

Challenges of ecosystem restoration in Louisiana – availability of sediment and its management

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Abstract Human intervention has impaired the Mississippi River's ability to deliver sediment to its delta wetlands, and as a consequence acute land loss in coastal Louisiana has resulted in an unprecedented ecocatastrophe. To mitigate this degradation, an unparalleled restoration effort is underway. For this effort to be successful and sustainable, various sediment input mechanisms must be integrated, including: building appropriate sediment-diversions; beneficially using the millions of cubic metres of sediment dredged annually from navigational channels; harvesting deposits of sand and suitable sediment from the river and offshore; and related sediment management activities that are compatible with other uses of the river. A comprehensive sediment management plan has been developed to identify and delineate potential sediment sources for restoration, and to provide a framework for managing sediment resources wisely, cost effectively, and in a systematic manner. The Louisiana Sediment Management Plan provides regional strategies for improved comprehensive management of Louisiana's limited sediment resources.

Key words sediment management; coastal land loss; sand resources; Louisiana Coastal Master Plan; river diversion; Mississippi River Delta; deltaic plain