

Water

Water Resources

Client

Louisiana Department of Natural Resources

Location

Baton Rouge, Louisiana, USA

Bayou Lafourche

Project Highlights

- Reintroduce a natural fork in the Mississippi River, approximately 56 kilometres
- Reduce coastal marsh and swampland deterioration
- Increase flood control options on the Mississippi River

Project Description

During the past 66 years, roughly 5,200 square kilometers of southern Louisiana coastland has reverted to open water. Currently, 65 to 75 square kilometres of coastal marshes and swamps sink into the Gulf of Mexico every year. By 2050, it is projected that an additional 1,800 to 2,400 square kilometres of this precious landscape will meet the same fate.

This coastal-land loss in Louisiana has captured the attention of citizens, the nation, the oil and gas industry, environmentalists, the navigation industry and other major stakeholder groups. With appropriate action, 70 percent of the projected coastal losses could be prevented.

Two of the largest engineering and design projects awarded to date, the Bayou Lafourche Freshwater Diversion Project and conceptual level evaluation of the Third Delta concept, are CH2M HILL projects.

Reintroduce the Fork in the River



Bayou Lafourche (fork) is the longest of Louisiana's more than 300 bayous and was once an original course of the Mississippi River. When a flood-control dam was constructed in 1904, the bayou was created.

CH2M HILL is currently completing an 18-month study and evaluation of alternatives to use the bayou as a conveyance channel to transport and relocate water, sediments and nutrients to deteriorating marshes and to block saltwater intrusion up the bayou during low rainfall and high-gulf periods. The project includes diverting water from the Mississippi River into Bayou Lafourche.

Delta Blues

The second restoration project will evaluate the Third Delta concept. This project focuses on rebuilding deteriorating delta lobes on both sides of Bayou Lafourche by using Mississippi River flows. During major flooding, water diverted from the Mississippi River would fill a river-sized channel 160 kilometres in length, 92 metres wide and 6 metres deep. The channel would erode naturally to produce an ultimate flow capacity of 566 cubic metres per second.

The scope and scale of this effort to save America's Wetland is projected to be the largest in the world. A prime example of the national attention focused on the Louisiana coastal land-loss issue is heightened media interest. National Geographic and IMAX films have contacted CH2M HILL's project team for background information.



Coastal Land Loss: What's at stake?

- No. 1 port complex in United States
- US\$70 billion in cargo a year
- 95 percent of domestic grains reach the world markets through Louisiana
- US\$1 billion annual coastal fishery industry
- Major infrastructure for nation's oil and natural gas production
- 30 percent of domestic and 18 percent of imported oil and gas flows through coastal Louisiana
- Hurricane protection for 2 million people
- Coastal habitat for millions of birds and animals
- World-renowned fishing, hunting and boating
- Warehouse of U.S. strategic petroleum reserves