Appendix K

CZMA CONSISTENCY DETERMINATION

BOBBY JINDAL
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

State of Louisiana

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF COASTAL RESTORATION AND MANAGEMENT

April 14, 2009

Edward D. Creef
Chief, Environmental Function
Dept. of the Army
New Orleans District, Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160-0267

RE: **C20090032,** Coastal Zone Consistency
U. S. Army Corps of Engineers, New Orleans District
Direct Federal Action
Calcasieu River and Pass Dredged Material Management Plan and Supplemental Environmental Impact Statement, **Cameron Parish, Louisiana**

Dear Mr. Creef:

The above referenced project has been reviewed for consistency with the approved Louisiana Coastal Resource Program (LCRP) as required by Section 307 of the Coastal Zone Management Act of 1920, as amended. The project as proposed in the application is consistent with the LCRP. If you have any questions concerning this information request, please contact Brian Marcks of the Consistency Section at (225)342-7939 or 1-800-267-4019.

Sincerely yours,

Gregory J. DuCote
Acting Administrator
Interagency Affairs/Field Services Division

GJD/JDH/bgm

cc: David Butler, LDWF
Renee Sanders, OCPR
Kaili Mills, CMD FI
Myles Hebert, Cameron Parish
John Coppock, Calcasieu Parish

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

Planning, Programs, and
Project Management Division
Environmental Planning
and Compliance Branch

April 4, 2009

Mr. Gregory J. Ducote
Program Manager, Interagency Affairs
Coastal Management Division
Office of Coastal Restoration and Management
P.O. Box 44487
Baton Rouge, Louisiana 70804-4487

Dear Mr. Ducote:

Please reference Consistency Determination, Consistency Number C20090032 titled *"Calcasieu River and Pass, LA, Dredged Material Management Plan (DMMP) and Supplemental Environmental Impact Statement (SEIS)"* initially submitted to your agency on January 16, 2009. The Consistency Determination has been modified and is enclosed for your consideration. A Draft Dredged Material Management Plan and integrated Supplemental Environmental Impact Statement will be available for public comment for your review in late April.

Modification to the Consistency Determination includes the removal of confined disposal facility (CDF) expansion 9, 10, 11 and 13 avoiding adverse impacts to 638 acres of wetlands. The proposed action (tentatively selected plan (TSP)) designates 30 percent of the dredged material between channel miles 5 and 36 for the creation and nourishment of wetland and estuarine habitat creating approximately 6,306 acres of wetlands. The TSP provides flexibility during periodic updates of the DMMP to incorporate additional beneficial use sites such as but not limited to site 4, 24, 28 and 52 identified in Plan C.

The Draft DMMP/SEIS evaluated three viable alternatives (including the No Action Plan). The proposed action, Plan B is the TSP at a cost of approximately $866 million dollars and Plan C which creates 10,030 acres of marsh with no adverse impacts is the environmentally preferred plan at a cost of $886 million dollars. The TSP would create an acre of marsh for $32,000 while plan C would create an acre of marsh for $34,000. Plan C was not chosen as the TSP because it is not the least costly plan as required by engineering regulation 1105-2-100 which governs the development and selection of Dredge Material Management Plans. The regulation states "It is the Corps of Engineers policy to accomplish the disposal of dredged material associated with the construction or maintenance dredging of navigation projects in the least costly manner.... This constitutes the base disposal plan (*Federal Standard*) for navigation purpose."

This office requests your concurrence with the enclosed modified Consistency Determination, which addresses the applicable Coastal Use Guidelines. A copy of the Draft DMMP/SEIS executive summary, project maps and cost appendix is enclosed for your use. Based on the enclosed information, we believe that the proposed action is consistent, to the maximum extent practicable, with the State of Louisiana's approved Coastal Resources Program.

Comments should be provided to Ms. Sandra Stiles either by mail at: U.S. Army Corps of Engineers, CEMVN-PM-RP, Attn: Ms. Sandra Stiles, P.O. Box 60267, New Orleans, Louisiana, 70160-0267, by E-mail to: Sandra.E.Stiles@usace.army.mil, or by FAX to (504) 862-2088.

If you have any questions, please feel free to contact Ms. Stiles at (504) 862-1583.

Sincerely,

Joan Exnicios

Joan Exnicios
Acting Chief, Environmental Planning
and Compliance Branch

Enclosures

BOBBY JINDAL
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

State of Louisiana

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF COASTAL RESTORATION AND MANAGEMENT

March 13, 2009

Edward D. Creef
Chief, Environmental Function
Dept. of the Army
New Orleans District, Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160-0267

RE: **C20090032,** Coastal Zone Consistency
U. S. Army Corps of Engineers, New Orleans District
Direct Federal Action
Calcasieu River and Pass Dredged Material Management Plan and Supplemental Environmental Impact Statement, **Cameron Parish, Louisiana**

Dear Mr. Creef:

This office has received the above referenced federal application for consistency review with the approved Louisiana Coastal Resources Program in accordance with Section 307(c) of the Federal Coastal Zone Management Act of 1972, as amended. NOAA Regulations on Federal Consistency, at 15 CFR '930.41(a), allow 60 days for the review of Direct Federal Activities, and at '930.41(b) allow an additional 15 days with appropriate applicant notification. Please be advised that, by this letter, Coastal Management Division is requesting the 15 day time extension.

A final determination will be made within the authorized time period ending April 3, 2009. Please refer to the above Consistency Application number when responding to this letter. If you have any questions please call Brian Marcks of the Consistency Section.

Sincerely yours,

Jim Rives
Administrator

JR/JDH/bgm

cc: David Butler, LDWF
Kaili Mills, CMD FI
Myles Hebert, Cameron Parish
John Coppock, Calcasieu Parish

BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF WILDLIFE & FISHERIES

ROBERT J. BARHAM
SECRETARY

February 17, 2009

Jim Rives, Administrator
Louisiana Department of Natural Resources
Coastal Management Division
P.O. Box 44487
Baton Rouge, LA 70804-4487

RE: *Consistency Number: C20090032*
Applicant: COE-NOD
Notice Date: January 20, 2009

Dear Mr. Rives:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the public notice referenced above. The following recommendations have been provided by the appropriate biologist(s):

Ecological Studies:
Although the proposed beneficial use of dredge material may be considered compensatory for adverse wetland impacts, justification for the conversion of 638 acres of marsh to uplands should be provided along with an alternative site analysis. The justification should clearly show if there is a real need to expand the CDF's within wetlands. If need can be established, actions must be taken to avoid and/or minimize adverse impacts to fish and wildlife resources.

Marine Fisheries:
Although Marine Fisheries staff have been briefed on plan formulation and WVA evaluations, we believe that dredged material should be used beneficially to the maximum extent possible.

The Louisiana Department of Wildlife and Fisheries appreciates the opportunity to review and provide recommendations to you regarding this proposed activity. Please do not hesitate to contact LDWF Permits Coordinator Dave Butler at 225-763-3595 should you need further assistance.

Sincerely,

Jimmy Anthony
Assistant Secretary

mw/hf

c: Matthew Weigel, Biologist
Heather Finely, Biologist Program Manager
Kyle Balkum, Biologist Program Manager
EPA Marine & Wetlands Section
USFWS Ecological Services

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

January 16, 2009

Planning, Programs, and
Project Management Division
Environmental Planning
and Compliance Branch

Mr. Gregory J. Ducote
Program Manager, Interagency Affairs
Coastal Management Division
Office of Coastal Restoration and Management
P.O. Box 44487
Baton Rouge, Louisiana 70804-4487

Dear Mr. Ducote:

The U.S. Army Corps of Engineers, New Orleans District prepared the enclosed Consistency Determination, *"Calcasieu River and Pass, LA, Dredged Material Management Plan and Supplemental Environmental Impact Statement"*. A Supplemental Environmental Impact Statement is in preparation, and will be mailed to you at a later date. We request your concurrence with the enclosed Consistency Determination, which addresses the applicable Coastal Use Guidelines. Based on the enclosed information, we believe that the proposed action is consistent, to the maximum extent practicable, with the State of Louisiana's approved Coastal Resources Program.

Comments should be provided to Ms. Sandra Stiles either by mail at: U.S. Army Corps of Engineers, CEMVN-PM-RP, Attn: Ms. Sandra Stiles, P.O. Box 60267, New Orleans, Louisiana, 70160-0267, by E-mail to: Sandra.E.Stiles@usace.army.mil, or by FAX to (504) 862-2088.

If you have any questions, please feel free to contract Ms. Stiles at (504) 862-1583.

Sincerely,

for Elizabeth Wiggins
Chief, Environmental Planning
and Compliance Branch

Enclosure

CONSISTENCY DETERMINATION

Louisiana Coastal Use Guidelines

Calcasieu River and Pass
Dredged Material Management Plan
and
Supplemental Environmental Impact Statement

INTRODUCTION

Section 307 of the Coastal Zone Management Act of 1972, 16 U.S.C. 1451 *et.seq.* requires that "each federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs." In accordance with Section 307, a Consistency Determination has been prepared for the proposed Dredge Material Management Plan/Supplemental Environmental Impact Statement (DMMP/SEIS) project. Coastal Use Guidelines were written in order to implement the policies and goals of the Louisiana Coastal Resources Program, and serve as a set of performance standards for evaluating projects. Compliance with the Louisiana Coastal Resources Program, and therefore, Section 307, requires compliance with applicable Coastal Use Guidelines.

PURPOSE AND NEED FOR THE PROPOSED ACTION

The Calcasieu River and Pass, Louisiana, project does not have adequate dredged material disposal capacity needed to maintain the channel to authorized depths. Existing discharge sites are at or near capacity, and past maintenance deficiencies have resulted in substantial erosion of discharge facilities into adjacent water bodies. Other discharge sites have been lost to commercial development. Previous real estate agreements, which have enabled landowners to opt out of agreements for disposal, have resulted in some landowners rescinding permissions for their property to be used for the placement of dredged material. As a result, remaining discharge areas cannot accommodate the volume of dredged material needed to maintain the ship channel to project-authorized dimensions, and it has become necessary for CEMVN to reduce channel widths in some reaches.

Corps of Engineers Regulation (ER) 1105-2-100 requires U.S. Army Corps of Engineers Districts to prepare dredged material management plans (DMMP) for each federally authorized ship channel. Section 3-2 (b) (8) states:

> *Dredged material management planning for all Federal harbor projects is conducted by the Corps to ensure that maintenance dredging activities are performed in an environmentally acceptable manner, use sound engineering techniques, are economically warranted, and that sufficient confined discharge facilities are available for at least the next 20 years. These plans address dredging needs, discharge capabilities, capacities of discharge areas, environmental compliance requirements, potential for beneficial use of dredged material, and indicators of continued economic justification. The Dredged Material Management Plan shall be updated periodically to identify any potentially changed conditions.*

The purpose of the DMMP is for the U.S. Army Corps of Engineers, New Orleans District (CEMVN), to

develop a plan for the placement of material dredged for the maintenance of the Calcasieu Ship Channel. The actions and strategies set forth in the DMMP would provide for the management of materials dredged through operations and maintenance of the ship channel and berthing areas for a minimum period of 20 years while updating and redefining the base plan/federal standard for the project. Preparation of the DMMP would enable the CEMVN to comply with the requirement of ER 1105-2-100 to prepare a DMMP for each federally authorized navigation channel.

DESCRIPTION OF THE PROPOSED ACTION

The proposed project includes the placement of dredged material from the Calcasieu Ship Channel into confined disposal facilities (CDFs). In addition, dredged material would be beneficially used for the restoration of subsided coastal marsh. Figure K-1 is a map showing the disposal sites. Table K-1 lists the placement areas by reach and channel mile.

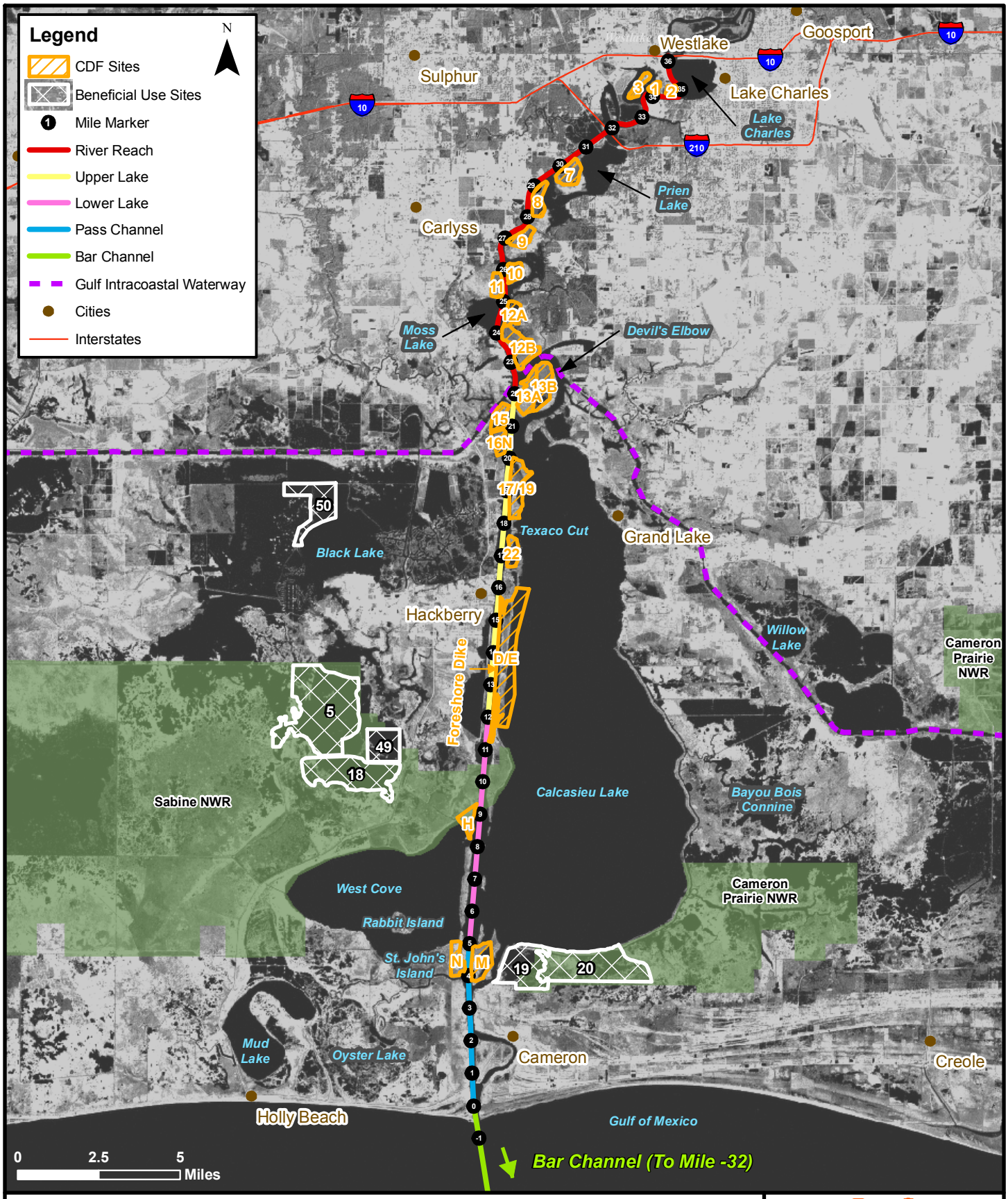
Confined Disposal Facilities. A CDF is an engineered structure for the containment of dredged material. CDFs are bound by confinement dikes or structures, thereby isolating the dredged material from its surrounding environment. The material is placed into the CDF either hydraulically or mechanically, where it is allowed to drain, dry, and consolidate. Effluent resulting from the settling of solids is discharged across weirs into adjacent waters of the U.S.

CDFs 17/19, D, and E would be expanded into Calcasieu Lake to the approximate limits depicted in the 1976 Calcasieu River and Pass Environmental Impact Statement. Extending lakeward from these reconfigured CDFs, dredged material would be placed in Calcasieu Lake to the approximate 3-foot depth contour to create intertidal marsh.

Rock or riprap would be used to armor areas along the ship channel that have been shown to be susceptible to erosion from currents and ship passage. On the right descending bank of the channel, armoring would be placed from channel mile 16.5 to 18.7. On the left descending bank of the channel, armoring would be placed along channel miles 15.6 to 20. Armoring would also be placed along the lake side of CDFs 17/19, 22, 23, and the wetland expansion area to the east of CDF D/E. A foreshore dike has already been constructed along the left-descending bank of the channel between miles 11 and 16 to prevent erosion. The Texaco Cut would remain open, and would be armored on its northern and southern banks into Calcasieu Lake to reduce erosion resulting from boat traffic, waves, and wind-driven currents.

Beneficial Use. A large portion of dredged material would be placed in beneficial use sites. The material would be used for the restoration of subsided and eroded coastal wetlands. All beneficial use placement areas included in this evaluation are currently available for use.

Operations for the placement of material for beneficial purposes would likely include the use of a hydraulic cutterhead pipeline dredge to remove shoal material from the ship channel during routine maintenance dredging events. Shoal material would be pumped via pipeline for confined, semi-confined, or unconfined placement within the beneficial use placement areas for shoreline stabilization, land reclamation, and marsh creation.



PLAN B
DISPOSAL SITES FOR DREDGED MATERIAL

Calcasieu River and Pass, Louisiana
Dredged Material Management Plan

Landsat Thematic Mapper Satellite Image: 2002 RGB753-Pan merge, LDEQ (2002)

GEC
Figure: K-1
Date: March 2009
Scale:1:260,000
Source: LDEQ/GEC/USACE
Map ID: 27585107-1241

Table K-1. Disposal Sites for Dredged Material

Reach	Section	Placement Sites	Type	Beneficial Use (CY)	Existing Capacity (CY)	Vertical Expansion (CY)	Horizontal Expansion: Upland Creation (CY)	Total Site Capacity (CY)	Total 20-Year Capacity (CY)	20-Year Dredge Quantity (CY)
River	34 to 36, Coon Island, Port	1	CDF	0	80,700	807,000	0	887,700	1,668,700	1,596,800
		2	CDF	0	71,000	710,000	0	781,000		
	30 to 34, Turning Basin, Clooney Isl. Loop	3	CDF	0	364,600	1,823,000	0	2,187,600	4,053,300	2,689,800
		7 (1/2)	CDF	0	207,300	1,658,400	0	1,865,700		
	26 to 30	7 (1/2)	CDF	0	207,300	1,658,400	0	1,865,700	6,538,500	5,877,200
		8	CDF	0	0	2,478,400	0	2,478,400		
		9	CDF	0	0	2,194,400	0	2,194,400		
	22 to 26	10	CDF	0	0	1,742,400	0	1,742,400	13,452,000	12,706,400
		11	CDF	0	217,800	1,742,400	0	1,960,200		
		12A	CDF	0	0	2,064,800	0	2,064,800		
		12B	CDF	0	2,095,800	5,588,800	0	7,684,600		
Upper Lake	21 to 22	15	CDF	0	584,000	2,920,000	0	3,504,000	6,214,000	4,458,800
		16 N	CDF	0	0	2,710,000	0	2,710,000		
	Devil's Elbow	13	CDF	0	0	11,455,000	0	11,455,000	11,455,000	10,310,400
	16 to 21	17	CDF	0	309,700	2,026,400		2,336,100	22,582,650	19,885,400
		19	CDF	0	0	1,694,000	1,936,500	3,630,500		
		22	CDF	0	214,500	1,716,800		1,931,300		
		Foreshore Dike	CDF	0	0	0	7,465,000	7,465,000		
		West of Black Lake (50)	BU Site	7,219,750	0	0	0	7,219,750		
	12 to 16	D	CDF	2,066,000	398,500	0	4,087,200	6,551,700	22,503,400	19,475,000
		E	CDF	2,066,000	0	0	4,087,200	6,153,200		
		Foreshore Dike	CDF	0	0	0	925,000	925,000		
		Sabine NWR (5)	BU Site	8,873,500	0	0	0	8,873,500		
Lower Lake		Cameron Par. School Bd (49)	BU Site	2,420,000	0	0	0	2,420,000	11,696,500	9,261,800
		Sabine NWR (18)	BU Site	9,276,500	0	0	0	9,276,500		
	5 to 9.5	H	CDF	0	458,000	916,400	0	1,374,400	13,329,600	10,853,000
		M	CDF	0	0	5,059,200	0	5,059,200		
		N	CDF	0	0	2,826,400	0	2,826,400		
		Cameron Prairie NWR (19)	BU Site	2,904,000	0	0	0	2,904,000		
		Cameron Prairie NWR (20)	BU Site	1,165,600				1,165,600		
Total				**35,991,350**	**8,035,600**	**50,965,800**	**18,500,900**	**113,493,650**	**113,493,650**	**97,114,600**

Dredged material slurry would be discharged into shallow open water areas to an elevation conducive to the development of wetlands habitat following dewatering and compaction as determined by elevation surveys of the adjacent or nearby habitat type to be created. It is anticipated that the final result of this dredged material placement would be a combination of wetlands, mud flat, and shallow open water habitat within the placement site. Dredged material slurry would be allowed to overflow over existing emergent marsh vegetation within the proposed discharge areas, but would not be allowed to exceed the pumping height necessary to achieve the habitat elevation after dewatering and consolidation as determined through geotechnical investigations.

In conjunction with the discharge activities, retention dikes, deflection dikes, and/or closures may be required to prevent the flow of dredged material back into adjacent waterways and properties. Earth, rock, aggregate, shell, geotubes, sheetpile, hay bales or a combination of the above may be used for dike/closure construction or refurbishment. Interior low-level earthen weirs also may be constructed within discharge areas to facilitate the deposition of sediments in a manner that would enhance wetlands development. Borrow material for dike/closure/weir construction would be taken from within discharge areas. Earthen dikes/closures would be allowed to degrade naturally. If earthen dikes/closures do not sufficiently degrade to provide fisheries and tidal ingress/egress following appropriate settlement of dredged material placed within discharge areas, earthen dikes/closures would be mechanically breached and/or degraded as necessary.

In addition to dredged material containment features, elements that may be constructed in association with the placement of material for beneficial use include:

- Access Corridors. Construction access corridors from the ship channel to beneficial use sites would be a maximum of about 200 feet in width and would cross over uplands, wetlands, and shallow open water as necessary. Access corridors also may occur across or along the crown of existing levees in the project vicinity.

- Flotation Access Corridors. Channels would be excavated as needed in shallow open water areas to allow construction equipment to access sites. If necessary, flotation access channels would be excavated by a mechanical dredge to maximum dimensions of approximately 80 feet wide and 10 feet deep. Flotation access channel material would be used in dike/closure construction or refurbishment, to backfill flotation access channels, or would be placed adjacent to and behind the dikes and closures in shallow open water to an elevation conducive to wetlands development following consolidation of the material. Flotation access channel material used to backfill the flotation access channels following completion of discharge work would be temporarily stockpiled on water bottoms adjacent to the flotation access channels.

  If existing canals are used for access, they may be dredged to facilitate flotation of pipelines and other necessary equipment from the dredging site on the ship channel to pipeline discharge sites within the beneficial use sites. Dredged material removed from existing canals would be placed on adjacent levees and/or into shallow open water on either side of canals. Canal dredged material placed in shallow open water areas would be placed to a height conducive for natural wetlands development.

- Containment Dikes. Levees surrounding beneficial use sites may be degraded as necessary to provide access into the discharge site. If levees are degraded for construction access, they may be rebuilt following completion of discharge activities. Degraded levee material would be placed/stockpiled either in shallow open water adjacent to the degraded levee sections or on adjacent levees. Material degraded from levees may be used to rebuild degraded levee sections. If borrow material is required to rebuild degraded levee sections, borrow material would be excavated from adjacent shallow water. If levees are not to be rebuilt using material removed

during levee degradation activities, any levee material that was placed in shallow open water would be degraded, if necessary, to a height conducive to wetlands development.

GUIDELINES APPLICABLE TO ALL USES

Guideline 1.1 The guidelines must be read in their entirety. Any proposed use may be subject to the requirements of more than one guideline or section of guidelines and all applicable guidelines must be complied with.

Guideline 1.2 Conformance with applicable water and air quality laws, standards and regulations, and with those other laws, standards and regulations which have been incorporated into the coastal resources program shall be deemed in conformance with the program except to the extent that these guidelines would impose additional requirements.

Guideline 1.3 The guidelines include both general provisions applicable to all uses and specific provisions applicable only to certain types of uses. The general guidelines apply in all situations. The specific guidelines apply only to the situations they address. Specific and general guidelines should be interpreted to be consistent with each other. In the event there is an inconsistency, the specific should prevail.

Guideline 1.4 These guidelines are not intended to nor shall they be interpreted so as to result in an involuntary acquisition or taking of property.

Guideline 1.5 No use or activity shall be carried out or conducted in such a manner as to constitute a violation of the terms of a grant or donation of any lands or waterbottoms to the State or any subdivision thereof. Revocations of such grants and donations shall be avoided.

Guideline 1.6 Information regarding the following general factors shall be utilized by the permitting authority in evaluating whether the proposed use is in compliance with the guidelines.

a) type, nature and location of use
b) elevation, soil and water conditions and flood and storm hazard characteristics of site.
c) techniques and materials used in construction, operation and maintenance of use.
d) existing drainage patterns and water regimes of surrounding area including flow, circulation, quality, quantity and salinity; and impacts on them.
e) availability of feasible alternative sites or methods for implementing the use.
f) designation of the area for certain uses as part of a local program.
g) economic need for use and extent of impacts of use on economy of locality.
h) extent of resulting public and private benefits.
i) extent of coastal water dependency of the use.
j) existence of necessary infrastructure to support the use and public costs resulting from use.
k) extent of impacts on existing and traditional uses of the area and on future uses for which the area is suited.
l) proximity to and extent of impacts on important natural features such as beaches, barrier islands, tidal passes, wildlife and aquatic habitats, and forest lands.
m) the extent to which regional, state and national interests are served including the national interest in resources and the siting of facilities in the coastal zones as identified in the coastal resources program.
n) proximity to, and extent of impacts on, special areas, particular areas, or other areas of particular concern of the state program or local programs.
o) likelihood of, and extent of impacts of, resulting secondary impacts and cumulative impacts.
p) proximity to and extent of impacts on public lands or works, or historic, recreational or cultural resources.
q) extent of impacts on navigation, fishing, public access, and recreational opportunities.
r) extent of compatibility with natural and cultural setting.

s) extent of long term benefits or adverse impacts.

Response to Guideline 1.1 – 1.6. The guidelines have been read in their entirety. The proposed action would be in conformance with all applicable state laws, regulations, and standards. Therefore, the proposed action is consistent with these guidelines.

Guideline 1.7 It is the policy of the coastal resources program to avoid the following adverse impacts. To this end, all uses and activities shall be planned, sited, designed, constructed, operated and maintained to avoid to the maximum extent practicable significant:

a) reductions in the natural supply of sediment and nutrients to the coastal system by alterations of freshwater flow.
Response: The proposed project is expected to induce minimal, if any, reductions in the natural supply of sediment and nutrients as affected by freshwater flow.

b) adverse economic impacts on the locality of the use and affected governmental bodies.
Response: The project would have a beneficial economic impact on the area.

c) detrimental discharges of inorganic nutrient compounds into coastal waters.
Response: Inorganic nutrients would not be discharged into coastal waters.

d) alterations in the natural concentration of oxygen in coastal waters.
Response: The project would not alter the natural concentration of oxygen in coastal waters.

e) destruction or adverse alterations of streams, wetland, tidal passes, inshore waters and waterbottoms, beaches, dunes, barrier islands, and other natural biologically valuable areas or protective coastal features.
Response: Reestablishment of CDFs D/E and 17/19 to the boundaries evaluated in the 1976 EIS for the Calcasieu River and Pass Project would convert approximately 443 acres of open water habitat on the western side of Calcasieu Lake to uplands and 68 acres of wetlands to uplands. Intertidal marsh created adjacent to CDFs D and E would convert approximately 476 acres of open water habitat to wetland habitat.

f) adverse disruption of existing social patterns.
Response: The proposed project would have no significant adverse impacts on existing social patterns.

g) alterations of the natural temperature regime of coastal waters.
Response: The proposed project would have no impact on the natural temperature regime.

h) detrimental changes in existing salinity regimes.
Response: The proposed project would have no impact on the existing salinity regime.

i) detrimental changes in littoral and sediment transport processes.
Response: The proposed project would have no impact on littoral and sediment transport processes.

j) adverse effects of cumulative impacts.
Response: The environmental effects of the proposed project would not contribute adverse increments to the cumulative effects of past, present, and reasonably foreseeable actions.

k) detrimental discharges of suspended solids into coastal waters, including turbidity resulting from dredging.

Response: Short-term impacts to water quality would be expected from expanding existing CDFs and placing the dredged material. Effects from placement of dredged material could occur as ponded water is discharged during placement, and during dewatering of the dredged material. These effects could include discharge of water with some elevated levels of suspended solids and nutrients. Although impacts would be short term, all discharges will be monitored closely during construction of the dike system and during dredged material placement. Monitoring will include turbidity and total suspended solid levels.

Construction companies contracted to rehabilitate CDFs would be required to follow standard best management practices (BMPs) to minimize the introduction of suspended solids into surrounding waters. These BMPs include such practices as siltation fences, hay bales, etc., to reduce erosion at construction sites. Dredging contractors would similarly be required to adhere to BMPs for dredging and dredged material disposal. Requirements to comply with BMPs would be included in and made part of construction and dredging contracts.

l) reductions or blockage of water flow or natural circulation patterns within or into an estuarine system or a wetland forest.
Response: There would be changes to the natural circulation of open water due to the creation of marsh through dredge placement. However, channels will be created in the newly created marsh for the ingress and regress of tidal flows.

m) discharges of pathogens or toxic substances into coastal waters.
Response: There will be no discharges of pathogens or toxic substances into coastal waters.

n) adverse alteration or destruction of archaeological, historical or other cultural resources.
Response: The Louisiana State Historic Preservation Officer has concurred that no alteration, destruction of archaeological, historical, or other cultural resources would result from this project.

o) fostering of detrimental secondary impacts in undisturbed or biologically highly productive wetland areas.
Response: In summation of secondary impacts, the action plans would not foster detrimental secondary impacts, but instead would offer benefits to the socioeconomic and natural environments. The project would be beneficial to the economy of the region and the nation by maintaining a navigable waterway to transport necessary goods (*e.g.*, petroleum, natural gas, etc.) to the Port of Lake Charles, a port of entry for such goods. The use of dredged material to restore subsided marsh would result in greater habitat diversity, additional estuarine habitat for economically important species, and improved recreation. Because marsh has been shown to provide a greater reduction in hurricane storm surge than open water, restored marsh would offer an incremental benefit in reducing hurricane damage.

p) adverse alteration or destruction of unique or valuable habitats, critical habitat for endangered species, important wildlife or fishery breeding or nursery areas, designated wildlife management or sanctuary areas, or forestlands.
Response: Two protected species are likely to be encountered within the project area: the piping plover (*Charadrius melodus*); and brown pelican (*Pelecanus occidentalis*).

Piping Plover. The placement of dredged material in CDFs would not interfere with foraging or other activities by the piping plover. The placement of material for beneficial use would reduce the amount of open water, and therefore the amount of shoreline potentially used for foraging. However, ample foraging habitat remains in the area. Dredged material disposal operations are likely to temporarily displace the birds from the vicinity of the dredging or dredge material disposal to other

areas. The biological assessment concluded that the project may affect but is not likely to adversely affect the piping plover.

Brown Pelican. If any of the CDFs in the project area are used by brown pelicans for roosting or loafing habitats, the placement of dredged material in CDFs may interfere with those activities. However, ample sites for roosting and loafing are available. The placement of material for beneficial use would reduce open water habitat by converting it to marsh, thereby reducing available foraging habitat. However, the reduction in the amount of open water is negligible compared to that remaining. The mobility of brown pelicans is such that operations involving the placement of dredged material would neither harm nor interfere with their activities.

q) adverse alteration or destruction of public parks, shoreline access points, public works, designated recreation areas, scenic rivers, or other areas of public use and concern.
Response: No such areas would be impacted by the proposed action.

r) adverse disruptions of coastal wildlife and fishery migratory patterns.
Response: No disruptions of coastal wildlife and fishery migratory patterns would occur.

s) land loss, erosion and subsidence.
Response: There would be negligible land loss and erosion associated with the proposed project. There would be no impact on natural subsidence.

t) increases in the potential for flood, hurricane or other storm damage, or increases in the likelihood that damage will occur from such hazards.
Response: Because marsh has been shown to provide a greater reduction in hurricane storm surge than open water, the marsh restored in this project would offer an incremental benefit in reducing hurricane damage.

u) reductions in the long-term biological productivity of the coastal ecosystem.
Response: Long-term biological productivity in the ecosystem will be enhanced through the creation of over 6,000 acres of marsh through the beneficial use of the dredged material.

Guideline 1.8 In those guidelines in which the modifier "maximum extent practicable" is used, the proposed use is in compliance with the guideline if the standard modified by the term is complied with. If the modified standard is not complied with, the use will be in compliance with the guideline if the permitting authority finds, after a systematic consideration of all pertinent information regarding the use, the site and the impacts of the use as set forth in guideline 1.6, and a balancing of their relative significance, that the benefits resulting from the proposed use would clearly outweigh the adverse impacts resulting from non-compliance with the modified standard and there are no feasible and practical alternative locations, methods and practices for the use that are in compliance with the modified standard and:

a) significant public benefits will result from the use, or;
b) the use would serve important regional, state or national interests, including the national interest in resources and the siting of facilities in the coastal zone identified in the coastal resources program, or;
c) the use is coastal water dependent.

The systematic consideration process shall also result in a determination of those conditions necessary for the use to be in compliance with the guideline. Those conditions shall assure that the use is carried out utilizing those locations, methods and practices which maximize conformance to the modified standard; are technically, economically, environmentally, socially and legally feasible and practical; and minimize or offset those adverse impacts listed in guideline 1.7 and in the guideline at issue.

Guideline 1.9 Uses shall to the maximum extent practicable be designed and carried out to permit multiple concurrent uses which are appropriate for the location and to avoid unnecessary conflicts with other uses of the vicinity.

Guideline 1.10 These guidelines are not intended to be, nor shall they be, interpreted to allow expansion of governmental authority beyond that established by La. R.S. 49:213.1 through 213.21, as amended; nor shall these guidelines be interpreted so as to require permits for specific uses legally commenced or established prior to the effective date of the coastal use permit program nor to normal maintenance or repair of such uses.

Response to Guideline 1.8 – 1.10. The guidelines have been read in their entirety. The proposed action is consistent with these guidelines.

GUIDELINES FOR LEVEES

The guidelines have been read in their entirety and the proposed action does not include the construction of a levee; therefore, these guidelines are not applicable to the project.

GUIDELINES FOR LINEAR FACILITIES

The guidelines have been read in their entirety and the proposed action does not include the construction of a linear facility; therefore, these guidelines are not applicable to the project.

GUIDELINES FOR DREDGED MATERIAL DEPOSITION

Guideline 4.1. Spoil shall be deposited utilizing the best practical techniques to avoid disruption of water movement, flow, circulation and quality.
Response. In the development of the tentatively selected plan (TSP), features that were incorporated to avoid and minimize potential adverse environmental effects include the reengineering and rehabilitation of existing deteriorated CDFs to provide for more efficient settling of solids prior to the discharge of decant water. Rehabilitation would avoid or minimize concentrations of suspended solids and turbidity in the vicinity of the discharge, thereby benefiting water quality and the aquatic ecosystem. The rehabilitation of CDFs and added rock armoring would reduce erosion of the side slopes, providing similar benefits by minimizing environmental impacts associated with elevated levels of suspended solids and turbidity. In addition, rehabilitated CDFs would enable better dewatering and consolidation of dredged material. This material would be made available to agencies, contractors, and industries, as a resource.

Guideline 4.2 Spoil shall be used beneficially to the maximum extent practicable to improve productivity or create new habitat, reduce or compensate for environmental damage done by dredging activities, or prevent environmental damage. Otherwise, existing spoil disposal areas or upland disposal shall be utilized to the maximum extent practicable rather than creating new disposal areas.
Response. The TSP includes beneficial use sites as well as the use, rehabilitation, and expansion of existing CDFs, as shown in Table K-1 above.

The TSP optimizes beneficial use for the 20-year plan by designating approximately 30 percent of material dredged between channel miles 5 and 36 for the creation and nourishment of marsh and estuarine habitat. Through beneficial use of the material, the TSP would create approximately 6,306 acres of new marsh in open-water areas of subsided marsh.

In addition, the TSP provides flexibility to incorporate additional beneficial use sites into the DMMP. Flexibility was built into the pumping schedule (shown in Section 5 of the DMMP) by designating material to be pumped to beneficial use areas in the Upper and Lower Lake reaches early in the 20-year life of the DMMP. One of the purposes of this schedule was to enable additional beneficial use sites analyzed in the DMMP (such as BU sites 4, 24, 48, and 52) to be incorporated into the TSP, possibly reducing the amount of CDF use scheduled in later years. Additional beneficial use sites may be incorporated in required periodic updates of the DMMP in the event that additional beneficial-use-site placement options become less costly than confined disposal placement options.

The TSP allows for the continued use and maintenance of existing CDFs should dredged materials become unsuitable for beneficial use (*e.g.,* contamination resulting from an oil spill along the channel). The TSP uses existing CDFs to the maximum extent practicable and does not create new confined disposal areas. However, this plan includes expanding CDFs 17/19, and D/E into Calcasieu Lake to the approximate limits depicted in the 1976 Calcasieu River and Pass EIS. Extending lakeward from reconfigured CDFs D and E, dredged material would be placed in Calcasieu Lake to the approximately 3-foot depth contour to create intertidal marsh.

CDFs would be maintained in a manner that would maximize their capacity. Section 5.5, *Disposal Area Management,* of the DMMP/SEIS, discusses features of a program to maximize the capacity of CDFs. Capacity would be improved by maximizing surface drainage, desiccation, shrinkage, and consolidation of dredged material. Dikes would be strengthened through the management of levee crowns and access ramps and through vegetation management. Erosion control measures would include rock or riprap armoring and the planting of non-woody, drought-resistant vegetation.

Guideline 4.3 Spoil shall not be disposed of in a manner which could result in the impounding or draining of wetlands or the creation of development sites unless the spoil deposition is part of an approved levee or land surface alteration project.
Response. This project is being conducted pursuant to existing authorities for individual project operation and maintenance. Any land alterations will be coordinated with LDNR.

Guideline 4.4 Spoil shall not be disposed of on marsh, known oyster or clam reefs or in areas of submersed vegetation to the maximum extent practicable.
Response.

Marsh Impacts: By expanding CDFs 17/19 and D/E, implementation of the proposed project would convert approximately 68 acres of marsh to upland habitat. In addition, approximately 476 acres of open water habitat would be converted to intertidal marsh.

Estuarine/Oyster Habitat: The area of Calcasieu Lake receiving dredged material is designated as a public oyster tonging area and is managed by the Louisiana Department of Wildlife and Fisheries (LDWF). The TSP would fill approximately 919 acres of lake bottom in Calcasieu Lake, 443 acres of which would be converted to uplands for CDFs D/E and 17/19, and 476 acres of which would be converted to marsh for the beneficial use of dredged material. Thirteen acres of lake bottom impacted by CDF expansions are potentially productive oyster grounds. Coordination with the Louisiana Department of Wildlife and Fisheries is ongoing with respect to any requirements for mitigation for the loss of oyster habitat.

These impacts may be compensated through the use of dredged material to restore over 6,000 acres of degraded coastal marshes and estuarine habitat, thereby enhancing long-term productivity of the estuarine environment.

Guideline 4.5 Spoil shall not be disposed of in such a manner as to create a hindrance to navigation or fishing, or hinder timber growth.

Response: This project would not hinder fishing or timber growth. It would facilitate navigation by accommodating the volume of dredged material needed to maintain the ship channel to project-authorized dimensions.

Guideline 4.6 Spoil disposal areas shall be designed and constructed and maintained using the best practical techniques to retain the spoil at the site, reduce turbidity, and reduce shoreline erosion when appropriate.
Response. Rock or riprap would be used to armor areas along the ship channel that have been shown to be susceptible to erosion from currents and ship passage. On the right descending bank of the channel, armoring would be placed from channel mile 16.5 to 18.7. On the left descending bank of the channel, armoring would be placed along channel miles 15.6 to 20. Armoring would also be placed along the lake side of CDFs 17/19, 22, 23, and the wetland expansion area to the east of CDF D/E. A foreshore dike has already been constructed along the left-descending bank of the channel between miles 11 and 16 to prevent erosion. The Texaco Cut would remain open, and would be armored on its northern and southern banks into Calcasieu Lake to reduce erosion resulting from boat traffic, waves, and wind-driven currents.

Additionally, construction companies contracted to rehabilitate CDFs would be required to follow standard best management practices (BMPs) to minimize the introduction of suspended solids into surrounding waters. These BMPs include such practices as siltation fences, hay bales, etc., to reduce erosion at construction sites. Dredging contractors would similarly be required to adhere to BMPs for dredging and dredged material disposal. Requirements to comply with BMPs would be included in and made part of construction and dredging contracts.

Guideline 4.7 The alienation of state-owned property shall not result from spoil deposition activities without the consent of the Department of Natural Resources.
Response. This project has been coordinated with and is in full compliance with the LDNR.

GUIDELINES FOR SHORELINE MODIFICATION

The guidelines have been read in their entirety and the proposed action does not include shoreline modifications; therefore, these guidelines are not applicable to the project.

GUIDELINES FOR SURFACE ALTERATIONS

The guidelines have been read in their entirety and noted. The proposed action would not have adverse alterations to surfaces, with specific responses as follows:

Guideline 6.4. To the maximum extent practicable wetland areas shall not be drained or filled. Any approved drain or fill project shall be designed and constructed using best practical techniques to minimize present and future property damage and adverse environmental impacts.
Response. The TSP would convert approximately 68 acres of wetlands to upland sites. However, the loss of marsh would be more than compensated by the restoration of approximately 6,306 acres of degraded coastal wetlands and estuarine habitat.

Guideline 6.8. Surface alterations shall, to the maximum extent practicable, be located away from critical wildlife areas and vegetation areas. Alterations in wildlife preserves and management areas shall be conducted in strict accord with the requirements of the wildlife management body.
Response. If CDFs are expanded in close vicinity to the Sabine National Wildlife Refuge or Cameron Prairie National Wildlife Refuge, any possible impacts on the refuge will be handled in strict coordination with the USFWS and refuge personnel.

GUIDELINES FOR HYDROLOGIC AND SEDIMENT TRANSPORT MODIFICATIONS

The guidelines have been read in their entirety and noted. The proposed action would comply with all guidelines for hydrologic and sediment transport modifications with specific responses as follows:

Guideline 7.3. Undesirable deposition of sediments in sensitive habitat or navigation areas shall be avoided through the use of the best preventive techniques.
Response. Rock or riprap would be used to armor areas along the ship channel that have been shown to be susceptible to erosion from currents and ship passage. On the right descending bank of the channel, armoring would be placed from channel mile 16.5 to 18.7 (Figure 2-4). On the left descending bank of the channel, armoring would be placed along channel miles 15.6 to 20. Armoring would also be placed along the lake side of CDFs 17/19, 22, 23, and the wetland expansion area to the east of CDF D/E. A foreshore dike has already been constructed along the left-descending bank of the channel between miles 11 and 16 to prevent erosion. The Texaco Cut would remain open and would be armored on its northern and southern banks into Calcasieu Lake to reduce erosion resulting from boat traffic, waves, and wind-driven currents.

Construction companies contracted to rehabilitate and expand CDFs would be required to follow standard best management practices (BMPs) to minimize the introduction of suspended solids into surrounding waters. These BMPs include such practices as siltation fences, hay bales, etc., to reduce erosion at construction sites. Dredging contractors would similarly be required to adhere to BMPs for dredging and dredged material disposal. Requirements to comply with BMPs would be included in and made part of construction and dredging contracts.

Guideline 7.7. Weirs and similar water control structures shall be designed and built using the best practical techniques to prevent "cut arounds," permit tidal exchange in tidal areas, and minimize obstruction of the migration of aquatic organisms.
Response. The only water control structures that will be used in the project would be those needed to confine dredged material for more efficient settling of solids prior to the discharge of decant water. Rehabilitation of CDFs would avoid or minimize concentrations of suspended solids and turbidity in the vicinity of the discharge, thereby benefiting water quality and the aquatic ecosystem.

GUIDELINES FOR DISPOSAL OF WASTES

The guidelines have been read in their entirety and the proposed action does not involve the disposal of waste; therefore, these guidelines are not applicable to the project.

GUIDELINES FOR USES THAT RESULT IN THE ALTERATION OF WATERS DRAINING INTO COASTAL WATERS

The guidelines have been read in their entirety and are not applicable to the project.

GUIDELINES FOR OIL, GAS, AND OTHER MINERAL ACTIVITIES

The guidelines have been read in their entirety and the proposed action would not involve oil, gas, and other mineral activities; therefore, these guidelines are not applicable.