7/22/92

COASTAL WETLANDS PLANNING, PROTECTION, AND RESTORATION ACT

Proposed Project Information Form

Project Name: East Mud Lake (PCS-24) Submitted by: SCS

Project Area Size (acres): 8,054
(attach map)

Marsh Type or Management Unit: Brackish Acres:[1/]

Present Conditions

1. Acres of vegetated marsh (marsh, broken marsh, and scrub/shrub wetlands) and listing of dominant plant species present. 3,233

2. Acres of open water. 4,821

3. Percent of open water area listed in Item 2 dominated (greater than 50% canopy coverage) by aquatic plants. 55%

4. Historical information on marsh loss trends (provide references, if available, or methods used to derive information given).

   Prior to the 1960's dense stands of widgeon grass existed in the south end of Mud Lake, but fluctuating water levels and associated turbidities currently prevented the establishment and growth of this very desirable submergent plant. Comparison of aerial photographs (1953-1983) reveal an erosion rate of approximately 76 acres per year.

5. Brief summary of significant historical hydrologic changes.

6. Recent shoreline erosion rate (provide reference if available).

7. Percent of open water area ≤ 1.5 feet in depth (relative to marsh surface). 80%; Determined by field investigation

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[1/] Include wetland acres only; exclude significant upland areas (ridges, fill areas, etc.) and fastlands, but can include minor amounts of spoil banks for simplicity.

8. Salinity Data:

   a. For fresh and intermediate marsh, provide average high salinity for each sampling station for the period March through November. "Average high salinity" is defined as the average of the upper 33% of all salinity values when those values are arranged in order from highest to lowest.

   b. For brackish and saline marsh, provide average annual salinity for each sampling station. 12 ppt

   c. For all salinity data, provide period of record, sample size and, if possible, a map showing the location of sampling location(s) in relation to project area.

9. Location, type size and operation schedule (if applicable) of existing permitted and unpermitted structures. See Plan

10. If there is an existing management plan for the area, is it permitted? Provide copy of permitted operational scheme and permit number. Permit No. - SW (Cameron Parish Wetlands) 921. See plan for permitted operational scheme. CUP No. - P900448

11. Location of structures, culverts, breaks in spoil banks, etc. that serve as hydrologic connections and are not identified above or are not easily seen by examination of aerial photography. See Plan

12. Estimated subsidence rate (provide references if available).

Future Conditions

1. Location, type, size and operation of proposed structures and water control systems, including plugs. See Plan

2. Proposed hydrologic changes (water introductions, circulation routes, etc.) due to the project. See Plan

3. Project Benefits:

   The benefits listed below should reflect the net benefits attributable to the project for the 20-year analysis period. For example, if 100 acres of emergent marsh are predicted to be lost over the next 20 years without the project in place, but only 10 acres are predicted to be lost with the project in place, net benefits to emergent marsh attributable to the project would be protection of 90 acres.

a. Acres of emergent marsh predicted to be gained/lost without project.

1,520 ac. lost without project based on 1953-1983 aerial photography.

Acres of emergent marsh predicted to be gained/lost with project.

Acres of shallow open water.
Mud Lake - 2388
Other - 2433
- 1946 less than 1 1/2'

The plantings along Mud Lake Shoreline will create at least 75 acres of emergent marsh in 20 years. The combination of water management and vegetative plantings shall restore 1946 ac. of the remaining shallow open water (other than Mud Lake)

TOTAL = 2,021 ac. restored to vegetated marsh

b. Percent of open water area dominated by aquatic vegetation predicted to be present at end of 20 years without project. 55%

Percent of open water area dominated by aquatic vegetation predicted to be present at end of 20 years with project. 50%

4. Predicted plant species composition of marsh, for future-with and future-without project (general, in terms of dominant species).

Marshhay cordgrass
Olney threesquare
Smooth cordgrass
Widgeon grass

5. Estimate of open water area ≤ 1.5 feet in depth (in relation to marsh surface), future-with and future-without project.

Future with - 2,100
Future without - 5,340

6. Predicted salinities, future-with and future-without project.

Future without - 12
Future with - 10

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project..... East Mud Lake Wetland Restoration (PCS–24) Marsh type acres..... 8054

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	40	0.46	39	0.45	21	0.29
V2	% Aquatic	10	0.37	10	0.37	10	0.37
V3	Interspersion	%		%		%	
	Class 1		0.44		0.44		0.32
	Class 2	60		60			
	Class 3					60	
	Class 4	40		40		40	
	Class 5						
V4	Hydrology	%		%		%	
	Class 1		1.00		1.00		1.00
	Class 2	100		100		100	
	Class 3						
V5	%OW <= 1.5ft	80	1.00	80	1.00	84	0.92
V6	Salinity (ppt)	12	0.70	12	0.70	12	0.70
V7	Access Value	0.58	0.62	0.58	0.62	0.58	0.62
		HSI =	0.56	HSI =	0.55	HSI =	0.47

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project..... East Mud Lake Wetland Restoration (PCS–24) Marsh type acres..... 8054

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	40	0.46	40	0.46	40	0.46
V2	% Aquatic	10	0.37	15	0.41	50	0.65
V3	Interspersion	%		%		%	
	Class 1		0.44		0.44		0.44
	Class 2	60		60		60	
	Class 3						
	Class 4	40		40		40	
	Class 5						
V4	Hydrology	%		%		%	
	Class 1		1.00		1.00		1.00
	Class 2	100		100		100	
	Class 3						
V5	%OW <= 1.5ft	80	1.00	80	1.00	80	1.00
V6	Salinity (ppt)	12	0.70	12	0.70	10	1.00
V7	Access Value	0.58	0.62	0.44	0.50	0.44	0.50
		HSI =	0.56	HSI =	0.54	HSI =	0.61

AAHU CALCULATION

Project: East Mud Lake Wetland Restoration (PCS–24)

Future With Project			Total	Cummulative
TY	Acres	x HSI	HU's	HU's
0	8054	0.56	4482.70	
1	8054	0.54	4373.23	4427.96
20	8054	0.61	4923.12	88315.32
			AAHU's =	4637.16

Future Without Project			Total	Cummulative
TY	Acres	x HSI	HU's	HU's
0	8054	0.56	4482.70	
1	8054	0.55	4458.61	4470.65
20	8054	0.47	3807.34	78526.53
			AAHU's	4149.86

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	4637.16
B. Future Without Project AAHU's =	4149.86
Net Change (FWP – FWOP) =	**487.30**