

Engineering With Nature

Project Fact Sheet



Title

Atchafalaya River Island Creation Project

Background

Over the past several years, the USACE New Orleans District has been using dredged material to nourish an island forming naturally in the Atchafalaya River, LA. Dredged material mounds placed upriver of the island using shoal material removed from a Federal navigation channel during routine channel maintenance are being dispersed by natural river currents, thereby nourishing and self-designing the natural island. The project is intended to generate monitoring data to quantify and otherwise improve the District's understanding of the maturation of this beneficial use of dredged material within the Atchafalaya Basin.

Objectives

This project will provide biological and hydrological monitoring data to quantify the island's benefits and otherwise improve our understanding of the maturation of this beneficial use of dredged material within the Atchafalaya Basin. The project will document how a river island was successfully created using dredged material in a beneficial manner, taking advantage of the natural hydrological processes inherent in the system. Project findings will help direct future dredged material placement practices in the basin and other riverine systems.

Approach

Hydrologic, geomorphologic and biologic monitoring studies and high resolution aerial mapping will be performed to determine the river hydrology necessary to create the island via transport of upstream dredged material mounds and the introduction and the establishment of riparian and wetland vegetation and wildlife on the island. The project will use moderate-resolution hyper-temporal imagery to catalog the island's formation and maturation for determining the effectiveness of this project in terms of restoring, creating, enhancing, and protecting the coastal Louisiana landscape.

Outcomes

FY13 - Technical Note: Using dredged material and nature to create river island habitat in coastal Louisiana

EWN Web site: Create and upload initial project description

FY14 - Progress Report: Hydrological and biological monitoring results

EWN Web site: Revise project description; add available monitoring results

FY15 - Technical Report: EWN: A concept for developing river island habitat

Journal Article: Creating island habitat in the Atchafalaya River, Louisiana using dredged material and Engineering With Nature

EWN Web site: Finalize project description and results of monitoring efforts



Figure 1. The Atchafalaya River Island had grown to 90 acres as of Dec 2009.



Figure 2. A diverse assemblage of native vegetation is colonizing the island.

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