, Morgan City, and Tiger Island pumping plants; and such other miscellaneous modifications as deemed appropriate; and

(3) Continued construction of bank stabilization measures, as required, along the Atchafalaya River main channel above river mile 55.0.

b. I have approved the following features of the Atchafalaya Basin project for implementation under existing authorization:

(1) Enlargement of the main channel by construction of training works along the Atchafalaya River to a height sufficient to confine average annual peak flows, from river mile 116.0 to mile 90.0, and maintenance of existing channel banks from river mile 90.0 to mile 53.0 on the east side and mile 55.0 on the west side;

(2) Realignment of the four principal distributaries of the Atchafalaya River main channel; the Old Atchafalaya River, the East Freshwater Distribution Channel, the West Access Channel, and the East Access Channel to provide the optimum channel entrance angles for sediment control;

(3) Construction of a rock weir and connecting levees above the head of Grand Lake to control the present distribution of low to normal floodway outlet flows to approximately 30 percent through the Wax Lake Outlet and 70 percent through the Lower Atchafalaya River. For flows exceeding a 10-year frequency event, the low-level levees above Wax Lake Outlet would be overtopped. Operation of the outlet system will be monitored, and provided that the area's ecosystem responds favorably, then flow into Wax Lake Outlet may be further restricted by modification of the rock weir to limit low to normal flows entering the outlet to approach 20 percent;

(4) Enlargement of Wax Lake Outlet overbank by setting back the existing west Wax Lake Outlet Levee an average of about 3 miles and degrading the old levee to natural ground level and construction of a new West Calumet floodgate;

(5) Enlargement of the outlet channels by construction of training work below Morgan City on both the Wax Lake Outlet and Lower Atchafalaya River and closure of Bayou Shaffer. Training works will simulate the formation of natural levees along about 15 miles of existing channel length by placing dredged material to a height sufficient to confine average peak flows, in an irregular series of low mounds about 1 vertical on 40 horizontal, with gaps; and

(6) Construction of freshwater distribution structures for the Henderson Lake and Alabama Bayou areas in the lower floodway. The Courtableau structure site will be relocated to a site in the vicinity of Bayou Graw near river mile 45.0 on the West Atchafalaya River levee, and the Sherbourne structure will be located in the east river levee at approximate river mile 43.0.

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c. I will consider approval, under existing authorization, of construction of further extension of the East Atchafalaya Basin Protection Levee beyond the Avoca Island Cutoff channel and/or other structural and nonstructural measures, after completion of further studies of the engineering and biological parameters affecting the complex, dynamic and delicate ecosystem of the Atchafalaya Bay-Terrebonne Marsh backwater complex.

3. The reporting officer recommended improvements in the Basin for flood control and environmental preservation that require Congressional authorization. The Mississippi River Commission was unable to reach a majority view on the implementation of these features. After careful consideration of all issues, I conclude that the unauthorized features of the plan recommended by the reporting officer are in the public interest, are justifiable on the basis of combined economic and beneficial environmental effects, are responsive to the Congressional resolutions which requested a "... comprehensive plan for the management and preservation of the water and related land resources of the Atchafalaya River Basin...", and are, therefore, proper added increments of the Mississippi River and Tributaries Project. Therefore, I recommend that the Atchafalaya Basin Feature of the MR&T project, authorized by the Flood Control Act, approved 15 May 1928, as amended, be further modified and expanded to provide improvements as follows, with such modifications, substitutions, additions, or deletions as in the discretion of the Chief of Engineers may be advisable in the interest of flood control and environmental improvements.

a. Acquisition of additional real estate interest, excluding minerals, in the Lower Atchafalaya Basin Floodway for:

(1) Flood Control Purposes - Flowage easements on approximately 59,000 acres and developmental control easements on approximately 367,000 acres, excluding developed ridges; *with wharfs*

(2) Environmental Protection Purposes - In addition to developmental control rights, environmental protection rights will be included in a comprehensive multipurpose easement on the same 367,000 acres, excluding developed ridges;

(3) Recreation Development Purposes - Fee simple title, excluding minerals, on 1,500 acres; and

(4) Public Access - Participation with the State of Louisiana in the fee title purchase, excluding minerals, of approximately 50,000 acres of lands identified by the State as being available from "willing sellers". Federal cost participation will be limited to \$32,000,000.00. (The State will provide additional public access within the lower floodway on 150,000 acres of existing State-owned lands and on more than 30,000 acres of lands donated to the State by the Dow Chemical Company.).

b. Construction of recreation facilities to provide three destination-type campgrounds, seven primitive campgrounds, boat-launching ramps, and other facilities complementary to outdoor recreational activities.

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c. Construction initially of two "pilot" Management Units, with implementation of future units to be at the discretion of the Chief of Engineers after evaluation of the operational success of the pilot units.

d. Construction of miscellaneous canal closures and water circulation improvements in the lower floodway.

4. The estimated cost of those features of the plan for which authorization exists is \$816,980,000. This does not include \$58,800,000 for the 14,000-foot interim extension of Avoca Island Levee recommended by the Mississippi River Commission, but which requires further study before approval and implementation. The total cost of features of the plan which require Congressional authorization is estimated to be \$250,240,000 (all costs in October 1982 prices). The flood control features of the plan are integral, inseparable features of the authorized comprehensive MR&T project. The environmental features also provide many intangible benefits such as preservation of forest areas, lakes, swamps, and wetlands while the recreation features provide for public access and enjoyment of the special qualities of the Atchafalaya basin. Separable benefit cost analyses are not computed for inseparable features of the MR&T project. The benefit-cost ratio for this comprehensive project is 16.7 to 1.

5. The plan described in this report is a balanced approach to the water resource problems encountered in the Atchafalaya Basin area. The plan provides for the safe passage of the project design flood in an environmentally acceptable manner. The report is generally in accordance with all applicable laws and guidelines.

6. I recommend project features described in paragraph 3 above for authorization and implementation subject to cost sharing and financing arrangements which are satisfactory to the President and Congress.



J. K. Bratton
Lieutenant General, U.S. Army
Chief of Engineers