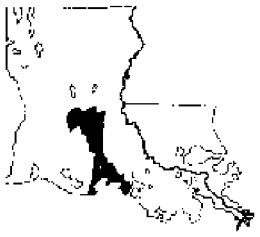
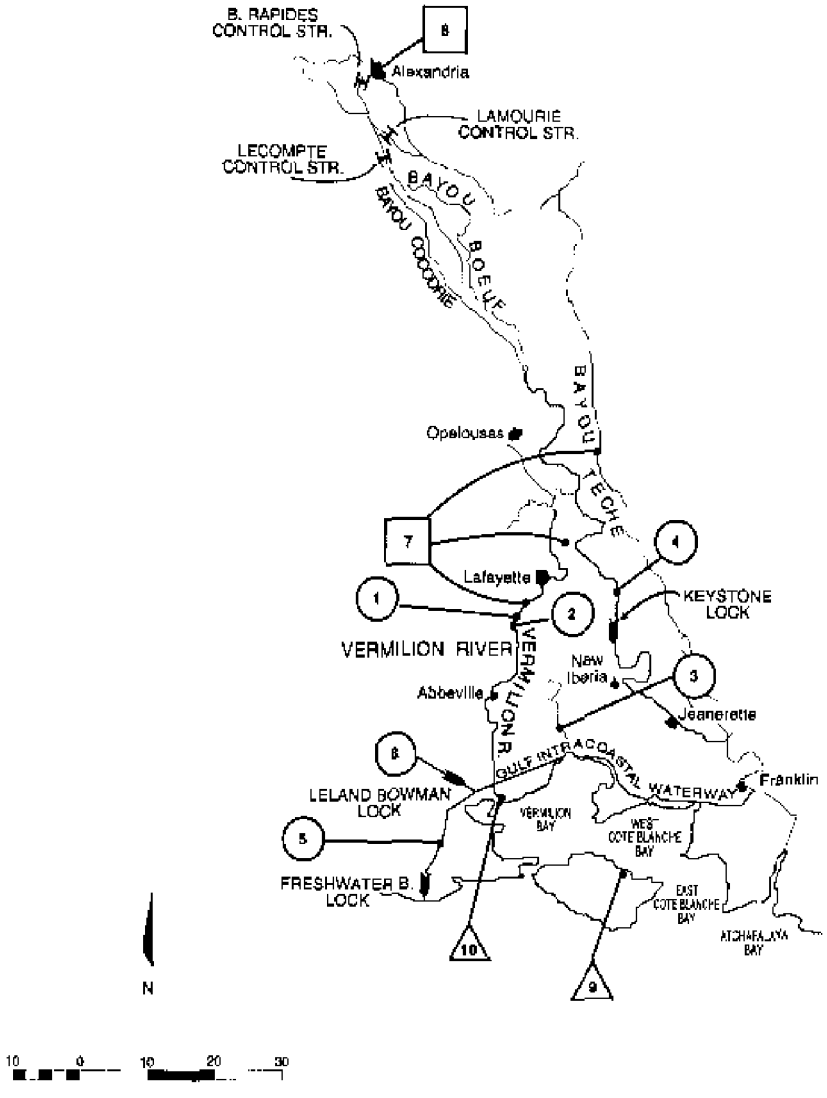
Vermilion River and Bayou Teche Basins





Projects

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Vermilion River and Bayou Teche Basins

Introduction

This area comprises the drainage basins of Vermilion River and Bayou Teche. The upper portion of the area is composed of alluvial ridges along Bayou Teche, prairies and hills. The lower portion consists primarily of coastal marshes. Navigation, flood control, municipal and industrial water supply, water-quality control, irrigation, recreation, and fish and wildlife preservation and enhancement are the purposes served by Corps of Engineers projects in the Teche-Vermilion basins.

Keystone Lock and Dam on Bayou Teche

Projects

Bayou Teche

Authorized in 1934 and prior years, this project consists of a channel 8 feet deep and 80 feet wide from the mouth of the stream to New Iberia; 6 feet deep and 60 feet wide to Keystone Lock; and 6 feet deep and 50 feet wide to Arnaudville. It also includes Keystone Lock and Dam, which was completed in 1913. All channel improvement work above Keystone Dam was completed in 1916. Channel improvement from the mouth to about 3 miles below New Iberia was completed in 1920.

An interim channel, 8 feet deep by 60 feet wide, was dredged along the 3-mile reach below New Iberia, and one, 6 by 50 feet, was dredged between New Iberia and Keystone Lock, a distance of approximately 17 miles.

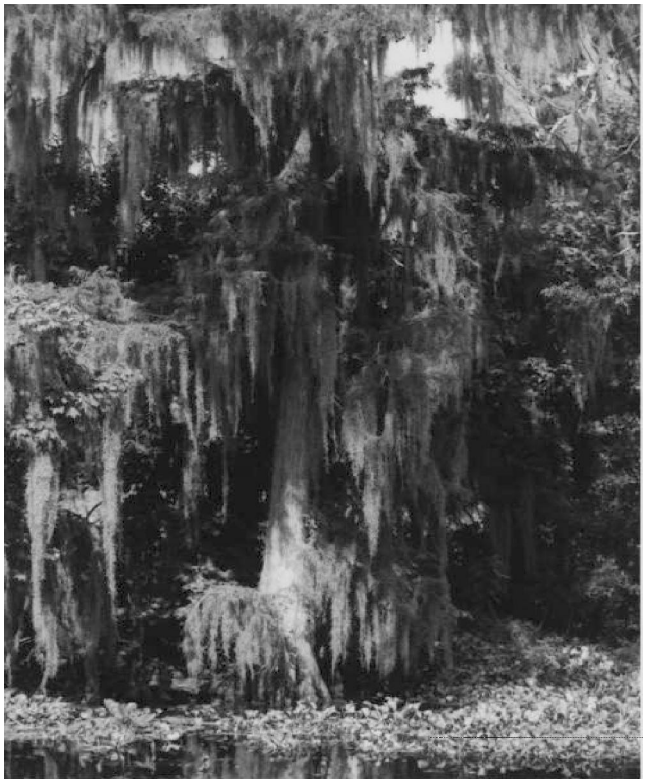
The authorized project is about 71 percent complete. Cost of the existing project to date is $754,330. The uncompleted portion of the work is inactive.

Average annual traffic on this waterway from 1986-1995 was 1,150,000 tons. The major cargoes are crude petroleum and sugar.

Bayou Teche and Vermilion River

This multiple-purpose project, completed in 1957 at a cost of $2,891,922, provides improvements for navigation, flood control, and increased water supply for irrigation.

Specifically, the improvements consist of an 8-foot-deep by 80-foot-wide navigable channel from Vermilion Bay to the Gulf Intracoastal Waterway and a 9-foot-deep by 100-foot-wide navigation channel from the Gulf Intracoastal Waterway to a fixed bridge located 400 feet south of the Southern Pacific Lines bridge at Lafayette. Also authorized are improvements of the non-navigable channel of Vermilion River (also called Bayou Vermilion) and Bayou Fusilier from Lafayette to Bayou Teche, enlargement of Bayou Teche from about mile 103.8 (2 miles below Arnaudville) to Port Barre (mile 124.8), and raising the crest of Keystone Dam to permit increased diversion of water from Bayou Teche through Ruth Canal to the Vermilion River. As a result of the flood of March 1947, which occurred when flood control improvements on Vermilion River were substantially complete, the Vermilion was further enlarged between the Gulf Intracoastal Waterway and Youngs Coulee, mile 175. Enlargement of the channel necessitated the construction of new highway bridges at Woodlawn and Milton and the modification of numerous other bridges.



Spanish moss drapes the bald cypress and oaks along Bayou Teche

The project waterways provide excellent recreational opportunities and are extensively used for boating, waterskiing, and fishing. Bayou Teche, an abandoned course of the Mississippi River, is particularly attractive. Its well-sloped banks, wide meander bends, stately moss-draped oaks, and historical heritage attract visitors from all parts of the country. Evangeline State Park and New Iberia City Park are located on the bayou and add to its recreational allure. The Vermilion River provides numerous boating facilities. Planning is in progress to further develop recreation and boating access to Bayou Teche and Vermilion River.

Cumulative benefits from flood damages prevented through 1996 are estimated at $8,713,000. The average annual traffic from 1986-1995 was 1,205,000 tons. Crude petroleum, machinery, and water were the major cargoes.

Bayou Vermilion

This 5.5-foot-deep channel from Vermilion Bay to Lafayette was completed in 1896. The project has been superseded by the navigation features of the Bayou Teche and Vermilion River project described previously.

Freshwater Bayou

Freshwater Bayou Channel and Lock give more efficient access to petroleum, gas, salt, and sulphur resources operating in the Gulf and shore support facilities. The project is also a useful route for fishermen and trappers.

Consisting of a 12-foot-deep by 125-foot-wide waterway between the Gulf Intracoastal Waterway in the vicinity of Vermilion River and the Gulf of Mexico, the waterway generally follows the existing channels of Schooner Bayou Cutoff, Schooner Bayou, Sixmile Canal, Belle Isle Canal, and Freshwater Bayou. A 16-foot-deep by 84-foot-wide by 600-foot-long lock, constructed in the vicinity of Beef Ridge near the Gulf of Mexico, prevents saltwater intrusion. Jetties to the 6-foot depth contour are authorized but will be installed if justified by excessive maintenance of the offshore channel.

Cost of the existing project (except for construction of jetties at a later date, if necessary) was $7,116,224 Federal and $16,060 non-Federal cash contributions. Estimated cost of construction of jetties (1971) is $1,118,100. Estimated non-Federal cost for the existing project is $171,000. In addition, the U.S. Coast Guard is to provide navigational aids at the estimated cost of $19,100.

Rock which was removed from the Wax Lake Outlet Control Structure was placed along the western shoreline of Freshwater Bayou to prevent shoreline erosion. This project, funded by the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA), was the second CWPPRA project constructed by the Corps of Engineers.

The lock and channel were opened to navigation in 1968. The average annual traffic from 1986-1995 was 672,000 tons.

Freshwater Bayou Lock at the Gulf of Mexico

CWPPRA project - Vermilion River Cutoff bank protection at Onion Lake

Marsh Island Hydrologic Restoration

The project was authorized by the Coastal Wetlands Planning, Protection, and Restoration Act (Public Law 101-646, Title III) on the 6th Priority Project List. The project is located on the northeastern shoreline of Marsh Island and is located on the Marsh Island Wildlife Refuge. The total project area is 6,697 acres and contains 5,034 acres of brackish marsh and 1,663 acres of open water. Natural erosional processes and subsidence along the northeast shoreline of Marsh Island have lead to the deterioration of the north rim of Lake Sand. The project will stabilize the northeastern shoreline of Marsh Island, including the northern shoreline of Lake Sand, and help to restore historical hydrology. The project consists of the construction of 9 plugs in oil and gas canals at the northeast end of Marsh Island, the protection of the northeast shoreline of Marsh Island, and isolating Lake Sand from Vermilion Bay with dredged material. Current schedule calls for construction start in May 98.

Vermilion River Cutoff Shoreline Protection & Restoration

The project was authorized by the Coastal Wetlands Planning, Protection, and Restoration Act (Public Law 101-646, Title III) on the 1st Priority Project List. The Vermilion River Cutoff, near Intracoastal City, LA, connects the Vermilion River and the Gulf Intracoastal Waterway with Vermilion Bay for navigation purposes. The project area is on the east and west sides of the Cutoff, in the vicinity of Onion Lake and Onion Bayou. Erosion of the west bank of the Vermilion River Cutoff has occurred to the extent that the land bridge between the Cutoff and Vermilion Bay, to the west, is breached in several places, allowing wind driven waves from the bay to cross the cutoff and attack the east bank. Thus, erosion on the east bank is also occurring at an accelerated rate. The purpose of the project was to take action to protect the east bank and prevent the scale of deterioration that has occurred on the west bank. The initial plan called for a rock dike and sediment-trapping devices along the west bank. That plan was revised when field investigations indicated that protection of the east bank of the Cutoff would best be accomplished with measures on the east bank because cutting off the west bank with a continuous dike would stop the flow of desirable nutrients and sediments from the Cutoff into Vermilion Bay through the west bank land breaches. The revised project design included rock armoring the east bank opposite the west bank land breaches. Construction was completed on February 11, 1996.

Petit Anse, Tigre, and Carlin Bayous

These waterways are used for accessing fishing and hunting areas, and boating and skiing are popular in the area. Average annual traffic on the project waterways from 1986-1995 was 2,209,000 tons.

Authorized in 1935 and modified in 1937, 1945, 1948 and 1960, the project currently provides for a 9-foot-deep by 80-foot-wide channel in Bayou Petit Anse from the Gulf Intracoastal Waterway to the north end of Avery Island, a 9-foot-wide by 80-foot-deep channel in Bayou Carlin from Bayou Petit Anse to Lake Peigneur, a harbor of refuge at Delcambre, and a 7-foot-deep by 60-foot-wide channel from the Gulf Intracoastal Waterway via McIlhenny Canal to deep water in Vermilion Bay. These improvements were completed in 1962 at a Federal cost of $392,247. Mooring facilities have been constructed in the harbor of refuge by non-Federal interests.

This project was further modified in 1976 under authority of Section 201 of the Flood Control Act of 1965. Construction has not been initiated. However, modifications authorized include enlargement of Bayou Petit Anse from the entrance of the Avery Island Salt Mine Canal to the Gulf Intracoastal Waterway to 12 feet deep by 125 feet wide, enlargement of Bayou Carlin from Bayou Petit Anse to Lake Peigneur to 12 feet deep by 125 feet wide (except within the town limits of Delcambre where the enlargement will be 12 feet deep by 80 feet wide), and replacement of the railroad bridge across Bayou Carlin at Delcambre with a vertical lift bridge to provide vertical clearance of 73 feet and horizontal clearance of 80 feet.

Pinhook Bridge

Scour, caused by enlargement of the Vermilion River above and below the bridge in Lafayette, was threatening the stability of the bridge approaches. Both banks were graded and covered with riprap in 1950.

Teche-Vermilion Basins

Authorized by the Flood Control Act of 1966, this feature provides for the diversion of supplemental fresh water from the Atchafalaya River upstream of Krotz Springs to the head of Bayou Teche at Port Barre. The supplemental fresh water is to be distributed among Bayou Teche, Vermilion River, and the west side borrow pit along the West Atchafalaya River Basin Project Levee (WABPL) for municipal, industrial, irrigation, and water-quality control uses.

The initial improvements were constructed by the Federal Government at a Federal cost of $35.7 million. The non-Federal cost was $4 million. Construction improvements include a 1,300-cubic-feet per second pumping station at the Atchafalaya River; a leveed conveyance channel with an inverted siphon under State Canal; and a control structure through the WABPL. Three downstream control structures were also built: a gated culvert between Bayou Courtableau and the WABPL borrow pit to the south, a weir in Bayou Fusilier, and a navigable gate in Loreauville Canal.

The three new control structures and the existing non-Federal Ruth Canal Control Structure are operated to distribute the supplemental fresh water as needed. Operation and maintenance of the completed works is the responsibility of the Teche-Vermilion Freshwater District. Construction was begun in 1976 and completed in 1982.

Leland Bowman Lock

The Leland Bowman Lock is located in the Vermilion River-Mermentau River section of the Gulf Intracoastal Waterway about 2 miles west of the Vermilion River. Leland Bowman Lock replaced the Old Vermilion Lock because of the old lock's limitations of sill depth and width.

A replacement of the old Vermilion Lock was approved by the Secretary of the Army in 1976, under authority contained in the Rivers and Harbors Act of 1909. The new lock, now called Leland Bowman Lock, is located just south of the existing waterway and west of the existing lock. It is 110 feet wide, 1,200 feet long, and has a depth over sill of 15 feet below mean low Gulf level.

West Atchafalaya Basin Protection Levee and drainage structure

Construction was initiated in 1981, and the new lock was opened to traffic in 1985. Costs of the Leland Bowman Lock are $32.2 million Federal and $240,000 non-Federal.

Small Projects

Snagging and clearing of 6.9 miles of Bayou des Cyprairres in 1953 and was accomplished under the authority of Section 2 of the Flood Control Act of 1937, and subsequent modifications.

Programs and Surveys

Flood Plain Information Reports

Franklin. A flood plain information report on the Franklin area, initiated in 1976, has been suspended and replaced by a flood insurance study for the city of Franklin.

Lafayette. A flood plain information report on the Lafayette area was completed and published in 1973.

Scott Area and Lafayette Parish. A flood plain information report on the Scott area was completed and published in 1974.

Flood Insurance Studies

Insurance studies that have been completed in the Vermilion River and Bayou Teche basins are: Abbeville, Baldwin, Franklin, Lafayette, Lafayette Parish, Marksville, Scott, Duson, and St. Mary Parish.

Surveys Authorized or Under Way

Bayou Sale Ridge. This study is to determine the advisability of modifying Bayou Sale from the Gulf Intracoastal Waterway to the Gulf of Mexico to improve flood control, drainage, and hurricane protection. The study has not been funded.

Vermilion River and Bayou Tigre. This study was initiated in 1988 to determine the advisability of providing flood protection and major drainage outlets in the Vermilion River and Bayou Tigre basins in south-central Louisiana. The study was terminated in January 1990 because no feasible plans could be developed.

Bayou Tigre, Erath, Louisiana. The purpose of this study is to investigate the feasibility of measures to alleviate flooding problems along Bayou Tigre in the vicinity of the town of Erath, Louisiana. A reconnaissance study of the flooding problems along the Vermilion River and Bayou Tigre was completed in January 1990. Two alternative plans were developed and evaluated for reducing flooding in the Erath area; however, both plans were not economically feasible and the study was terminated. This study would address changes in local conditions, modify and re-evaluate the previously developed plans, and develop and evaluate new plans to reduce flooding. The reconnaissance study was terminated in October 1997 because a non-Federal sponsor was not identified to share the cost of feasibility studies.

Alexandria, Louisiana. The purpose of the study was to investigate the feasibility of providing flood protection to the city of Alexandria, located in central Louisiana on the southwest bank of the Red River. A reconnaissance study was completed in 1992. Except for a small project that can be pursued under Section 205 of the Flood control Act of 1948, as amended, improvements were not economically justified. This study is inactive.

Red swamp crawfish

Alexandria, Louisiana to the Gulf of Mexico Study. The reconnaissance study is investigating flooding problems in the area drained by the intercepted drainage system west of the West Atchafalaya Basin Protection Levee (WABPL), between Alexandria, Louisiana and the Gulf of Mexico. The study authority also includes other study purposes, including navigation, wetland conservation and restoration, wildlife habitat, commercial and recreational fishing, saltwater intrusion, freshwater and sediment diversion, and other purposes. This study includes about 1,700 square miles in nine parishes from Alexandria, Louisiana to the Gulf of Mexico. The WABPL, a feature of the Mississippi River and Tributaries project, prevents flooding from the Atchafalaya Basin and intercepts flows from the basin's major watersheds which converge in Bayou Courtableau in St. Landry parish, west of the WABPL. Bayou Courtableau has three outlets: Bayou Teche, the Bayou Courtableau Control Structures (wiers) to the WABPL landside drainage system, and the Bayou Courtableau Drainage Structure to the Atchafalaya Basin Floodway. The flows in Bayou Teche and the Vermilion River contributes to the flooding problems in the Lafayette area, and flows over the Courtableau Weirs contribute to flooding problems in the Bayou Portage and lakes Dauterive and Fausse pointe areas. The study was initiated in 1998.

Upper Bayou Teche, Louisiana. The Upper Bayou Teche interim study was initiated in 1985 with 100 percent non-Federal funding contributed by the Teche-Vermilion Fresh Water District. The purpose of this study is to determine the feasibility of increasing low flows in Bayou Teche and the Vermilion River to benefit commercial fisheries (crawfish) and provide an agricultural water supply of sufficient quantity and quality. Work on this interim study was terminated in 1991 because no implementable plan could be developed.

Lafayette Parish. A reconnaissance study, investigating flooding problems caused by heavy rains and high stages on the Vermilion River in Lafayette Parish was initiated in April 1994. The report was submitted in June 1995 and recommended continuing into a cost-shared feasibility study. A Feasibility Cost Sharing Agreement was executed with the Louisiana Department of Transportation and Development in March 1996. Structural measures inclusive of retention facilities and channel modifications, and non-structural improvements are slated for evaluation in the feasibility phase. Non-structural investigations are scheduled for completion in February 1999. Investigation of structural measures are scheduled for completion in September 2000.

Leland Bowman Lock on the Gulf Intracoastal Waterway