Comprehensive Recommendations
Supporting the Use of the
Multiple Lines of Defense Strategy
to Sustain Coastal Louisiana

Planning Unit 4

Lake Pontchartrain Basin Foundation
Coalition to Restore Coastal Louisiana

Workshop Presentation
November 6, 2007
Requirements for Implementation of the Multiple Lines of Defense Strategy to Rebuild Louisiana’s Coast and Hurricane Protection

Technical Workshops
Sponsored by the lake Pontchartrain Basin Foundation and the Coalition to Restore Coastal Louisiana

Planning Units 3b and 4 - November 6, 2007
McNeese University (room announced later), Lake Charles, La.

Planning Units 3a and 3b - November 16, 2007
Houma Civic Center, Houma La.

Planning Units 1 and 2 - November 16, 2007
Bayou Segnette State Park

The workshops will start at 8:00 am and end at approximately 3:00 pm
Workshop Objective

Three workshops will be held to discuss and identify the essential recommendations to restore the coast, levee improvement, elevating homes and all other “Lines of Defense” as described by the Multiple Lines of Defense Strategy. Focus will be on not just the individual components of a plan but their relation to each other. Integration means components should mutually support and not conflict with their contribution to the overriding goals of improving flood protection while sustaining the coastal estuary. Notes from the meeting and other related documents will be posted on the MLODS website (www.mlods.org) after the workshop. The overall goal is to facilitate convergence on the best projects to keep our coast healthy while providing adequate flood protection from storm surges.
Cheniers and Historical Hydrology

Gould and McFarlan 1959
Mermentau River

Natural river channel

Dredged channel with jetties

Natural accumulation of sediment blocking the river channel

Interruption of sediment by jetties
Alterations to Hydrology

- 1950 Calcasieu Lock Construction
- 1974-77 Upper Mermentau straightening
- 1936 Hwy 27 Construction
- 1925-44 GIWW Construction
- 1951 Catfish Point Structure Construction
- 1952 Mermentau River Improvement
- Calcasieu Ship Channel Expansions 1941 - 30 ft, 1951 - 35 ft, 1968 - 40 ft
Draft Wetland Habitat Goals

<table>
<thead>
<tr>
<th>Wetland Habitat Types</th>
<th>Saline</th>
<th>18 ppt (8-29 ppt)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brackish</td>
<td>10 ppt (4-18 ppt)</td>
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<tr>
<td></td>
<td>Intermediate</td>
<td>4 ppt (2-8 ppt)</td>
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<tr>
<td></td>
<td>Fresh Marsh/Swamp</td>
<td>0 ppt (0-3 ppt)</td>
</tr>
</tbody>
</table>
MLOD Recommendations
Calcasieu/Sabine Pass Salinity Control Structure
MLOD Recommendations
Flap-Gate Culverts
MLOD Recommendations
Gum Cove Salinity Control Structure
MLOD Recommendations
Sabine River Diversion

![Graph of daily discharge with USGS data for Sabine River near Ruliff, TX, showing daily mean discharge, period of approved data, and estimated daily mean discharge with provisional data periods.]
Non-Structural Measures

DON’T WAIT, ELEVATE!
Structural Measures
Lake Charles - Sulphur
Structural Measures
Lake Charles - Sulphur
Structural Measures
Lake Charles - Sulphur
Structural Measures
Gueydan and Kaplan
Restoration Measures – Marsh Creation
Black Lake – Hackberry Marsh Creation
Restoration Measures – Marsh Creation
Calcasieu Land Bridge and Shoreline
Restoration Measures – Marsh Creation
Marsh Creation Seaward of Grand Chenier
MLOD Recommendations
Chenier Restoration
MLOD Recommendations
Grand Chenier, Hackberry and Blue Buck Restoration
MLOD Recommendations
Evacuation Routes