Lafourche

1963

2014
Table 3. Delta Plain Coastal Land Loss Ranking

<table>
<thead>
<tr>
<th>CLASS NAME</th>
<th>ACREAGE</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil and Gas</td>
<td>249,152</td>
<td>36.06%</td>
</tr>
</tbody>
</table>
“There is clear evidence that past and current oil and gas activities have made and continue to make substantial contributions to degradations in the natural defenses against hurricane surges and waves in coastal Louisiana. . . . All of these works and activities have contributed significantly to the loss of natural defenses such as barrier beaches, wetlands, and marshes. In several important cases, it was the loss of these natural defenses that contributed to the unanticipated breaches of flood protection facilities that protected the greater New Orleans area during hurricane Katrina and led to repeated flooding during hurricane Rita.” (July 18, 2006)
Studies Conclude that Oil & Gas Activities Contributed to Coastal Loss

L. St. Amant, 1971
US Bureau of Land Management, 1972
US Army Corps of Engineers (S.M. Gagliano), 1973
US Army Corps of Engineers, 1973
US Environmental Protection Agency, 1976
D.W. Davis, 1976
N.J. Craig et al., 1979
National Oceanic and Atmospheric Administration, 1980
Fruge, 1981
Johnson & Gosselink, 1982
US Fish and Wildlife Service, 1983
R.E. Turner et al., 1984
Louisiana Mid-Continent Oil and Gas Association, 1985
Minerals Management Service, 1985
LSU Center for Wetland Resources, 1985
Louisiana Geological Survey, 1987
Mineral Management Service, 1987
US Fish and Wildlife Service, 1987
American Petroleum Institute, 1988
LA Dept of Natural Resources/US Fish and Wildlife Service, 1988
Minerals Management Service, 1989
Penland et al., 1990
Louisiana Geological Survey, 1991
US Environmental Protection Agency, 1992
US Department of the Interior, 1994
Penland et al., 1996
US Environmental Protection Agency, 1997
US Geological Survey, 2004
US Army Corps of Engineers, 2004
Louisiana Sea Grant, 2008
LACPR, USACE, 2009
Minerals Management Service, 2009
Gulf Coast Ecosystem Restoration Task Force, 2011
The dominant mechanism for land loss in the identified restoration areas was altered hydrology associated with oil and gas exploration and drilling (64 percent). The second largest process contributing to land loss was the direct removal of wetlands during the dredging of exploratory canals and wellhead access canals (12 percent).
Examples of Legal Requirements Governing O&G operations

1920
Louisiana Dept. Of Conservation:
“Fresh water, whether above or below the surface, must be prevented from pollution, whether in drilling or plugging.”

1943
Louisiana Dept. of Conservation:
Prohibits discharge into any body of water if “any beneficial animal or vegetable life in said waters may be destroyed.”

1952
Army Corps of Engineers:
Operators must maintain canals, not damage banks. No “ridges... or deep holes that may... cause injury to navigable channels or to the banks of the waterway shall be left.”

1974
Army Corps of Engineers:
Operators of canals and other oil and gas operations must maintain their structure or work as originally proposed--permits say “according to the drawings attached hereto.”
“Mineral exploration and production sites shall be cleared, revegetated, detoxified, and otherwise restored as near as practicable to their original condition upon termination of operations to the maximum extent practicable.”

Louisiana Administrative Code 43:I.719(M)

“Areas ... shall be backfilled or otherwise restored to the pre-existing conditions upon cessation of use for navigation purposes to the maximum extent practicable.”

Louisiana Administrative Code 43:I.705(N)

“Mineral exploration and production facilities shall be to the maximum extent practicable designed, constructed, and maintained in such a manner to maintain natural water flow regimes, avoid blocking surface drainage, avoid erosion.”

Louisiana Administrative Code 43:I.723(D)
Sample Permits

Permit No. 19850425

“[T]he canal will be restored to as near preproject condition as practicable by **backfilling** with available spoil...”

Permit No. 19810436

“Slip shall be **filled** to marsh level with available spoil and the remaining spoil shall be used to **fill** the canal.”
<table>
<thead>
<tr>
<th>Project Description</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point Au Fer Canal Plugs</td>
<td>$5,490,270</td>
</tr>
<tr>
<td>Lake Chapeau Sediment Input and Hydrologic Restoration, Point Au Fer Island – canal plugs</td>
<td>$5,932,620</td>
</tr>
<tr>
<td>Marsh Island Hydrologic Restoration – canal plugs</td>
<td>$5,143,323</td>
</tr>
<tr>
<td>Bayou Rigolettes, Bayou Perot, and Harvey Cut Channel Management – canal plugs</td>
<td>$2,770,000</td>
</tr>
<tr>
<td>Lafitte Oil and Gas Field (East) Restoration – canal plugs</td>
<td>$2,230,000</td>
</tr>
<tr>
<td>Land Bridge Shoreline Protection Extension and Wetland Restoration</td>
<td>$39,000,000</td>
</tr>
</tbody>
</table>
Appendix A – Ongoing Protection and Restoration Project Summaries

Point Au Fer Canal Plugs, $5,490,270 - This project is intended to reduce saltwater intrusion into the Point au Fer marshes without reducing freshwater back flooding from the Atchafalaya River. Phase I of this project, completed in 1997, involved the plugging of two major natural gas/oil pipeline canals on the eastern half of the island. Under Phase II, a rock shoreline stabilization structure was constructed in 2000 along a thin stretch of beach separating the Gulf of Mexico from the Mobil Canal.

Lake Chapeau Sediment Input and Hydrologic Restoration, Point Au Fer Island, $5,932,620 - The objectives of this project are to restore the marshes west of Lake Chapeau, re-establish the hydrologic separation of the Locust Bayou and Alligator Bayou watersheds, and re-establish the natural drainage patterns within the Lake Chapeau area. To accomplish this material dredged from Atchafalaya Bay was used to create marsh, oil field access canals were plugged, and spoil banks were gapped. An estimated 850,000 cubic yards of material were hydraulically dredged from Atchafalaya Bay and spread to a thickness of approximately 2 feet to create 160 acres of marsh.

Marsh Island Hydrologic Restoration, $5,143,323 - The objective of the project is to stabilize the northeastern shoreline of Marsh Island, including the northern shoreline of Lake Sand, and to help to restore the historical hydrology. The project included construction of nine plugs in oil and gas canals at the northeast end of Marsh Island, protection of the northeast shoreline with rock, and isolation of Lake Sand from Vermilion Bay with a rock dike.
Appendix E, Part C – Project Concepts in Coastal Parish Master Plans

Bayou Rigolettes, Bayou Perot, and Harvey Cut Channel Management, $2,770,000 - This project would restore hydrologic conditions at the critical Land Bridge area by plugging several oil and gas canals, restricting channel dimensions at Harvey Cut, and restricting channel dimensions at the Bayou Perot/ Little Lake intersection.

Land Bridge Shoreline Protection Extension and Wetland Restoration, $39,000,000 - This project is designed to fortify the region on the southern side of a portion of the Land Bridge Project - Phase 3. The wetland area is being hydrologically degraded by interior exposure from the oilfield canal breaches and shoreline erosion along surrounding water bodies. The project would construct approximately 28,000 feet of shoreline protection interspersed with viable oilfield canal closures, followed by the placement of dedicated dredge material to restore elevations of degraded wetland areas. The final identification of viable canal closure and wetland fill targets would be established during project design to maximize project effectiveness and minimize oil and gas impacts.

Lafitte Oil and Gas Field (East) Restoration, $2,230,000 - This project is to restore natural hydrology by eliminating avenues for saltwater intrusion and sediment loss. The Texaco Canals are a maze of existing oil and gas canals which now breach the natural ridges. After an evaluation of production activities within the field, several canals will be eliminated and plugged off to re-connect existing land masses. Future dedicated dredging can be utilized to fill the abandoned canals to reduce saltwater intrusion and enhance freshwater and sediment retention.

Delta Farms Oil and Gas Field Restoration, $1,300,000 - This project would plug redundant oilfield access canals to enhance freshwater retention, improve hydrology, and to reduce pathways for saltwater intrusion and extreme tidal exchange.

TOTAL COST $61,866,213
*P19870451*, Sun Exploration & Production Company, Terrebonne Parish, Point Au Fer Field – Dredge 26,500 cu yds of marsh material to construct a 900’ canal and slip. Spoil will be placed as continuous spoil banks around the canal and slip. Place 3,250’ each of 4” gas flowline and 2 ½” condensate flowline on the surface of the marsh. Approx. 5.7 acres of brackish marsh will be altered.

Special Conditions: “(f) … earthen plug shall be constructed …. within 90 days upon determining that well is a non-producer or upon termination of production in order to prevent extreme water movement into the area.”
Approx. 35,700 cu yds of canal bottom material will be dredged during cleanout of an existing access canal to dimensions of 3,500 x 70’ x 8’. Approx. 12,223 cu yds of waterbottom material will be dredged during cleanout of an existing well slip to dimensions of 710’ x 160’ x 8’. Spoil material from access canal and well slip dredging will be placed on existing spoil banks.

Permit Description: “Upon abandonment of the site, a shell capped earthen plug will be constructed ....”

Special conditions: “(f) ... earthen plug shall be constructed ... within 90 days upon determining that well is a non-producer or upon termination of production in order to prevent extreme water movement into the area.”
The loss of coastal wetlands and marshes is an issue that needs to be addressed

- Strongly Agree
- Somewhat Agree
- Somewhat Disagree
- Strongly Disagree
- Neutral
- Don't Know

Should the legislature intervene?

- Do not wait for LA legislature to intervene
- Wait for LA legislature to intervene
- Don't Know

Oil & gas drilling activities contributed to loss of natural barriers which led to breaches in levees and flood walls

- Strongly Agree
- Somewhat Agree
- Somewhat Disagree
- Strongly Disagree
- Neutral
- Don't Know

Who do you think should pay for restoring the wetlands where the oil and gas companies drilled? Is it:

- Oil & Gas Companies
- Louisiana Taxpayers
- Don't Know

TOTAL
Should the Legislature Intervene?

- Do not want LA legislature to intervene
- Want the LA legislature to intervene
- Don’t Know

[Pie charts showing data by region and demographic group]
On February 20, 2014, Don Briggs, President of the Louisiana Oil and Gas Association (LOGA), was deposed in a lawsuit related to the lawsuit brought by the Southeast Louisiana Flood Protection Authority – East against 97 oil and gas companies.

During the deposition, Briggs was questioned by attorney Rock Palermo about what proof Briggs had that the lawsuit would cause oil and gas companies to leave the state.

*Palermo:* “Do you have any evidence that any oil company considers Louisiana’s legal climate in deciding whether they will drill for oil and gas in Louisiana?”

*Briggs:* “No.”

*Palermo:* “Is it your opinion that oil and gas companies are leaving Louisiana because of the threat of lawsuits?”

*Briggs:* “Yes.”

*Palermo:* “Which oil companies have left Louisiana because of lawsuits?”

*Briggs:* “I don’t know.”

*Palermo:* “Give us a name of an oil company that has refused to do business in Louisiana because of lawsuits.”

*Briggs:* “I don’t know any.”

*Palermo:* “You can’t name a single company that has not drilled because of lawsuits?”

*Briggs:* “No.”
The 2012 Coastal Master Plan, p.36:
“[A] budget of $100 billion would allow us to achieve a net gain of land even under less optimistic future coastal conditions.”

The 2012 Coastal Master Plan, p.36:
“$50 billion reflects existing and potential funding sources .... With all the good this plan could achieve, we won’t be able to completely compensate for the land loss that will occur over the next 50 years.”

The CPRA was formed in 2005. It says it has secured $18 billion toward coastal protection and restoration. But, $14.5 billion of that was the one-time payment from the Corps for the flood protection system after Hurricane Katrina, not the Master Plan. That leaves at most $3.5 billion secured to date.