Program Purpose

- Reverse the current trend of degradation in the coastal ecosystem.
- Targeted ecological restoration of healthy, productive, and diverse wetlands.
- Enhanced sustainability with essential form and function of the natural ecosystem.
- An integrated restoration program that results in multiple use benefits; benefits not solely for wetlands, but for communities, industries, and resources of the coast.
Deterioration of Landscape

Major Causes Of Wetland Loss

Challenges

- Barrier Island Degradation
- Storms
- Salt Water Intrusion
- Canals
- Oil & Gas Development
- Levee System
- Sediment Reduction
- Sea Level Rise
- Subsidence
#1 - Prevents future land loss where predicted to occur

#2 - Sustainability – Restores fundamentally impaired (or mimics) deltaic processes through river reintroductions

#3 - Sustainability – Restores endangered or critical geomorphic structure

#4 - Protects vital socio-economic resources
SUMMARY
Coastal Louisiana has lost an average of 34 square miles of land, primarily marsh, per year for the last 50 years. From 1932 to 2000, coastal Louisiana has lost 1,900 square miles of land, roughly an area the size of the state of Delaware. If nothing is done to stop this land loss, Louisiana is expected to lose another 700 square miles of land, or about equal to the size of the greater Washington D.C.-Baltimore area, in the next 50 years. Further, Louisiana accounted for an estimated 90 percent of the coastal marsh loss in the lower 48 states during the 1990s.
Fig. 18. Graphical depiction of the growth and decay of a delta lobe (adapted from Gagliano and Van Beek 1975; Neill and Deegan 1986). Habitat and biological diversity peak in the early to middle stage of the decay phase.
Study Objectives

- **Ecosystem Objectives**
  - Sustain productive and diverse fish and wildlife habitats
  - Reduce nutrient delivery to the continental shelf

- **Hydrogeomorphic Objectives**
  - Establish dynamic salinity gradients
  - Increase sediment input
  - Maintain or establish natural landscape features and hydrologic processes
LCA Restoration Goals
1) No Action: continued degradation rate;
2) Reduce Loss: decrease in degradation rate;
3) Stabilize: no wetland loss;
4) Enhance: increase wetland acreage.
Critical restoration features:
1) Mississippi River-Gulf Outlet Canal (MRGO)
2) Small diversion at Hope Canal
3) Barataria Basin barrier shoreline restoration-
Caminade headlands and Shell Island
4) Small Bayou Lafourche reintroduction
5) Medium diversion with dedicated dredging at Myrtle Grove
6) Multipurpose operation of the Houma Navigation Canal Lock
7) Terrebonne basin barrier shoreline restoration-
Isles Dernieres and East Timbalier
8) Maintain land bridge between Caillou Lake and
the Gulf of Mexico
9) Small diversion at Convent/Blind River
10) Increase Amite River Diversion Canal influence by gapping banks
11) Medium diversion at Whites Ditch
12) Gulf shoreline stabilization at Point Au Fer Island
13) Convey Atchafalaya River water to northern Terrebonne marshes
14) Modification of the Caernarvon diversion for marsh creation
15) Modification of the Davis Pond diversion for marsh creation

Other components of the plan include:
- Science and technology program
- Demonstration projects
- Beneficial use of dredged material
- Modifications to existing water control structures
- Long-term, large-scale restoration concepts

Note:
Critical features 1 - 5 recommended for programmatic authorization
Critical features 6 - 15 recommended for approval with future authorization
LCA Agencies

- Department of Army - U.S. Army Corps of Engineers
- Department of Agriculture - Natural Resources Conservation Service
- Department of Commerce - National Marine Fisheries Service
- Department of the Interior - U.S. Fish and Wildlife Service
- Environmental Protection Agency
- Louisiana Coastal Protection and Restoration Authority
Authorization

WRDA 2007

- Conditionally Authorized Near-term Features
- Ten Critical Restoration Features
- Science & Technology Program
- Demonstration Projects Program
- Beneficial Use Dredge Material Program
- Investigation of Modifications to Existing Structures
- Long-term Studies

Total LCA Ecosystem Restoration $1,996,500,000
Monitoring and Adaptive Management

- Science and Technology Program
  - Focused research to reduce uncertainties
  - Data acquisition and monitoring
  - Modeling
- Demonstration Projects
- Chief’s Report - Feasibility Studies will identify Adaptive Management Measures
- Adaptive Management Program Under Development
Lessons Learned

- Deviations should be documented in great detail
- Changes in staffing in a vertical team can result in review issues without documentation
- Development of alternatives consisting of combined measures should be as exhaustive as reasonably possible
- WRDA issues
- Predict the unpredictable
Program Challenges

- Workload
- Resource availability
- Congressional deadlines
- Level of detail required in plans
- Changing conditions on a dynamic coast
Success to Date

- Chief’s Report . . . . . . . . . . . . . Jan 2005
- WRDA . . . . . . . . . . . . . . . . . . Nov 2007
- 6 FCSAs . . . . . . . . . . . . . . . . . Nov 2008
- Public scoping meetings . . . . . Feb 2009
- 6 ATRs . . . . . . . . . . . . . . . . . . May 2009
- Feasibility Scoping Meetings . . July 2009