MAIN REPORT

APPENDIX A

Mississippi River-Southwest Pass
Hopper Dredged Pump-Out Review

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Hopper Dredge Pump-Out Review

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INTRODUCTION

In response to the U.S. Army Corps of Engineers, New Orleans District's (MVN) November 14, 2006, consistency determination for proposed Fiscal Year (FY) 2007 maintenance dredging of the Southwest Pass (SWP) segment of the Mississippi River, Baton Rouge to the Gulf of Mexico, Louisiana, project, the Louisiana Department of Natural Resources (LDNR) requested that the MVN provide information regarding the feasibility of performing pump-out disposal operations for hopper dredges working in this channel segment as a means to increase the beneficial use of dredged material removed from this channel (Figure 1). The MVN responded by undertaking an investigation of the feasibility and cost-effectiveness of performing hopper dredge pump-out disposal operations in SWP. The results of this investigation will help determine the possibility of performing hopper dredge pump-out operations as a viable method of maintenance dredging and disposal in this channel.

Since FY 2002, only hopper dredges have been used for maintenance dredging work in SWP. Hopper dredges in SWP either work in the dredge-and-haul dredging mode, or in the agitation dredging mode. Hopper dredges working between Mile 4.0 Above Head of Passes (AHP) and Mile 11.0 Below Head of Passes (BHP) dredge-and-haul to an open water, Section 404 disposal site, at the head of Pass a Loutre and South Pass. This disposal site is known as the Head of Passes hopper dredge disposal area (HDDA). Hopper dredges working between Mile 11.0 BHP and Mile 18.8 BHP dredge-and-haul to the designated ocean dredged material disposal site (ODMDS). Hopper dredges working in the jetty channel and the bar channel (mile 18.8 BHP to Mile 22.0 BHP) do agitation dredging and/or dredge-and-haul to the designated ODMDS. Agitation dredging involves filling a hopper dredge to capacity and allowing it to overflow. Fine sediments released into surface waters are carried out of the mouth of river to the Gulf of Mexico. Coarser/heavier sediments collect in the hopper and are ultimately hauled to the ODMDS. Based on data from the past 10 years, approximately 13,000,000 cubic yards of shoal material are removed annually from the SWP channel during maintenance dredging operations.

In order to develop hopper pump out cost, two general assumptions were made that had a great influence on the overall results of the study:

1. Total costs developed in this investigation assume that the dredge-and-haul method of hopper dredge operations in SWP would be replaced by hopper dredge pump-out operations. This was done in order to effectively compare the two methods. In actuality the hopper pump-out method

would be done in combination with the dredge-and-haul method, therefore costs will vary based on usage. These costs will have to be determined based on the project requirements.

2. South Pass maintenance dredging and disposal activities are assumed to be a direct result of placing shoal material at the hopper dredged disposal area located at Head of Passes (HDDA). This is not a proven fact, and is only included in the development of the total SWP maintenance dredging costs at LDNR's request. It is likely that placement of shoal material at the HDDA would contribute to in South Pass shoaling to some degree. However, the extent of HDDA's contribution also may be minimal. Without a hydrological modeling effort for the Head of Passes vicinity, there is no reliable way to determine what effects the use of the HDDA may have on South Pass shoaling rates. Addition of South Pass maintenance dredging costs into the development of the annual maintenance dredging cost for the Mississippi River - Southwest Pass may skew results to show a higher overall annual cost to maintain SWP via hopper dredging (with dredge-and-haul and agitation dredging modes) than is actually experienced.

A brief summary of SWP maintenance dredging history is provided in Appendix A. A discussion of the different dredge plant types that might be used in SWP are provided in Appendix B.

COST ANALYSIS

An evaluation was performed on the Current Method of dredging and on hopper dredge pump-out dredging for an average annual year of dredging. The cost evaluation was based on an average annual SWP dredging quantity of approximately 13,000,000 cubic yards of shoal material, which was derived using historical information over the last 10 years. The average annual cubic yard estimate was then broken down into cubic yards per dredging reach mile. The per dredging mile cost per cubic yard was then calculated to provide a comparison between the two methods. All costs are indexed to January 2007 dollars.

It was assumed that a medium sized dredge would perform all of the dredging, and that no agitation dredging would be performed in SWP.

The contract duration was also evaluated for both methods.

Current Method (hopper dredge-and-haul)

The Current Method was defined as all "dredge-and-haul" hopper dredging with open water disposal at the HDDA or at the ODMDS. For this study, it was assumed that all dredging above Mile 11.0 BHP was deposited in the HDDA and all dredging below Mile 11.0 BHP was deposited in the ODMDS (Figure 2). The average annual estimate of 13,000,000 cubic yards of shoal material to be removed by maintenance dredging in SWP was treated as one large contract with six medium sized hopper dredges performing the work (6 Mobilizations & Demobilizations) (Table 1).

The cost of re-handling dredged material placed at the HDDA was included as an annual additional cost to the Current Method. Dredged material placed at the HDDA is "mined" when

necessary from the HDDA by a cutterhead dredge and placed into nearby beneficial use disposal areas. Sediment mining of the HDDA is driven primarily by funding availability coupled with the need to provide hopper dredge access into this disposal area and disposal capacity. Sediment mining from the HDDA was performed in FY 1998, FY 2004, and FY 2007. During the FY 1998 sediment mining event, approximately 1,051,661 cubic yards were removed by a cutterhead dredge at a total cost of $3,058,404. During the FY 2004 sediment mining event, approximately 4,124,598 cubic yards of dredged material were removed by a cutterhead dredge at a total cost of $7,340,805. Although the FY 2007 sediment mining event is complete, exact quantities and cost have not been finalized at the time of this writing (Estimated Quantity/Amount: $8,848,450/3,999,139cy). While the exact frequency of HDDA sediment mining events is not predictable, this study assumes that sediment mining of the HDDA would be performed biennially. The annual cost of HDDA mining was estimated based on the FY 2007 cost and dividing by a cycle time of 2 years for a total of $4,424,225. About 1,999,570 cubic yards of material would be removed from the HDDA during each mining event.

The cost of dredging South Pass also was included, at LDNR's request, as an additional cost to the Current Method. It has not been determined what effects the disposal at the HDDA has on South Pass shoaling. Therefore, an estimated quantity and cost that can be attributed to shoaling in South Pass from the HDDA disposal is unknown. The exact frequency of maintenance dredging events is not predictable since the dredging is highly dependant on funding availability. This study assumes a cycle time of 5 years. During the FY 2006 dredging event, approximately 5,648,313 cubic yards of material were removed by a cutterhead dredge at a total cost of $15,620,000. The annual cost of South Pass dredging was estimated based on the FY 2006 cost and dividing by a cycle time of 5 years for a total of $3,124,000.

Hopper dredge pump-out Method

The hopper dredge pump-out method was defined as all SWP maintenance dredging being performed by hopper dredge pump-out with disposal sites at 7 separate locations along the channel (Figure 3). For this study it was assumed that the closest pump-out discharge location to each dredging work reach would be used for disposal. The average annual quantity of 13,000,000 cubic yards was treated as a single contract that includes the construction of 7 separate hopper dredge pump-out discharge pipelines (Table 2).

An FY 07 cycle-time analysis of the Current Method versus hopper dredge pump-out was performed to address the possibility of additional dredges being necessary to maintain the SWP channel on a daily basis (Appendix C). This analysis indicated that one to three additional hopper dredges would be necessary throughout the entire dredging period in order to accommodate hopper dredge pump-out operations while performing channel maintenance. This need for additional hopper dredges will strain the ability of the limited hopper dredge fleet to keep up with the maintenance dredging needs of other Federal navigation channels throughout the country and would likely increase the cost of dredging by reducing competition. A cost for this extra dredging need was estimated at $4,415,918 based on a 25% increase in 2 hopper contracts bid over the government estimate. This amount was applied to the total hopper pump-out annual cost.

A meeting was held on January 19, 2007, to discuss with the Mississippi River Pilots and navigation interests safe locations for SWP hopper dredge pump-out discharge sites. Results from this meeting were:

- Unsafe locations were head of passes on either side of the channel, the area 1 mile below or above light 10 (at Mile 14.1 BHP); any location below Mile 15 BHP on either side and the bar channel.
- Possible locations were Pilot town anchorage above Head of Passes on the west side; South Pass and Pass A Loutre; and Mile 12 BHP on the west side.

These recommendations were evaluated and the location of the hopper dredge pump-out sites were then chosen based on the following factors: channel conditions, discharge pipeline length, and the potential for maximum beneficial use. Seven (7) locations on the west side of the SWP channel were selected for this study as the hopper dredge pump-out discharge sites (Figure 3). The west side of the SWP channel was chosen for these 7 sites because disposal areas located on this side of the channel are better protected from the high energy Gulf of Mexico wave environment. Three locations were chosen outside of the safe areas designated by the Pilots: at Mile 14.0 BHP, 17.0 BHP and 18.0 BHP. Because cutterhead dredges have historically worked in these channel locations, it was determined that hopper dredge pump-out discharge sites were feasible at these locations.

DISCUSSION

Hopper dredge pump-out versus the Current Method of dredging

The total annual cost for the Current Method of SWP maintenance dredging was estimated at $38,909,525 (Table 1). Included in this annual cost is the re-handling of dredged material by sediment mining of the HDDA (estimated to be about $ 4,424,225) and South Pass dredging (estimated to be about $3,124,000). It should be noted that the average annual O&M budget to maintain the SWP channel is about $24,000,000. The total annual cost for SWP hopper dredge pump-out was estimated at $57,627,618 (Table 2). If all SWP maintenance dredging were performed by the hopper dredge pump-out method, it would add a total annual estimated cost of $ 18,718,093 to the project (Table 3). As stated initially, the cost analysis is based on general assumptions that influence these costs. Cost information should not be extracted from this report for segments of the channel since the scope of work will change and thus the cost will change.

Hopper dredge pump-out operations require that discharge pipeline ownership and additional plant and crew costs be added to the dredging unit price. This additional cost adds an average of $1.00 per cubic yard, which makes the hopper dredge pump-out cost per cubic yard more expensive then the current method of dredge-and-haul. In addition to the increased cost per cubic yard, the Mobilization and Demobilization costs for the hopper dredge pump-out method add to the total cost an additional $315,000 to $439,000 for each discharge site location used.

Although the hopper dredge pump-out method was more expensive than the Current Method throughout all SWP dredging reaches, the Mile 6.0 BHP to Mile 15.0 BHP dredging reach was the least expensive for hopper dredge pump-out operations (Table 3). In this SWP dredging

reach, the dredging cycle costs between the two methods are comparable due to the shorter travel times to the hopper dredge pump-out locations versus traveling to the open water disposal locations (the HDDA and the ODMDS) (Figure 4). Cost differences between the Current Method and hopper dredge Pump-Out operations was less than $1.00 per cubic yard ($0.97 to $0.62). Within this dredging reach, the SWP Mile 10.0 BHP to Mile 13.0 BHP reach provides the least expensive hopper pump-out disposal alternative with cost differences ranging from $0.74 to $0.62 per cubic yard as compared to the Current Method. An annual dredging quantity of approximately 910,000 cubic yards of shoal material is estimated per each mile of dredging in this reach.

CONCLUSION

The results of this investigation show that, for purposes of maintaining the entire SWP channel, the hopper dredge pump-out method is significantly more expensive than the Current Method of dredge-and-haul open water disposal in the HDDA and/or the ODMDS. If all dredging were performed with hopper dredge pump-out disposal operations, the cost of SWP maintenance dredging would increase by about $ 18,718,093 annually. Because the average annual O&M budget to maintain the SWP channel is about $24,000,000, the MVN would not be able to fund hopper dredge pump-out operations for the entire SWP channel without an additional source of funding to cover the incremental cost of performing beneficial use of dredged material through hopper dredge pump-out operations.

The most cost-effective hopper dredge pump-out dredging reach is located between Mile 10.0 BHP and Mile 13.0 BHP. In this three mile dredging reach, the additional cost to remove and dispose of shoal material by hopper dredge pump-out method ranges from $0.74 to $0.62 per cubic yard over the cost to remove shoal material under the Current Method. To remove the estimated annual quantity of about 2,730,000 cubic yards of shoal material from this dredging reach by hopper pump-out method would cost an estimated additional amount of $1,810,900.

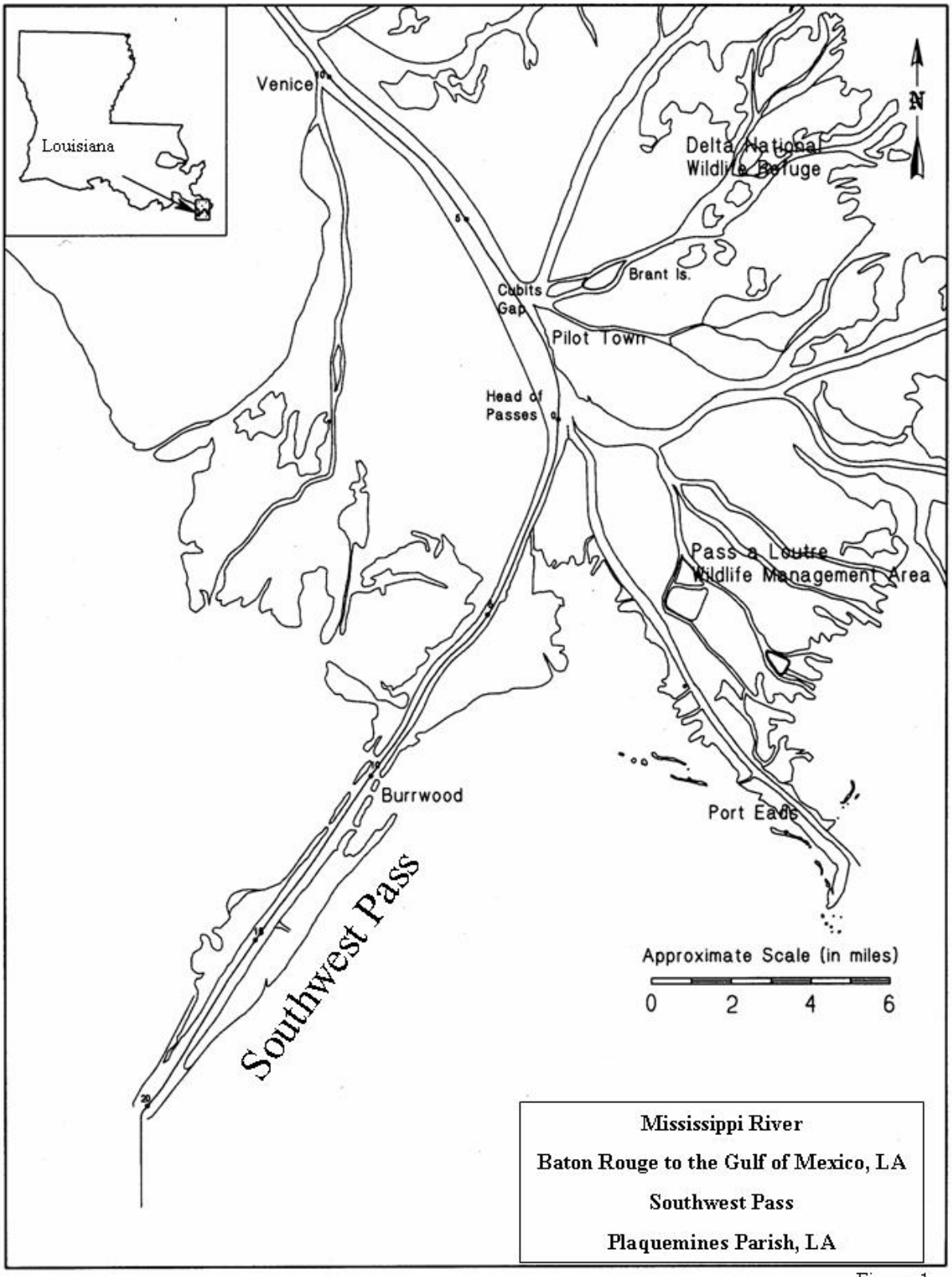
Louisiana
Venice
Delta National Wildlife Refuge
N
Brant Is.
Cubits Gap
Pilot Town
Head of Passes
Pass a Loutre Wildlife Management Area
Burrwood
Port Eads
Southwest Pass
Approximate Scale (in miles)
0 2 4 6
Mississippi River
Baton Rouge to the Gulf of Mexico, LA
Southwest Pass
Plaquemines Parish, LA

Figure 1

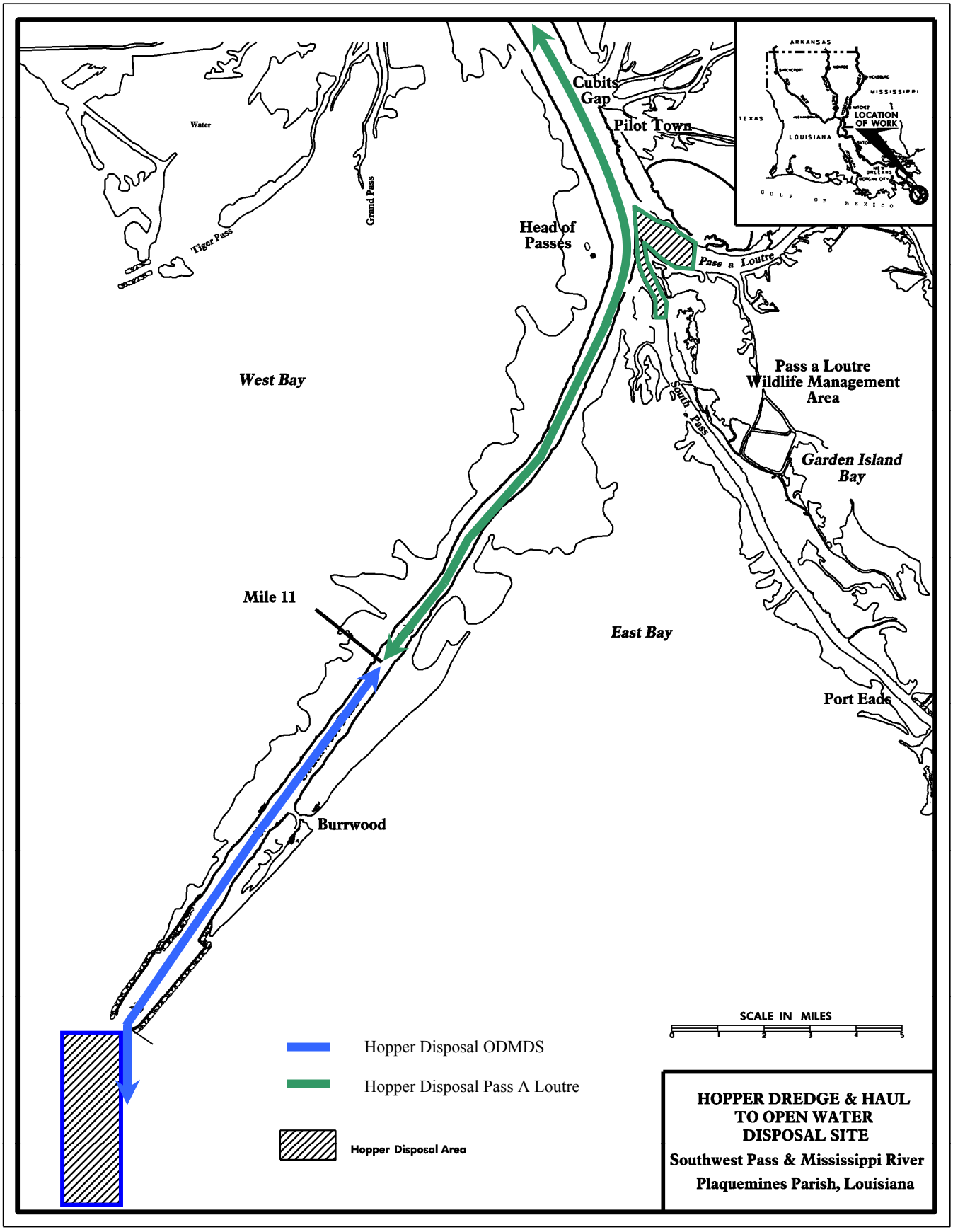

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Figure 2

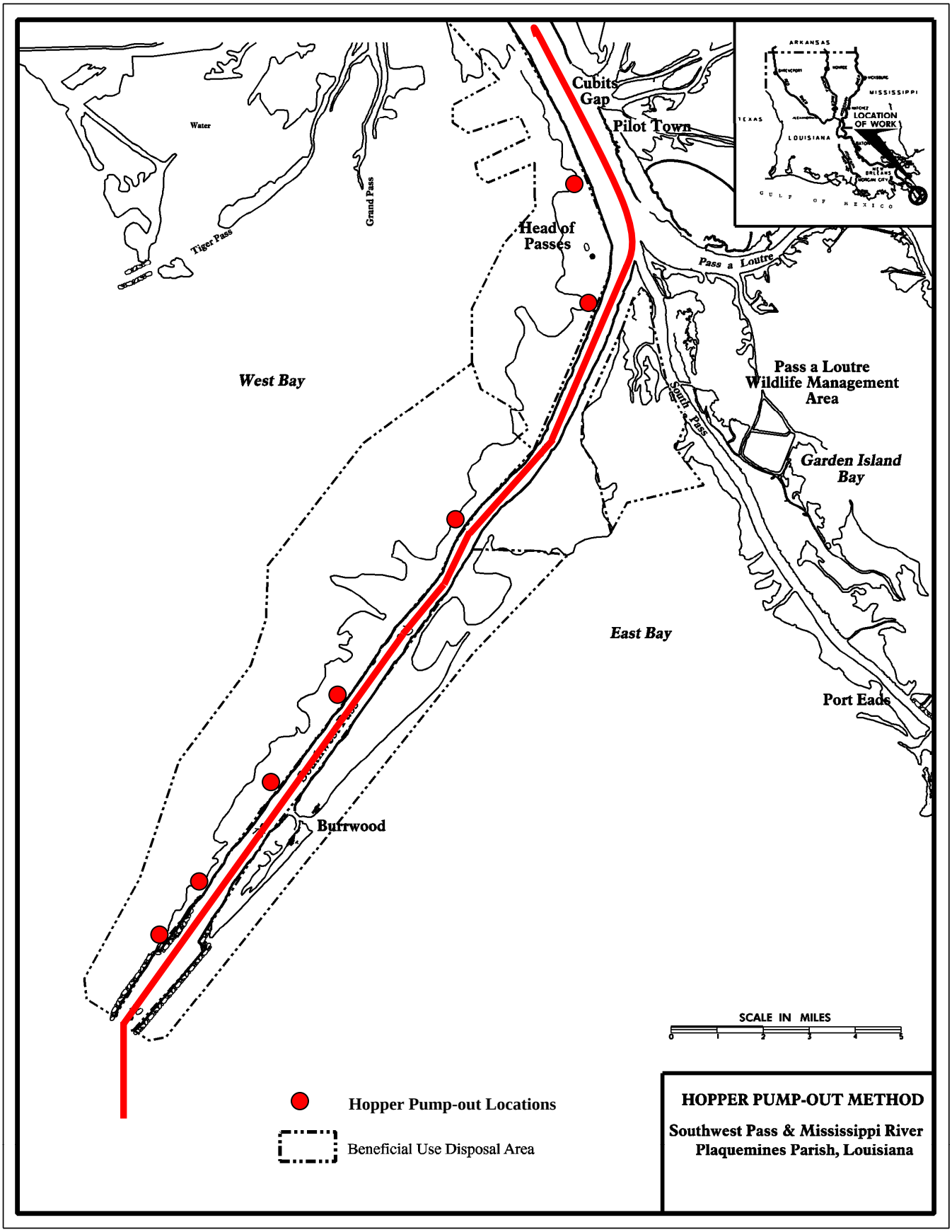

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Figure 3

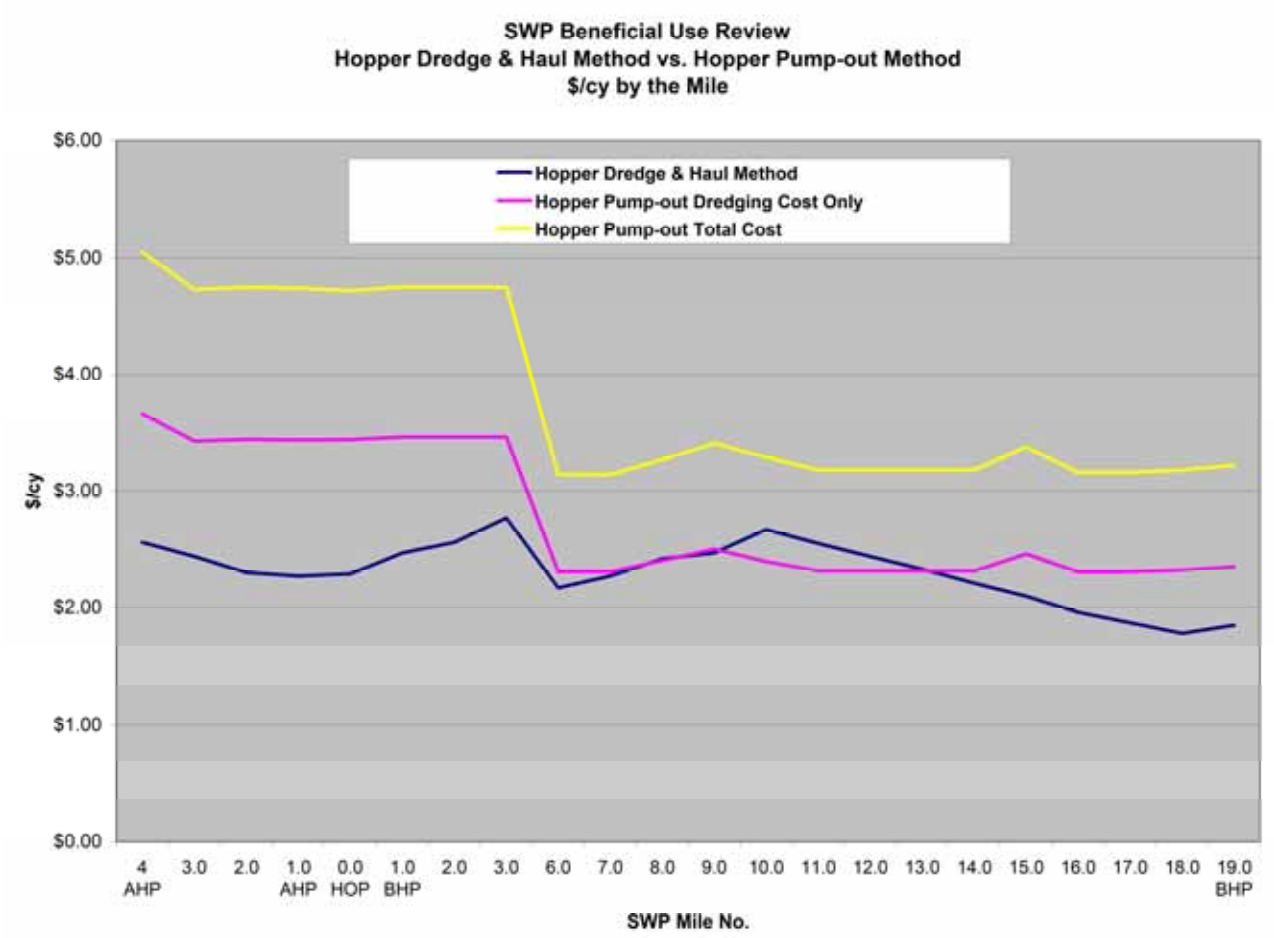


Figure 4. Based on the contract durations calculated for both methods, an additional 2 hopper dredges would be needed to perform all dredging by the hopper pump-out method. This would put a strain on the limited hopper dredge fleet and thus would increase the cost of dredging by reducing competition. A cost for extra dredging need was estimated at $4,415,918 based on a 25% increase in 2 hopper contracts bid over the government estimate. This amount was applied to the total hopper pump-out annual cost.

Table 1

Hopper Dredging and Hauling to Open Water Disposal - Cost Estimate 1

MISSISSIPPI RIVER, SOUTHWEST PASS BENEFICIAL USE REVIEW

HOPPER DREDGE ESTIMATE - AVERAGE ANNUAL DREDGING

Bid Item	DESCRIPTION		Estimated Quantity	Unit	Unit Price	Total Price
0001	Mobilization & Demobilization of hopper dredge and all attendant plant.		6	EA	$220,800	$1,324,800
0002	Dredging – Rental of a trailing-type hopper dredge					
	Dredging Location	Disposal Location				
0002A	Mile 3.0 AHP to 4.0 AHP	PAL	1,040,000	CY	$2.56	$2,662,400
0002B	Mile 2.0 AHP to 3.0 AHP	PAL	390,000	CY	$2.44	$951,600
0002C	Mile 1.0 AHP to 2.0 AHP	PAL	650,000	CY	$2.30	$1,495,000
0002D	Mile 0.0 HOP to 1.0 AHP	PAL	1,300,000	CY	$2.27	$2,951,000
0002E	Mile 0.0 HOP to 1.0 BHP	PAL	520,000	CY	$2.29	$1,190,800
0002F	Mile 1.0 BHP to 2.0 BHP	PAL	130,000	CY	$2.47	$321,100
0002G	Mile 2.0 BHP to 3.0 BHP	PAL	130,000	CY	$2.56	$332,800
0002H	Mile 3.0 BHP to 4.0 BHP	PAL	130,000	CY	$2.77	$360,100
0002I	Mile 6.0 BHP to 7.0 BHP	PAL	260,000	CY	$2.17	$564,200
0002J	Mile 7.0 BHP to 8.0 BHP	PAL	260,000	CY	$2.27	$590,200
0002K	Mile 8.0 BHP to 9.0 BHP	PAL	260,000	CY	$2.42	$629,200
0002L	Mile 9.0 BHP to 10.0 BHP	PAL	520,000	CY	$2.47	$1,284,400
0002M	Mile 10.0 BHP to 11.0 BHP	PAL	910,000	CY	$2.67	$2,429,700
0002N	Mile 11.0 BHP to 12.0 BHP	ODMDS	910,000	CY	$2.55	$2,320,500
0002O	Mile 12.0 BHP to 13.0 BHP	ODMDS	910,000	CY	$2.44	$2,220,400
0002P	Mile 13.0 BHP to 14.0 BHP	ODMDS	910,000	CY	$2.33	$2,120,300
0002Q	Mile 14.0 BHP to 15.0 BHP	ODMDS	910,000	CY	$2.21	$2,011,100
0002R	Mile 15.0 BHP to 16.0 BHP	ODMDS	910,000	CY	$2.10	$1,911,000
0002S	Mile 16.0 BHP to 17.0 BHP	ODMDS	910,000	CY	$1.96	$1,783,600
0002T	Mile 17.0 BHP to 18.0 BHP	ODMDS	520,000	CY	$1.87	$972,400
0002U	Mile 18.0 BHP to 19.0 BHP	ODMDS	390,000	CY	$1.78	$694,200
0002V	Mile 19.0 BHP to 20.0 BHP	ODMDS	130,000	CY	$1.85	$240,500
	Dredging Subtotal:		13,000,000		$2.31	$30,036,500
	Pass A Loutre Sediment Mining - 2 year cycle (Annualized):					$4,424,225
	South Pass Dredging - 5 year cycle (Annualized):					$3,124,000
					TOTAL:	$38,909,525

Notes:

1 Item No. 0001 - Average cost of mob & demob of plant for 6 separate contracts

2 Item Nos. 0002 (A-V) - Average cubic yards per mile based on the 10 year average annual cubic yards of 13,000,000. Minimal dredging is done between miles 4.0 - 5.0 AHP, 4.0 - 6.0 BHP and 20 22 BHP therefore they are not listed as dredging locations.

3 Price includes General and Administrative (G&A), Overhead and Profit

4 Disposal Locations - PAL - Pass A Loutre Open Water Disposal Area
ODMDS - Ocean Dredged Material Disposal Site

Table 2

All Hopper Pump-out dredging with Pump-out for beneficial use - Cost Estimate 2

MISSISSIPPI RIVER, SOUTHWEST PASS BENEFICIAL USE REVIEW

HOPPER DREDGE PUMPOUT ESTIMATE - AVERAGE ANNUAL DREDGING

Bid Item	DESCRIPTION		Estimated Quantity	Unit	Unit Price	Total Price
0001	Mobilization & Demobilization of hopper dredge and all attendant plant.		8	EA	$220,800	$1,766,400
0002	Hopper Pump Out Mobilization & Demobilization					
	Disposal Location					
0002A	1.5 AHP - West		1	LS	$359,500	$359,500
0002B	1.7 BHP - West		1	LS	$372,000	$372,000
0002C	7.0 BHP - West		1	LS	$315,200	$315,200
0002D	12.0 BHP - West		1	LS	$439,200	$439,200
0002E	14.0 BHP - West		1	LS	$439,200	$439,200
0002F	17.0 BHP - West		1	LS	$394,200	$394,200
0002G	18.0 BHP - West		1	LS	$394,200	$394,200
0003	Dredging – Rental of a trailing-type hopper dredge Dredging Location	Disposal Location				
0003A	Mile 3.0 AHP to 4.0 AHP	1.5 AHP	1,040,000	CY	$5.05	$5,252,000
0003B	Mile 2.0 AHP to 3.0 AHP	1.5 AHP	390,000	CY	$4.73	$1,844,700
0003C	Mile 1.0 AHP to 2.0 AHP	1.5 AHP	650,000	CY	$4.75	$3,087,500
0003D	Mile 0.0 HOP to 1.0 AHP	1.5 AHP	1,300,000	CY	$4.74	$6,162,000
0003E	Mile 0.0 HOP to 1.0 BHP	1.7 BHP	520,000	CY	$4.72	$2,454,400
0003F	Mile 1.0 BHP to 2.0 BHP	1.7 BHP	130,000	CY	$4.75	$617,500
0003G	Mile 2.0 BHP to 3.0 BHP	1.7 BHP	130,000	CY	$4.75	$617,500
0003H	Mile 3.0 BHP to 4.0 BHP	1.7 BHP	130,000	CY	$4.75	$617,500
0003I	Mile 6.0 BHP to 7.0 BHP	7.0 BHP	260,000	CY	$3.14	$816,400
0003J	Mile 7.0 BHP to 8.0 BHP	7.0 BHP	260,000	CY	$3.14	$816,400
0003K	Mile 8.0 BHP to 9.0 BHP	7.0 BHP	260,000	CY	$3.27	$850,200
0003L	Mile 9.0 BHP to 10.0 BHP	7.0 BHP	520,000	CY	$3.41	$1,773,200
0003M	Mile 10.0 BHP to 11.0 BHP	12.0 BHP	910,000	CY	$3.29	$2,993,900
0003N	Mile 11.0 BHP to 12.0 BHP	12.0 BHP	910,000	CY	$3.18	$2,893,800
0003O	Mile 12.0 BHP to 13.0 BHP	12.0 BHP	910,000	CY	$3.18	$2,893,800
0003P	Mile 13.0 BHP to 14.0 BHP	14.0 BHP	910,000	CY	$3.18	$2,893,800
0003Q	Mile 14.0 BHP to 15.0 BHP	14.0 BHP	910,000	CY	$3.18	$2,893,800
0003R	Mile 15.0 BHP to 16.0 BHP	14.0 BHP	910,000	CY	$3.38	$3,075,800
0003S	Mile 16.0 BHP to 17.0 BHP	17.0 BHP	910,000	CY	$3.16	$2,875,600
0003T	Mile 17.0 BHP to 18.0 BHP	17.0 BHP	520,000	CY	$3.16	$1,643,200
0003U	Mile 18.0 BHP to 19.0 BHP	18.0 BHP	390,000	CY	$3.18	$1,240,200
0003V	Mile 19.0 BHP to 20.0 BHP	18.0 BHP	130,000	CY	$3.22	$418,600
	Dredging Subtotal:					$48,731,800
	Cost of 2 additional Dredges required due to Hopper Pump-out contract duration:					$4,415,918
					TOTAL:	$57,627,618

Notes:

1 Item No. 0001 - Cost of Hopper Mobilization and Demobilization

2 Item No. 0002 (A-G) - Cost of mobilization/demobilization for shore pipeline, additional plant and crew at the specified location.

3 Item Nos. 0003 (A-V) - Average cubic yards per mile based on the 10 year average annual cubic yards of 13,000,000. Minimal dredging is done between miles 4.0 - 5.0 AHP, 4.0 - 6.0 BHP and 20 - 22 BHP therefore they are not listed as dredging locations.

4 Price includes General and Administrative (G&A), Overhead and Profit

Table 3

COST COMPARISON

MISSISSIPPI RIVER, SOUTHWEST PASS BENEFICIAL USE REVIEW

HOPPER DREDGING AND HAULING TO OPEN WATER DISPOSAL SITE VS HOPPER DREDGE PUMPOUT FOR BENEFICIAL USE ESTIMATE
AVERAGE ANNUAL DREDGING

Bid Item	DESCRIPTION		Estimated Quantity	Unit	Hopper Dredge & Haul (D&H) Unit Price	Hopper Pumpout (PO) Unit Price	D&H vs PO Unit +/(-)	Hopper Dredge & Haul Total Price	Hopper Pumpout Total Price	D&H vs PO Total +/(-)
0001	Mobilization & Demobilization of hopper dredge and all attendant plant.		6 (D&H)/ 8 (PO)	EA	$220,800	$220,800	$0	$1,324,800	$1,766,400	$441,600
0002	Hopper Pump Out Mobilization & Demobilization Disposal Location									
0002A	1.5 AHP - West		1	LS	NA	**$359,500**	$359,500	NA	$359,500	$359,500
0002B	1.7 BHP - West		1	LS	NA	**$372,000**	$372,000	NA	$372,000	$372,000
0002C	7.0 BHP - West		1	LS	NA	**$315,200**	$315,200	NA	$315,200	$315,200
0002D	12.0 BHP - West		1	LS	NA	**$439,200**	$439,200	NA	$439,200	$439,200
0002E	14.0 BHP - West		1	LS	NA	**$439,200**	$439,200	NA	$439,200	$439,200
0002F	17.0 BHP - West		1	LS	NA	**$394,200**	$394,200	NA	$394,200	$394,200
0002G	18.0 BHP - West		1	LS	NA	**$394,200**	$394,200	NA	$394,200	$394,200
0003	Dredging – Rental of a trailing-type hopper dredge Dredging Location	D&H/PO Disposal Location								
0003A	Mile 3.0 AHP to 4.0 AHP	PAL/1.5 AHP	1,040,000	CY	$2.56	$5.05	$2.49	$2,662,400	$5,252,000	$2,589,600
0003B	Mile 2.0 AHP to 3.0 AHP	PAL/1.5 AHP	390,000	CY	$2.44	$4.73	$2.29	$951,600	$1,844,700	$893,100
0003C	Mile 1.0 AHP to 2.0 AHP	PAL/1.5 AHP	650,000	CY	$2.30	$4.75	$2.45	$1,495,000	$3,087,500	$1,592,500
0003D	Mile 0.0 HOP to 1.0 AHP	PAL/1.5 AHP	1,300,000	CY	$2.27	$4.74	$2.47	$2,951,000	$6,162,000	$3,211,000
0003E	Mile 0.0 HOP to 1.0 BHP	PAL/1.7 BHP	520,000	CY	$2.29	$4.72	$2.43	$1,190,800	$2,454,400	$1,263,600
0003F	Mile 1.0 BHP to 2.0 BHP	PAL/1.7 BHP	130,000	CY	$2.47	$4.75	$2.28	$321,100	$617,500	$296,400
0003G	Mile 2.0 BHP to 3.0 BHP	PAL/1.7 BHP	130,000	CY	$2.56	$4.75	$2.19	$332,800	$617,500	$284,700
0003H	Mile 3.0 BHP to 4.0 BHP	PAL/1.7 BHP	130,000	CY	$2.77	$4.75	$1.98	$360,100	$617,500	$257,400
0003I	Mile 6.0 BHP to 7.0 BHP	PAL/7.0 BHP	260,000	CY	$2.17	$3.14	$0.97	$564,200	$816,400	$252,200
0003J	Mile 7.0 BHP to 8.0 BHP	PAL/7.0 BHP	260,000	CY	$2.27	$3.14	$0.87	$590,200	$816,400	$226,200
0003K	Mile 8.0 BHP to 9.0 BHP	PAL/7.0 BHP	260,000	CY	$2.42	$3.27	$0.85	$629,200	$850,200	$221,000
0003L	Mile 9.0 BHP to 10.0 BHP	PAL/7.0 BHP	520,000	CY	$2.47	$3.41	$0.94	$1,284,400	$1,773,200	$488,800
0003M	Mile 10.0 BHP to 11.0 BHP	PAL/12.0 BHP	910,000	CY	$2.67	$3.29	$0.62	$2,429,700	$2,993,900	$564,200
0003N	Mile 11.0 BHP to 12.0 BHP	OD/12.0 BHP	910,000	CY	$2.55	$3.18	$0.63	$2,320,500	$2,893,800	$573,300
0003O	Mile 12.0 BHP to 13.0 BHP	OD/12.0 BHP	910,000	CY	$2.44	$3.18	$0.74	$2,220,400	$2,893,800	$673,400
0003P	Mile 13.0 BHP to 14.0 BHP	OD/14.0 BHP	910,000	CY	$2.33	$3.18	$0.85	$2,120,300	$2,893,800	$773,500
0003Q	Mile 14.0 BHP to 15.0 BHP	OD/14.0 BHP	910,000	CY	$2.21	$3.18	$0.97	$2,011,100	$2,893,800	$882,700
0003R	Mile 15.0 BHP to 16.0 BHP	OD/14.0 BHP	910,000	CY	$2.10	$3.38	$1.28	$1,911,000	$3,075,800	$1,164,800
0003S	Mile 16.0 BHP to 17.0 BHP	OD/17.0 BHP	910,000	CY	$1.96	$3.16	$1.20	$1,783,600	$2,875,600	$1,092,000
0003T	Mile 17.0 BHP to 18.0 BHP	OD/17.0 BHP	520,000	CY	$1.87	$3.16	$1.29	$972,400	$1,643,200	$670,800

Table 3 continued

COST COMPARISON

MISSISSIPPI RIVER, SOUTHWEST PASS BENEFICIAL USE REVIEW

HOPPER DREDGING AND HAULING TO OPEN WATER DISPOSAL SITE VS HOPPER DREDGE PUMPOUT FOR BENEFICIAL USE ESTIMATE
AVERAGE ANNUAL DREDGING

Bid Item	DESCRIPTION		Estimated Quantity	Unit	Hopper Dredge & Haul (D&H) Unit Price	Hopper Pumpout (PO) Unit Price	D&H vs PO Unit +/(-)	Hopper Dredge & Haul Total Price	Hopper Pumpout Total Price	D&H vs PO Total +/(-)
0003U	Mile 18.0 BHP to 19.0 BHP	OD/18.0 BHP	390,000	CY	$1.78	$3.18	$1.40	$694,200	$1,240,200	$546,000
0003V	Mile 19.0 BHP to 20.0 BHP	OD/18.0 BHP	130,000	CY	$1.85	$3.22	$1.37	$240,500	$418,600	$178,100
	Dredging Subtotal:							$30,036,500	$48,731,800	
	Subtotal:		13,000,000	AVG:	$2.41	$4.09		$31,361,300	$53,211,700	$21,850,400
	Pass A Loutre Sediment Mining - 2 year cycle (Annualized):							$4,424,225		
	South Pass Dredging - 5 year cycle (Annualized):							$3,124,000		
	Cost of additional Dredges required due to Hopper Pump-out contract duration:								$4,415,918	
				TOTAL:				$38,909,525	$57,627,618	$18,718,093

Notes:

1 Item No. 0001 - Average cost of mob & demob of plant.

2 Item No. 0002 (A-G) - Cost of shore pipeline construction, additional plant and crew at the specified location.

3 Item Nos. 0003 (A-V) - Average cubic yards per mile based on the 10 year average annual cubic yards of 13,000,000. Minimal dredging is done between miles 4.0 - 5.0 AH 4.0 - 6.0 BHP and 20 - 22 BHP therefore they are not listed as dredging locations.

4 Price includes General and Administrative (G&A), Overhead and Profit

5 Disposal Locations - PAL - Pass A Loutre Open Water Disposal Area
OD - Ocean Dredged Material Disposal Site

6 Unit - CY (cubic yard) converted to insitu volume by the following formula [(Average Bin Density - Raw Water Density)/(Sediment Bulk Density - Raw Water Density)] x Hopper Volume

7 Assumptions :Treated as one large job
- 6 Mob/Demob for Current Method (Dredge & Haul) Hopper Dredges
- 8 Mob/Demob for Hopper Pump-out Dredges
- Constructing Hopper pumpout lines once

APPENDIX A

Southwest Pass Maintenance Dredging History

Southwest Pass Channel History

Since the 1980's several events have occurred that changed the way Southwest Pass (SWP) is maintained (Figure 1). Historically cutterhead dredges were used in conjunction with hopper dredges to maintain SWP. In recent years, the trend has shifted to using hopper dredges exclusively. This change can be attributed to several factors; bankline restoration, deepening of the channel, safety concerns and the Corp's commitment to navigation customers. Outlined below is a historic timeline of the channel conditions and how these factors have necessitated a change in the way SWP is maintained.

1980's

- **Authorized Channel**
  - **1980-1987** - 40 feet MLG by 800 feet wide; transitioning at Mile 17.5 BHP to 600 feet wide through the Jetty and Bar Channel. Authorized by the Rivers and Harbors Act of 2 March 1945 (Public Law 14, 79th Congress, 1st Session)

  - **1987-1989** - 45 feet MLG by 750 feet wide; transitioning at Mile 17.5 BHP to 600 feet wide through the Jetty and Bar Channel. Authorized by Title IV of the Second Supplemental Appropriations Act of 1985 (PL 99-98) and the Water Resources Development Act of 1986 (Public Law 99-662), construction of the 45-foot channel from the Gulf to New Orleans began in July 1987 and was completed in December 1987. Dredging 0f the 45-foot channel to mile 181 near Donaldsonville was completed in 1988.

- **Mission** –
  - **1980-1987** - The mission was to keep the channel open to the extent possible with the funds allocated. Shoaling occurred most often from mile 3.5 AHP to 1.0 BHP and from mile 15.0 BHP to 22.0 BHP requiring multiple dredging assignments within the same area. The Associated Branch Pilots issued a reduction in controlling drafts during portions of the years 1980, 1983, 1984, and 1985 advising the navigation community of less than project depth in Southwest Pass. The recommended draft restrictions were detrimental to the navigation community, compromising the entire process of delivering goods to the nation**.**

  - **1987-1989 –** With the newly deepened channel of 45 feet, the ship "Marshall Konyev ran aground on 20 March 1989 and ultimately was freed on 15 April 1989. The grounding caused an extremely dangerous situation with river currents grounding the ships Mare Ligure (30 March – 31 March), Exxon Willmington (7 April), Idlcos Leader (8April), and the Nilam (14 April) as they attempted to navigate around the Marshal Konyev. The Associated Branch Pilots issued a reduction in controlling drafts from 20 March – 1 June warning navigation of less than project depth. This incident exemplified the vulnerability of the channel and what could happen if it were at less than project dimensions. Furthermore, the navigation community expressed concern that the inability to guarantee the depth and width of SWP created "seeds of doubt" which over time could create a

climate where the users would decide that the risk is too high to send ships to a channel that may be too shallow to navigate when they arrive from departure ports worldwide. The importance and significance of navigation on the Mississippi River and the economic engine it provides to Louisiana as well as the rest of the nation was brought to the forefront of the highest level of decision makers within the Corps of Engineers. Because safe, dependable navigation on the Mississippi was so vital to the Nation, HQUSACE supported the New Orleans District in committing to maintain full authorized channel depth and width at all times 24-hours a day 365 days a year to avoid any channel restrictions and any ship groundings, thereby creating a safe, reliable channel.

- **Type of equipment used –**
  From 1980-1989, a mix of Government and private industry hopper dredges and cutterhead dredges were used to maintain SWP. Figure 1 "Southwest Pass Events" shows near 50-50 split between dredged quantities of each. Prior to the construction of the 45 foot channel, the cutterheads were placed at areas where high shoaling took place. Typically, shoaling occurred to a degree where the top of the shoal was above the authorized depth, creating unsafe navigation for ships laden down to the authorized depth.

- **Average Annual Quantity 1980-1989 –** 18,370,992 cubic yards

- **Changes to Channel –**
  - The Mississippi River, Baton Rouge to the Gulf, Louisiana project provided for bank stabilization and shore restoration projects which were completed in the late 1980's. The effect of this effort was to restore the banks of the Mississippi River below Venice, Louisiana, and SWP in order to confine the flow to within the river banks, which ultimately increased flow velocities yielding a net result of less shoaling and less required maintenance dredging.
  - 1987 - Channel deepened to -45 feet MLG x 750 feet.

1990's

- **Authorized Channel** - 45 feet MLG by 750 feet wide; transitioning at Mile 17.5 BHP to 600 feet wide through the Jetty and Bar Channel. Authorized by Title IV of the Second Supplemental Appropriations Act of 1985 (PL 99-98) and the Water Resources Development Act of 1986 (Public Law 99-662

- **Mission** - New Orleans District's mission was to maintain a safe, reliable channel with dimensions of 45 foot MLG x 750, 24 hours a day, 365 days per year**.**

- **Type of equipment used - Cutterhead, Hopper & Conventional Dustpan**

  Conventional Dustpan – For 1996 and 1999, the dustpan dredge Jadwin was used and in 1997 the Wallace McGeorge was used for a very short period removing shoal

material. They were effective in dredging shoal material and placing it 1,000 feet overboard.

- **Average Annual Quantity 1990 -1999 -** 22,230,828 cubic yards

- **Changes to Channel**

1997 - % flow through Pass a Loutre shows a marked drop from previous % flow rates of near 20% in the 80's to approximately 11% and continues for remainder of the 90's.

2000's

- **Authorized Channel – Same as 1990's**

- **Mission –** Our mission remained the same as stated in the 1990s. While shoaling will not be eliminated, it's somewhat less than previous years and more dispersed due to generally average hydrographs in the 2000s.

The Fiscal Year 2007 dredge location table (Figure 2) shows how quickly dredges are required and assignments change due to the active shoaling in the channel. In early February 2007, the river crested at 12.6 feet on the Carrollton gage. As the river began to fall at almost 1 foot per day, channel conditions began to decline rapidly and shoaling was occurring in multiple locations. Three contract hopper dredges and one government hopper dredge were necessary, with assignment location changes daily, in order to maintain the channel. During this time period, 97 assignments were given; 10 in January, 50 in February, and 25 in March (as of March 27, 2007). Channel shoaling and the need for dredging has been continuous. As contracts are completed, additional hopper dredge contracts or government dredges are needed to constantly maintain project dimensions.

- **Type of equipment used to maintain SWP:**

During the 2000's, the Mississippi River has experience lower sustained flows than in previous decades resulting in less shoaling. The Mississippi River Carrollton gage is a good indicator of shoaling and is used to determine the need for dredging in SWP. With a prediction of 9 feet and rising, the first hopper dredge is called out if not already working. As the river continues to rise, subsequently falls and shoaling continues, affecting safe navigation, additional hopper dredges are added. The following is a description of each type of equipment and its current use in SWP.

Hopper - Maintenance of the channel is performed with the use of hopper dredges. Hopper dredged material is placed in open-water disposal sites at the Head of Passes hopper dredge disposal area (HDDA) and in the Ocean Dredged Material Disposal Site (ODMDS). Hopper dredges provide the mobility and response time that is required during high shoaling periods. Shoals develop along the edges of the channel in strips that range from 50 to 200 feet wide and several miles long. As the shoals develop, hopper dredges are moved quickly between several different assignment locations along the channel in order to maintain full project dimensions.

The material at placed at the HDDA is subsequently mined through a separate cutterhead contract and is used beneficially to create and/or restore wetlands.

Cutterhead - Cutterhead dredges could be used to maintain SWP; however, they are not used because the commitment to navigation to provide full channel dimensions 24 hours a day, 365 days a year precludes permitting the channel to shoal to depths that would make use of cutterhead dredges productive and cost effective. Furthermore, cutterhead dredges, because of their spudding systems, swing anchors, cables, and discharge pipelines, are considered safety hazards in some areas due to their inability to move quickly out of the channel. Cutterhead dredges are restricted from use in the Head of Passes area (Mile 3.5 AHP to 1.0 BHP) and in the jetties and bar channel (below Mile 19.5 BHP).

Non-conventional Dustpan - Dustpan dredges have not routinely been used in SWP due to safety concerns, their limited design and their limited availability. In June 2002, a dustpan dredge demonstration project was performed by the U.S. Army Engineer Research and Development Center, New Orleans District and the Louisiana Department of Natural Resources. This project demonstrated safe navigation and dredging operations of a dustpan dredge in the head of passes area. Based on the results of this demonstration project, the dustpan dredges were added to the SWP Cutterhead Maintenance Plans & Specifications. However, at this time the Beach Builder is the only Dustpan dredge capable of discharging from the channel into open bays for marsh creation without the assistance of a booster pump-out station and significant modifications to the dredge.

Conventional Dustpan Dredge - The Wallace McGeorge has a 38 inch discharge diameter and would require an evaluation to determine if it is engineering feasible to design and build a discharge line/booster operation to carry the flow of a 38 inch discharge for thousands of feet.

- **Average Annual Qty (2000-2006) -** 12,856,027 cubic yards

- **2006 Hopper Dredge Pump-Out**

In 2006, a hopper dredge pump-out maintenance dredging operation was performed at the Pilottown Anchorage Area in the vicinity of SWP Miles 3.0 to 4.0 AHP. This hopper dredge pump-out job showed that such a disposal operation could be successfully conducted in this SWP segment. However, it also revealed that each pump-out event required approximately 2 hours to complete the approach, hook-up, and pump-out actions.

With an average of 6 loads per day, the dredge would not be dredging for approximately 12 hours a day. During periods of high river stages and associated dynamic shoaling, it is not feasible to reduce dredge production by 50% and maintain authorized channel dimensions. Increasing the dredging capacity by acquiring more hopper dredges to compensate for the loss of productive dredging time would require additional funding

beyond the federal standard for hopper dredge placement of dredged material into existing open water disposal areas or for agitation dredging. Acquisition of additional dredges is also conditioned by dredge availability and dredge size.

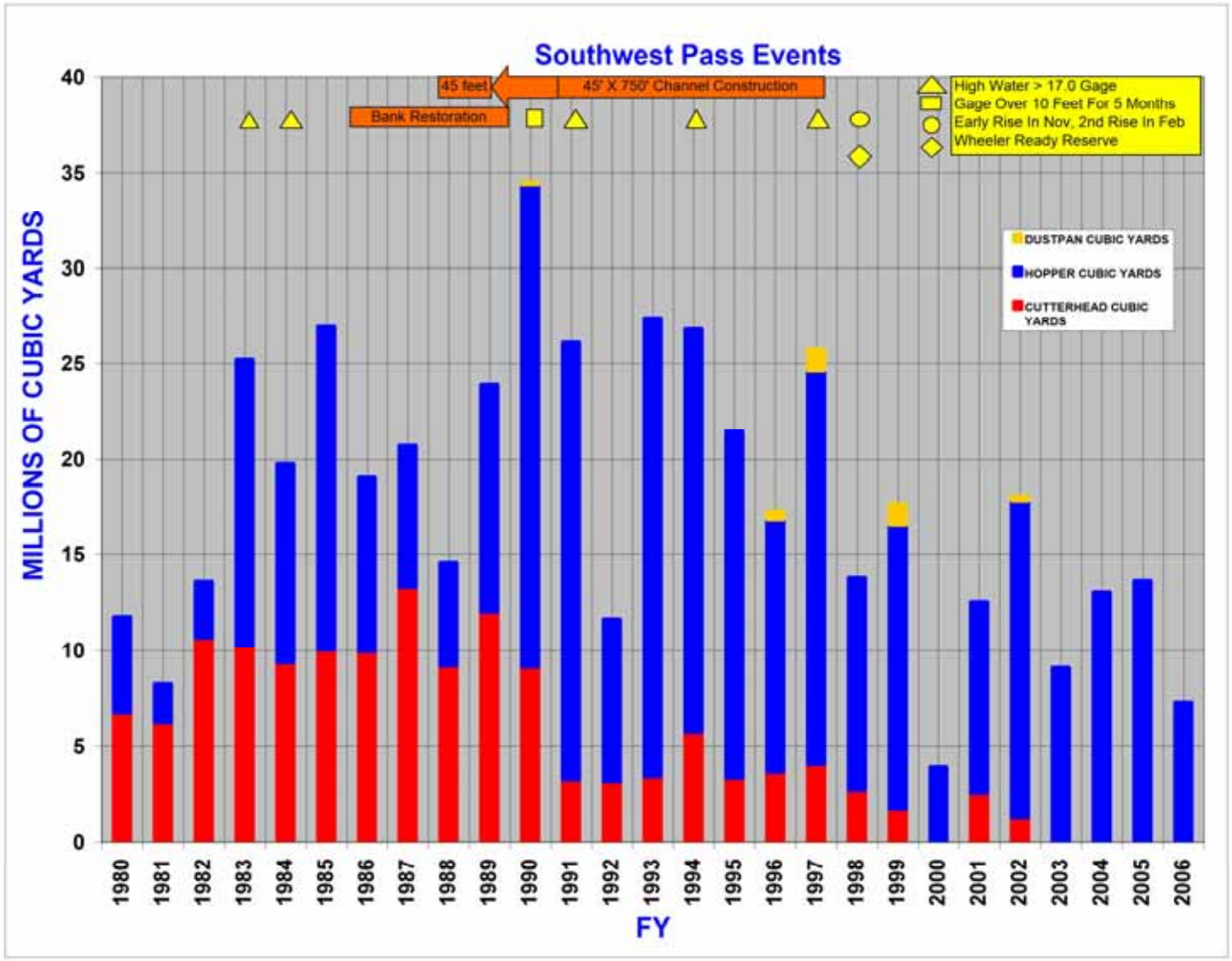


Figure 1. Southwest Pass Dredging and Significant Events 1980-2006

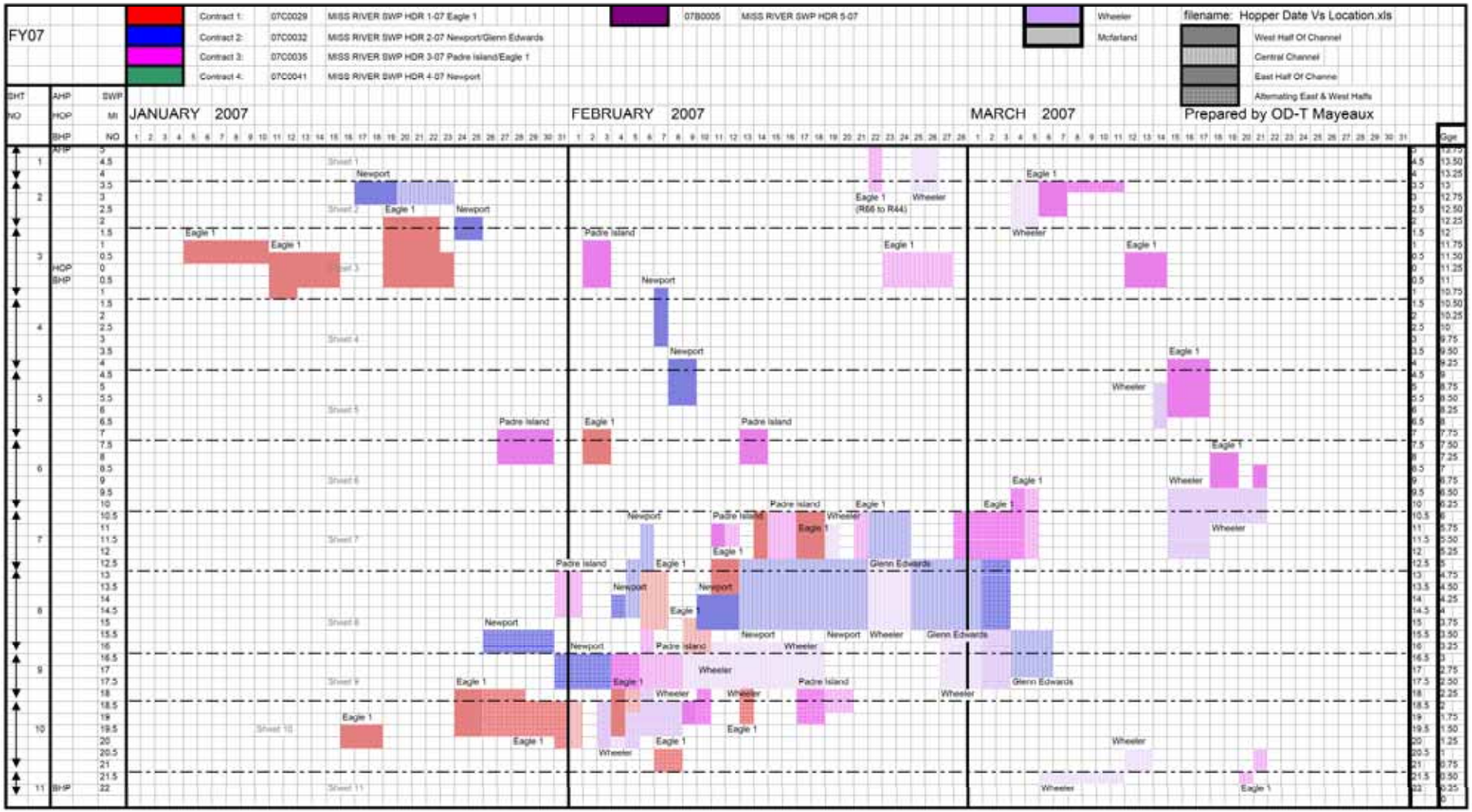


Figure 2. FY07 Dredge Locations

APPENDIX B

Maintenance Dredging Equipment Used in Southwest Pass

Ultimately, mission requirements and equipment effectiveness drive the type of dredging equipment used for any maintenance dredging project. The numbers of each type of dredge built/owned by the industry and the Government is a high indicator of the utility of each type. The information below identifies advantages and disadvantage of each type of dredge when it dredges within Mississippi River from Mile 6.0 AHP to 22.0 BHP. Stating the advantages and disadvantages is highly relevant since it is indicative of why and how the type of dredge used has changed as the mission requirements have changed.

Mission Requirement: The Corps' mission is to maintain channel dimensions of -45.0 x 750 feet wide on a 24/7 basis, 365 days per year. Major factors that dictate the most suitable/ appropriate/cost-effective equipment to consider are shoaling patterns, navigation requirements/ commitments, and Corps policy (33 CFR Parts 335-338).

The 3 main types of dredges used though-out the country are identified below along with the channel characteristics for which they are best suited as well as advantages and disadvantages of each.

Hopper Dredge: Of the 13 private industry hopper dredges, 9 are large enough to work within the Mississippi River from Mil 6.0 AHP to 22.0 BHP. Of the 4 Government hopper dredges, the Wheeler and the McFarland are used on the Mississippi River

- **Advantages**
  - Southwest Pass has an average of 15 inbound and 15 outbound ships per day which are categorized predominantly as bulk carriers, break bulk, tankers, chemical tankers, and passenger ships. Hopper dredges are able to work within the flow of navigation without affecting it. Thus, they have the distinct advantage over near-stationary objects such as cutterhead or dustpan dredges which have obstructions that navigation must monitor and avoid such as swing lines, the dredges themselves, and ancillary support equipment.
  - Hopper dredges can quickly and easily get out of the way of ships, especially in emergencies.
  - Hopper dredges are effective at removing small banks of material ranging from 1 to 4 feet above required project dimensions and can traverse long distances while dredging. Example: See Figure 2. FY07 Dredge Location in Appendix A. From 6 -19 March 2007, 11 miles of channel were dredged while encountering 3 to 4 ft banks ranging from 50 to 75 wide using the Wheeler and the Eagle I.
  - The hopper dredge is a very mobile self contained unit, which can be dispatched immediately to shoaling locations that develop non-continuously along the 28 mile length of the dredging reach.
  - Hopper dredges do not require discharge pipeline setup, which allows them to mobilize quickly

- **Disadvantages:**
  - High acquisition cost, high labor cost, limited in pump out capability, limited in channels with narrow widths & shallow depths, and transit time to and from dump sites limits productivity.

Cutterhead Dredges: The most common and most versatile dredge is the Cutterhead Dredge. For the most part, cutterhead dredges can work just about anywhere. They effectively work in the vicinity of obstructions and channels with narrow widths & shallow depths.

- **Advantages**
  - Highly effective when discharge requirements require pipeline assemblage
  - Highly effective when dredge material placement requires long transport distances.
  - Dredging sizable banks of material. Cutterhead dredges are very effective in removing very large continuous banks of material
  - Not limited by width of channel or depth
  - Can pump near continuously, thus experiencing less interruptions in pumping
  - Moderate acquisition cost, low labor cost, and with continuous dredging can equate to highly economical transport.

- **Disadvantages:**
  - Advance slowly along the channel, not mobile.
  - Can not move out of the way of ships in emergency situations.
  - Takes considerable time in relocating dredge and support equipment.
  - Dredging locations need pipeline discharge pre-constructed.
  - As bank heights decrease, dredge operates less economically**.**
  - Wires which control movement disallow other dredging equipment to work in the same vicinity

Conventional Dustpan Dredge: 1 Private Industry Dredge and 2 Government Owned. Dredging large volumes of material and placing it 1,000 feet away within the high flow of the channel.

- **Advantages:**
  - Fairly mobile unit: Can be dispatched immediately to shoaling locations without having to set up discharge pipelines and does not require significant support equipment

- **Disadvantages:**
  - Are not designed to pump more than 1,000 ft away.
  - Wires which control movement disallow other dredging equipment to work in the same vicinity.

Non-Conventional Dustpan Dredge: 1 Private Industry Dredge "The Beachbuilder".
The non-conventional dustpan dredge, "Beachbuilder" is a one-of-a-kind dredge. Referring to its namesake, the Beachbuilder is highly effective at building beaches since it was designed to do so. Typical beach building projects require long pump distances, have a borrow area to dredge from rather than performing channel maintenance (creating near stationary dredging), and experience heavy seas.

- Advantages
  - Dredging large volumes of material and placing it considerable distances from the dredge site.

- Disadvantages:
  - Not mobile, lacks self propulsion:
  - Wires which control movement disallow other dredging equipment to work in the same vicinity.

APPENDIX C

Additional Dredges for
Hopper Pump-out

If the mode of disposal were changed such that all hopper dredge material was required to be pumped out, then there would be a need for additional dredges in order to maintain the production rates achieved by the dredge and haul method. There are several disadvantages to attempting all pump out and are listed below.

* The number of additional equivalent dredges needed to maintain the channel at dredge and haul rates would fluctuate sporadically month to month since the dredging location of hopper dredges changes often.
* It's extremely doubtful that the dredging industry could supply enough dredges during peak flow events to pump out material and still maintain the channel.
* During less than peak flows, the dredging industry may be able to supply additional dredges, but most likely at higher prices.

Refer to March 2007 SWP Hopper Dredging History: Number-Of-Equivalent Hopper Pumpout Dredges

It is important to understand the following equalities which are the basis of this graph:

Pumpout Cycle Time = Travel time from dredging location to pumpout location + hopper pumpout (connecting, pumpout, and disconnecting times) + time to return to dredging location

Dredge and Haul Cycle Time = Travel time from dredging location to disposal location+ dumping time + time to return to dredging location

On the vertical axis of the graph, there are pumpout time factors varying from 0.0 at Mile 11, to 0.69 at Mile 0 (HOP) and Mile 21.5 (ODMDS) Gulf-of Mexico Ocean Dredging Material Disposal Site. These factors are obtained by dividing the Dredge and Haul (Current Method or Federal Standard) production rate by the Pumpout Production Rate at a particular Southwest Pass Mile, then subtracting 1. For example, the 0.69 factor at Mile 0.0 and Mile 21.5 are obtained by dividing the Current Method Production rate of 19,670 CY's/Day by the pumpout rate of 11,635 CY's/Day, then subtracting 1 from that result, giving the 0.69 factor shown in the vertical column. The formula is as follows:

Pumpout Time Factor = (Current Method Production Rate)/(Pumpout Production Rate) -1.0

These factors indicate the fractional time required (in days) to match the current method at each SWP mile.

For instance, at Mile 11, where the factor is 0.0, implies that the cycle time for pumpout cycle time, and current method time are equivalent. This is because it takes 2 hours for the current method dredge to sail to the Gulf-of-Mexico, or Pass-A-Loutre to dump; and, it takes about 2 hours for the pumpout dredge to dump at a pumpout location at Mile 11. The pumpout cycle time is primarily all hookup, pumpout, and unhook time; whereas, the current method time is primarily all travel and return time. The cycle times are about the same, so both methods require the same number of days, hence a factor of 0.0.

As the dredging location moves south towards the Gulf-of-Mexico (ODMDS), the pumpout dredge just moves to the next pumpout location 3 miles away with little effect on its cycle time and production, but the current method dredge has a shorter cycle time to the Gulf of Mexico, therefore its spending more time dredging and less time traveling, so it has more overall production, hence there is a larger requirement for equivalent hopper pumpout dredges to match the current method dredges increased production. This is why the hopper pumpout factors increase as the dredging location moves towards disposal sites Pass-A-Loutre or the Gulf-of-Mexico (ODMDS).

At the bottom of the spreadsheet, all of the hopper dredges that can bid on the Mississippi River hopper dredge rental specifications are shown with their respective Dredge and Haul production rates and includes Government hopper dredges that work there as well. For example, the Newport hopper dredge is shown with production rate of 34,095 cy/day. For each dredge currently working in Southwest Pass, the fractional equivalent (in days) of the additional time necessary when in the pump-out mode versus the Dredge & Haul mode is shown on a day to day basis.

Of interest is the "Averaged" dredge production rate of 48,001 CYs/Day. Shown at the bottom, this figure is the average of all the individual production rates. The numbers shown on the "Average" row indicate the number of equivalent hopper dredges required to match an average current method dredge with the 48,001 CYs/Day production rate. The "Equivalent Number of Dredges" are obtained by multiplying each individual factor next to each dredge working that day to its production rate, then summing up all of these and dividing by 48,001 CYs/Day. The same method was applied to the "Medium Dredge" axis, but the 34,816 CYs/Day production rate shown was obtained by averaging just the lower six dredges shown in the table.

Example calculation of Equivalent Dredge(s) for 15 March 2007:

In reviewing the spreadsheet and identifying the location of the hopper dredges working at the time, the following is determined;

* Padre Island was working between Mile 1.5 BHP to 1.5 AHP, pump-out time factor = .69 additional days
* Eagle 1 was working between Mile 9 & 11 BHP, pump-out time factor = .05 additional days
* Newport was working between Mile 17.5 and 19 BHP, pump-out time factor = .48 additional days

The fractions of time are then shown in the corresponding row of the dredge;

The spreadsheet then performs the following calculation which ultimately yields an additional .9 average dredges or 1.2 medium dredges that would be required if all work were performed in pump out mode versus dredge & haul. Thus,

$$\frac{(\text{Padre } .69 \text{ days} \times 33{,}855 \text{ cy/day}) + (\text{Eagle } .05 \text{ days} \times 51{,}286 \text{ cy/day}) + (\text{Newport } .48 \times 34{,}095 \text{ cy/day})}{48{,}001 \text{ cy/day}}$$

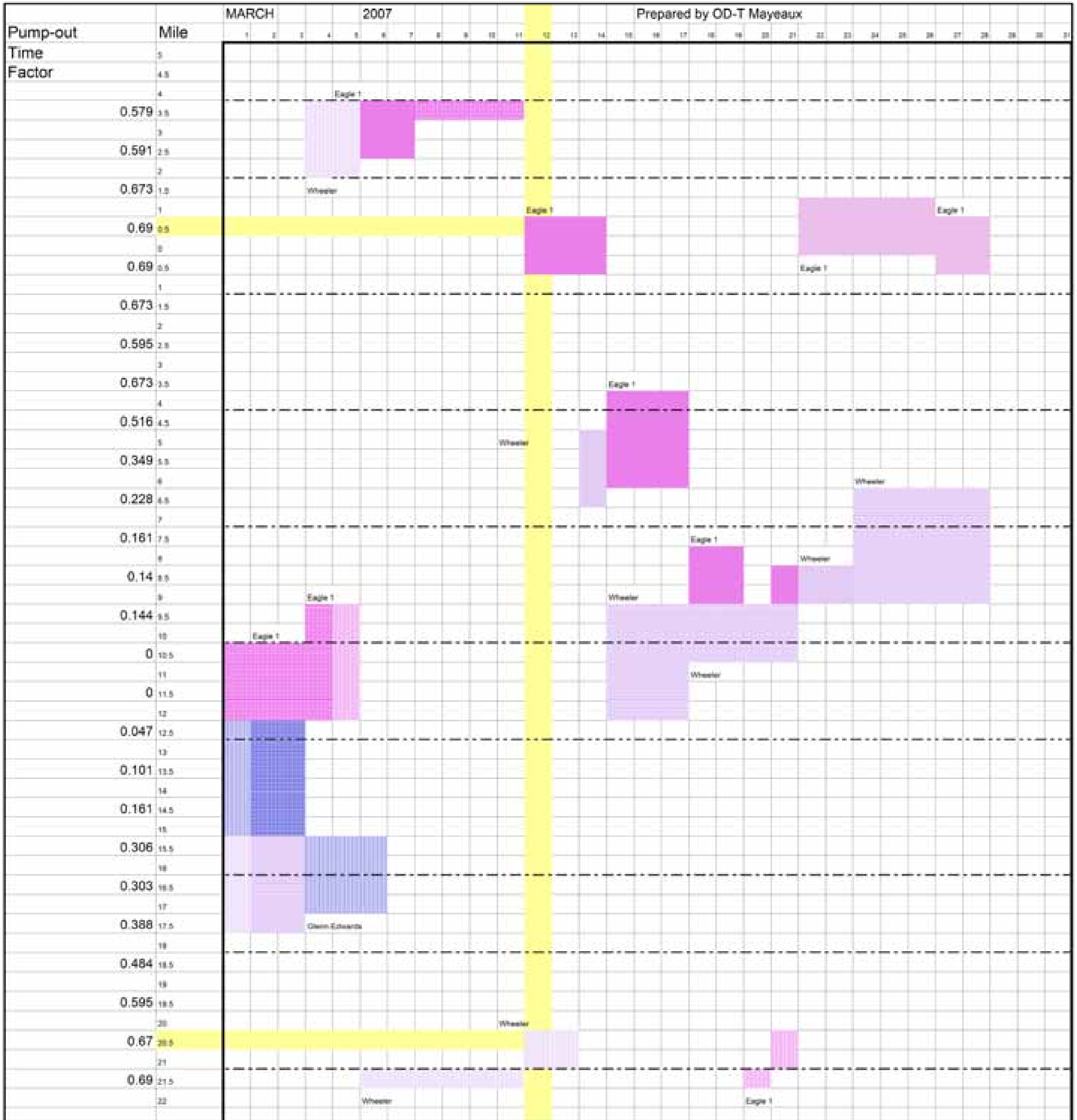
Result = .9 Average dredges needed to maintain River @ Dredge & Haul production rates.

(Padre .69 days x 33,855 cy/day) + (Eagle .05 days x 51,286 cy/day) + (Newport .48 x 34,095 cy/day)

34,816 cy/day

Result = 1.2 Average dredges needed to maintain River @ dredge & haul production rates.

It should be noted that the additional equivalent dredges necessary is based on dredge & haul disposal @ Pass A Loutre and the ODMDS site. Hopper pump out is based on pump out locations @ Mile 1.5 AHP, 1.7 BHP, 7.0 BHP, 12.0 BHP, 14.0 BHP, 17.0 BHP,and 18.0BHP. Changes to any of these locations will change the pump out time factors.



Dredge	Capacity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Glenn Edwards	85,383	0.1	0.1	0.1	0.3	0.3	0.3										
Stuyvesant	72,649																
Eagle 1	51,286	0.0	0	0	0.1	0.1	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.4	0.4
Bayport	45,029																
B.E. Lindholm	41,663																
Dodge Island	33,855																
Padre Island	33,855																
Newport	34,095																
RN Weeks	32,476																
Wheeler	64,768	0.3	0.3	0.3	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.3	0	0
McFarland	32,950																
Additional Medium Dredge(s) Required	34,816	0.8	0.8	0.8	1.9	1.9	2.9	2.1	2.1	2.1	2.1	2.1	2.3	2.3	1.6	0.5	0.5

Dredge	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Glenn Edwards															
Stuyvesant															
Eagle 1	0.4	0.2	0.2	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7			
Bayport															
B.E. Lindholm															
Dodge Island															
Padre Island															
Newport															
RN Weeks															
Wheeler	0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2			
McFarland															
Additional Medium Dredge(s) Required	0.5	0.4	0.4	1.2	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0

March 8th, Bids Opened on SWP Hopper Dredge Rental 5-2007

" No Bids Received"

APPENDIX D

Current Method (Dredge & Haul) and Pump-out Method Cost Comparison

Total Cost per Cubic Yard

Current Method (Dredge & Haul) and Pumpout Method Cost Comparison
Total Cost per Cubic Yard

D&H Unit Price includes: Mobilization and Demobilization cost, Pass A Loutre Sediment Mining, & South Pass Dredging

PO Unit Price includes: Mobilization and Demobilization of Hopper & Pipeline, and Cost of Additional Dredges

Dredging Location	Disposal Location	Estimated Quantity	Unit	D&H Unit Price	PO Unit Price	D&H vs PO Unit +/(-)
Mile 3.0 AHP to 4.0 AHP	PAL/1.5 AHP	1,040,000	CY	$3.48	$5.67	$2.18
Mile 2.0 AHP to 3.0 AHP	PAL/1.5 AHP	390,000	CY	$3.36	$5.35	$1.98
Mile 1.0 AHP to 2.0 AHP	PAL/1.5 AHP	650,000	CY	$3.22	$5.37	$2.14
Mile 0.0 HOP to 1.0 AHP	PAL/1.5 AHP	1,300,000	CY	$3.19	$5.36	$2.16
Mile 0.0 HOP to 1.0 BHP	PAL/1.7 BHP	520,000	CY	$3.21	$5.64	$2.43
Mile 1.0 BHP to 2.0 BHP	PAL/1.7 BHP	130,000	CY	$3.39	$5.67	$2.28
Mile 2.0 BHP to 3.0 BHP	PAL/1.7 BHP	130,000	CY	$3.48	$5.67	$2.19
Mile 3.0 BHP to 4.0 BHP	PAL/1.7 BHP	130,000	CY	$3.69	$5.67	$1.98
Mile 6.0 BHP to 7.0 BHP	PAL/7.0 BHP	260,000	CY	$3.09	$3.89	$0.80
Mile 7.0 BHP to 8.0 BHP	PAL/7.0 BHP	260,000	CY	$3.19	$3.89	$0.70
Mile 8.0 BHP to 9.0 BHP	PAL/7.0 BHP	260,000	CY	$3.34	$4.02	$0.68
Mile 9.0 BHP to 10.0 BHP	PAL/7.0 BHP	520,000	CY	$3.39	$4.16	$0.77
Mile 10.0 BHP to 11.0 BHP	PAL/12.0 BHP	910,000	CY	$3.59	$3.96	$0.37
Mile 11.0 BHP to 12.0 BHP	OD/12.0 BHP	910,000	CY	$2.65	$3.85	$1.20
Mile 12.0 BHP to 13.0 BHP	OD/12.0 BHP	910,000	CY	$2.54	$3.85	$1.31
Mile 13.0 BHP to 14.0 BHP	OD/14.0 BHP	910,000	CY	$2.43	$3.85	$1.42
Mile 14.0 BHP to 15.0 BHP	OD/14.0 BHP	910,000	CY	$2.31	$3.85	$1.54
Mile 15.0 BHP to 16.0 BHP	OD/14.0 BHP	910,000	CY	$2.20	$4.05	$1.85
Mile 16.0 BHP to 17.0 BHP	OD/17.0 BHP	910,000	CY	$2.06	$3.95	$1.88
Mile 17.0 BHP to 18.0 BHP	OD/17.0 BHP	520,000	CY	$1.97	$3.95	$1.97
Mile 18.0 BHP to 19.0 BHP	OD/18.0 BHP	390,000	CY	$1.88	$4.45	$2.57
Mile 19.0 BHP to 20.0 BHP	OD/18.0 BHP	130,000	CY	$1.95	$4.49	$2.54

PRICE PER CY COST BREAKDOWN & COMPARISON

MISSISSIPPI RIVER, SOUTHWEST PASS BENEFICIAL USE REVIEW
HOPPER DREDGING AND HAULING (D&H) TO OPEN WATER DISPOSAL SITE VS HOPPER DREDGE PUMPOUT (PO) FOR BENEFICIAL USE ESTIMATE
AVERAGE ANNUAL DREDGING

					Original Cost Estimate				Cost Breakdown $/CY (applying M&D and other Add'tl costs)									Total $/CY	
Bid Item	DESCRIPTION		Estimated Quantity	Unit	Hopper Dredge & Haul (D&H) Unit Price	Hopper Pumpout (PO) Unit Price	Hopper D&H Total Price	Hopper PO Total Price	D&H Dredging Unit Price	$/cy for PAL Mining	$/cy for South Pass	$/cy for Hopper Mob/Demob	PO Dredging Unit Price	$/cy for Hopper Mob/Demob	$/cy for Pipeline Mob/Demob	$/cy for Add'l 2 Dredges M&D	$/cy for 25% Dredge Availability	Hopper D&H Total Unit Price:	Hopper PO Total Unit Price:
0001	Mobilization & Demobilization of hoppe dredge and all attendant plant.		6 (D&H)/ 8 (PO)	EA	$220,800	$220,800	$1,324,800	$1,766,400	-	-	-	-	-	-	-	-	-	-	-
0002	Hopper Pump Out Mobilization & Demobilization Disposal Location																		
0002A	1.5 AHP - West		1	LS	NA	$359,500	NA	$359,500	-	-	-	-	-	-	-	-	-	-	-
0002B	1.7 BHP - West		1	LS	NA	$372,000	NA	$372,000	-	-	-	-	-	-	-	-	-	-	-
0002C	7.0 BHP - West		1	LS	NA	$315,200	NA	$315,200	-	-	-	-	-	-	-	-	-	-	-
0002D	12.0 BHP - West		1	LS	NA	$439,200	NA	$439,200	-	-	-	-	-	-	-	-	-	-	-
0002E	14.0 BHP - West		1	LS	NA	$439,200	NA	$439,200	-	-	-	-	-	-	-	-	-	-	-
0002F	17.0 BHP - West		1	LS	NA	$394,200	NA	$394,200	-	-	-	-	-	-	-	-	-	-	-
0002G	18.0 BHP - West		1	LS	NA	$394,200	NA	$394,200	-	-	-	-	-	-	-	-	-	-	-
0003	Dredging – Rental of a trailing-type hopper dredge Dredging Location	D&H/PO Disposal Location																	
0003A	Mile 3.0 AHP to 4.0 AHP	PAL/1.5 AHP	1,040,000	CY	$2.56	$5.05	$2,662,400	$5,252,000	$2.56	$0.34	$0.48	$0.10	$5.05	$0.14	$0.11	$0.03	$0.34	$3.48	$5.67
0003B	Mile 2.0 AHP to 3.0 AHP	PAL/1.5 AHP	390,000	CY	$2.44	$4.73	$951,600	$1,844,700	$2.44	$0.34	$0.48	$0.10	$4.73	$0.14	$0.11	$0.03	$0.34	$3.36	$5.35
0003C	Mile 1.0 AHP to 2.0 AHP	PAL/1.5 AHP	650,000	CY	$2.30	$4.75	$1,495,000	$3,087,500	$2.30	$0.34	$0.48	$0.10	$4.75	$0.14	$0.11	$0.03	$0.34	$3.22	$5.37
0003D	Mile 0.0 HOP to 1.0 AHP	PAL/1.5 AHP	1,300,000	CY	$2.27	$4.74	$2,951,000	$6,162,000	$2.27	$0.34	$0.48	$0.10	$4.74	$0.14	$0.11	$0.03	$0.34	$3.19	$5.36
0003E	Mile 0.0 HOP to 1.0 BHP	PAL/1.7 BHP	520,000	CY	$2.29	$4.72	$1,190,800	$2,454,400	$2.29	$0.34	$0.48	$0.10	$4.72	$0.14	$0.41	$0.03	$0.34	$3.21	$5.64
0003F	Mile 1.0 BHP to 2.0 BHP	PAL/1.7 BHP	130,000	CY	$2.47	$4.75	$321,100	$617,500	$2.47	$0.34	$0.48	$0.10	$4.75	$0.14	$0.41	$0.03	$0.34	$3.39	$5.67
0003G	Mile 2.0 BHP to 3.0 BHP	PAL/1.7 BHP	130,000	CY	$2.56	$4.75	$332,800	$617,500	$2.56	$0.34	$0.48	$0.10	$4.75	$0.14	$0.41	$0.03	$0.34	$3.48	$5.67
0003H	Mile 3.0 BHP to 4.0 BHP	PAL/1.7 BHP	130,000	CY	$2.77	$4.75	$360,100	$617,500	$2.77	$0.34	$0.48	$0.10	$4.75	$0.14	$0.41	$0.03	$0.34	$3.69	$5.67
0003I	Mile 6.0 BHP to 7.0 BHP	PAL/7.0 BHP	260,000	CY	$2.17	$3.14	$564,200	$816,400	$2.17	$0.34	$0.48	$0.10	$3.14	$0.14	$0.24	$0.03	$0.34	$3.09	$3.89
0003J	Mile 7.0 BHP to 8.0 BHP	PAL/7.0 BHP	260,000	CY	$2.27	$3.14	$590,200	$816,400	$2.27	$0.34	$0.48	$0.10	$3.14	$0.14	$0.24	$0.03	$0.34	$3.19	$3.89
0003K	Mile 8.0 BHP to 9.0 BHP	PAL/7.0 BHP	260,000	CY	$2.42	$3.27	$629,200	$850,200	$2.42	$0.34	$0.48	$0.10	$3.27	$0.14	$0.24	$0.03	$0.34	$3.34	$4.02
0003L	Mile 9.0 BHP to 10.0 BHP	PAL/7.0 BHP	520,000	CY	$2.47	$3.41	$1,284,400	$1,773,200	$2.47	$0.34	$0.48	$0.10	$3.41	$0.14	$0.24	$0.03	$0.34	$3.39	$4.16
0003M	Mile 10.0 BHP to 11.0 BHP	PAL/12.0 BHP	910,000	CY	$2.67	$3.29	$2,429,700	$2,993,900	$2.67	$0.34	$0.48	$0.10	$3.29	$0.14	$0.16	$0.03	$0.34	$3.59	$3.96
0003N	Mile 11.0 BHP to 12.0 BHP	OD/12.0 BHP	910,000	CY	$2.55	$3.18	$2,320,500	$2,893,800	$2.55	NA	NA	$0.10	$3.18	$0.14	$0.16	$0.03	$0.34	$2.65	$3.85
0003O	Mile 12.0 BHP to 13.0 BHP	OD/12.0 BHP	910,000	CY	$2.44	$3.18	$2,220,400	$2,893,800	$2.44	NA	NA	$0.10	$3.18	$0.14	$0.16	$0.03	$0.34	$2.54	$3.85
0003P	Mile 13.0 BHP to 14.0 BHP	OD/14.0 BHP	910,000	CY	$2.33	$3.18	$2,120,300	$2,893,800	$2.33	NA	NA	$0.10	$3.18	$0.14	$0.16	$0.03	$0.34	$2.43	$3.85
0003Q	Mile 14.0 BHP to 15.0 BHP	OD/14.0 BHP	910,000	CY	$2.21	$3.18	$2,011,100	$2,893,800	$2.21	NA	NA	$0.10	$3.18	$0.14	$0.16	$0.03	$0.34	$2.31	$3.85
0003R	Mile 15.0 BHP to 16.0 BHP	OD/14.0 BHP	910,000	CY	$2.10	$3.38	$1,911,000	$3,075,800	$2.10	NA	NA	$0.10	$3.38	$0.14	$0.16	$0.03	$0.34	$2.20	$4.05
0003S	Mile 16.0 BHP to 17.0 BHP	OD/17.0 BHP	910,000	CY	$1.96	$3.16	$1,783,600	$2,875,600	$1.96	NA	NA	$0.10	$3.16	$0.14	$0.28	$0.03	$0.34	$2.06	$3.95
0003T	Mile 17.0 BHP to 18.0 BHP	OD/17.0 BHP	520,000	CY	$1.87	$3.16	$972,400	$1,643,200	$1.87	NA	NA	$0.10	$3.16	$0.14	$0.28	$0.03	$0.34	$1.97	$3.95
0003U	Mile 18.0 BHP to 19.0 BHP	OD/18.0 BHP	390,000	CY	$1.78	$3.18	$694,200	$1,240,200	$1.78	NA	NA	$0.10	$3.18	$0.14	$0.76	$0.03	$0.34	$1.88	$4.45
0003V	Mile 19.0 BHP to 20.0 BHP	OD/18.0 BHP	130,000	CY	$1.85	$3.22	$240,500	$418,600	$1.85	NA	NA	$0.10	$3.22	$0.14	$0.76	$0.03	$0.34	$1.95	$4.49
	Dredging Subtotal:						$30,036,500	$48,731,800											
	Subtotal:		13,000,000	AVG:	$2.41	$4.09	$31,361,300	$53,211,700											
	Pass A Loutre Sediment Mining - 2 year cycle (Annualized):						$2,212,500												
	South Pass Dredging - 5 year cycle (Annualized):						$3,124,000												
	Cost of additional Dredges required due to Hopper Pump-out contract duration:							$4,415,918											
				TOTAL:			$36,697,800	$57,627,618											

MAIN REPORT

APPENDIX B

Real Estate

LOUISIANA COASTAL AREA (LCA), LOUISIANA
ECOSYSTEM RESTORATION
BENEFICIAL USE OF DREDGED MATERIAL (BUDMAT) PROGRAM STUDY
REAL ESTATE APPENDIX
JANUARY 2010

PURPOSE

The authorization and direction for the programmatic study of the Louisiana Coastal Area (LCA) Beneficial Use of Dredged Material (BUDMAT) Program is being conducted under the authority provided to the U.S. Army Corps of Engineers (USACE) by Title VII, Section 7006(d) of the Water Resources Development Act (WRDA) of 2007 (Public Law 110-114).

A study entitled "Louisiana Coastal Area (LCA), Louisiana, Ecosystem Restoration Study" was initiated on March 14, 2002 and completed in November, 2004. The LCA Study resulted in the recommendation of a near-term LCA Plan. The recommendation included the programmatic authorization of the $100 million, ten-year BUDMAT Program subject to the approval of a decision document by the Secretary of the Army.

This real estate appendix presents a preliminary programmatic plan for acquisition of lands, easements, and rights-of-way necessary for construction of projects implemented under the proposed 10-year LCA BUDMAT Program. This document is for planning purposes only and is subject to change.

PROJECT LOCATIONS

The LCA study area includes all of Louisiana's coastal area from Mississippi to Texas. The LCA BUDMAT study area, however, focuses primarily on the federally maintained navigation channels with the most significant opportunities for additional beneficial use of dredged material in coastal Louisiana, beyond that already being accomplished under the USACE Operations and Maintenance (O&M) program. The primary navigation channels currently depicted for study under this authorization include the Barataria Bay Waterway, LA; the Mississippi River, Outlets at Venice, LA; the Mississippi River, Baton Rouge to the Gulf, LA; the Atchafalaya River and Bayous Chene, Boeuf, and Black, LA; the Calcasieu River and Pass, LA; the Houma Navigation Canal, LA; the Bayou Lafourche, LA; the Mermentau River, LA; and the Freshwater Bayou, LA projects.

NON-FEDERAL SPONSOR

The Non-Federal Sponsor for the programmatic study was the Louisiana Department of Natural Resources (LDNR), acting on behalf of the State of Louisiana. However, the Coastal Protection and Restoration Authority of Louisiana (CPRA) will be identified as the Non-Federal Sponsor for the follow-on phase of construction for each of the beneficial use projects implemented under the LCA BUDMAT Program. As the Non-Federal Sponsor, CPRA must provide all real estate interests required for each project implemented under the LCA BUDMAT Program i.e., all lands, easements, rights-of-way, relocations, and any other interests, including suitable borrow and dredged or excavated material disposal areas (LERRDs). In addition, CPRA will provide all lands, water bodies, and/or water bottoms that are owned, claimed, or controlled by the State, including the

acquisition of oyster leases, as deemed necessary by the Government in consultation with CPRA. CPRA, as the Non-Federal Sponsor, will receive credit for the fair market value of the LERRDs provided, subject to review and approval by the Government.

GENERAL STUDY DESCRIPTION

The purpose of the LCA BUDMAT programmatic study is to investigate beneficial use opportunities across the Louisiana coastal area, but focus on those areas, particularly the navigation channels where maintenance dredging activities are common and where there exist additional opportunities to beneficially use dredged material. The LCA BUDMAT Program will optimize and increase the use of dredged material resulting from the maintenance of federally maintained navigation channels to restore and create coastal landscape features such as, but not limited to marshes, ridges, and islands; to reduce, halt or reverse the loss of existing landscape features; or to provide protection to Louisiana's coastal infrastructure. Funds from the LCA BUDMAT Program would be used for disposal actions associated with separate, cost-shared, individual ecosystem restoration beneficial use projects that are above and beyond the disposal activities covered under the USACE O&M maintenance and dredging Federal standard. The State of Louisiana, acting through the LDNR, was the Non-Federal Sponsor for the programmatic study. The study cost share ratio was 50 percent Federal and 50 percent non-Federal. The Non-Federal Sponsor for implementation of the LCA BUDMAT Program is the State of Louisiana, acting through the CPRA. The CPRA would sponsor the selection, planning, design and implementation of site-specific beneficial use projects under the LCA BUDMAT Program. Implementation of specific projects under the LCA BUDMAT Program, including the required design documents, will be cost shared at a 65 percent Federal and 35 percent non-Federal ratio.

Design documents will be prepared for each beneficial use project recommended for implementation under the LCA BUDMAT Program. The planning and design for beneficial use projects implemented under the LCA BUDMAT Program will take place in a two-step process that first screens and evaluates projects during Phase I. If the evaluation indicates cost-effective and implementable beneficial use projects, the projects will then proceed to Phase II design. The Phase II documentation will encompass plan formulation, analysis, justification and design tasks (including real estate and plan drawings), as well as NEPA coordination/environmental compliance documentation. Real Estate Plans will be prepared for each project during Phase II. It is anticipated that the Phase II design of each beneficial use project will be completed in 6-12 months.

LANDS, EASEMENTS AND RIGHTS OF WAY

This report does not identify specific sites to be acquired for the LCA BUDMAT Program. Sites will be identified after approval of the Programmatic Study Report, and feasibility studies will be performed for each proposed site location.

The LCA BUDMAT programmatic study areas consist of navigation channels, as previously identified, which are located in the parishes of Lafourche, Plaquemines; Terrebonne; St. Mary; Calcasieu; Vermilion and Cameron. The study of the channels will involve recommendations to dredge, transport, and place material from each of the channels into designated beneficial use areas (deposition areas).

The Barataria Bay Waterway and the Mississippi River navigation channels are located in Plaquemines Parish, Louisiana, one of the southern most parishes in the state. The parish is located just below New Orleans extending to the mouth of the Mississippi River and the Gulf of Mexico. The majority of the land in the parish is wetlands with most of the higher developable land located along a narrow strip abutting both sides of the Mississippi River. Oil and gas exploration and refining are major employers in the parish with commercial and recreational fishing and some farming also part of the local economy.

The Atchafalaya River and Bayous Chene, Boeuf, and Black navigation channels are located in St. Mary Parish, Louisiana. The Atchafalaya River is a distributary of the Mississippi and Red Rivers and is approximately 130 miles long. The study area will focus on that portion of the river located below the GIWW, to include Point au Fer and the entire swath of bay between the Atchafalaya channel and the Wax Lake Outlet. The economy in St. Mary Parish is supported by the oil and gas industry and related services, commercial fisheries, marine industries, and diversified wholesale and retail trade sector. The largest employers by major industry classifications are retail trade services, manufacturing, mining and transportation, and utilities. The predominant agricultural crop in the area is sugarcane. Other important agricultural operations in the area include hardwood timber production, cattle, aquaculture and freshwater and marine fisheries.

The Calcasieu River and Pass navigation channel is located in southwest Louisiana in Calcasieu and Cameron parishes. The Calcasieu River is a north – south waterway that runs through the parishes to the Gulf of Mexico. The western border of the parish is the Texas state line and its southern border is just a few miles from the Gulf of Mexico. The nearest major city is Lake Charles located in Cameron Parish. Agriculture, fisheries, the oil and gas industry, trapping and hunting, and other related services and industries form the economic base of the parishes. The city of Cameron is the home base of a large offshore oil industry, evidenced by numerous businesses related to the industry and several large rigs docked along the river. On a per square mile basis, Calcasieu Parish surpasses the mass industrialization along the Mississippi River. There are more than 53 industrial factories in Calcasieu Parish, and more than forty of these plants are located within a 10-mile radius. The major production in Cameron Parish is in cattle, fisheries, and wildlife. Cameron and Calcasieu parishes are especially known for fishing and hunting industries. The areas continue to experience waterfront and non-waterfront residential development of rural lands that were once only used for agriculture. The areas enjoy easy access to the Gulf of Mexico and local marshes. The presence of Calcasieu Lake makes the area a popular recreational area with activities such as fishing, hunting, and boating. Local as well as out-of-state residents purchase land on or near Calcasieu Lake for permanent residences or recreational camps.

The Houma Navigation Canal channel is located in Terrebonne Parish, Louisiana. Terrebonne Parish is located in south central Louisiana bordered on the south by the Gulf of Mexico, on the north and east by Lafourche Parish, and on the west by St. Mary and Assumption Parishes. The Houma Navigation Canal extends from the Intracoastal Waterway near Houma, Louisiana, to the Gulf of Mexico. The channel is maintained at 150-foot wide to a depth of -15 feet NGVD. Terrebonne Parish has a total area of 2,100 square miles of which 48 percent is land and 52 percent is water. The economy in the parish is supported by the oil and gas industry and related services, commercial fisheries, marine industries, and a diversified wholesale and retail trade sector. The major industries are retail trade services and mining. The predominant agricultural crop in the parish is sugarcane. Cattle, hunting lease enterprises, and marine and freshwater fisheries also produce substantial amounts of income for local residents. Land types adjacent to or nearby the

Houma Navigation Canal include industrial and residential waterfront property, agricultural land, marsh, and existing disposal areas.

The Bayou Lafourche navigation channel is a natural waterway located in Lafourche Parish, Louisiana. Lafourche Parish is located in the southeastern portion of Louisiana, encompassing an area of 1,472 square miles, of which 1,085 sq miles is land and 388 sq miles is water. Land elevation along the bayou is approximately 5 feet. Along Highway 1 and Bayou Loufourche, more than 65 continuous miles of homes are spaced closely together along the bayou. Ownerships in this area are generally narrow strips of land running perpendicular to the bayou so as to provide water frontage to each landowner. There is no zoning in the area and land usees are mixed. The economy in the lower portion of the parish is strongly tied to the Port of Fourchon, as well as the production and distribution of natural gas and oil. Significant economic interests are medical, light manufacturing support and services for the offshore oil and gas exploration, commercial fishing, agricultural, and tourism. Other industries include oil and timber production, sugar refining, boat building, cattle and seafood canning. The major crop is sugarcane.

The Mermentau River to the Gulf Navigation Channel, beginning at Mermentau River Mile 6.2 at Grand Chenier, LA and just west of and downstream of the LA Hwy 82 bridge, was constructed by the East Cameron Port Harbor and Terminal District in 1971. Since then, O&M dredging has been performed on an average 3-year cycle with an average of approx 850,000 cy of material removed from the channel limits. The project calls for the maintenance of a -15' MLG channel over a 100' bottom width between Mile 6.2 (junction of navigation channel with Mermentau River), through Lower Mud lake and the land cut area leading to the jetties, and thence a -15' MLG channel over a 200' bottom width through the jetty and Gulf entrance (Bar) channel reach.

Grand Chenier is a very small town containing little more than 100 households. The area that surrounds Grand Chenier, south of LA Hwy 82, is mostly marsh and scarcely developed. Few improvements are located near the mouth of the Mermentau River, at Lower Mud Lake, but they are likely improvements to accommodate the fishermen who frequent the area. The northern area of Grand Chenier, north of LA Hwy 82 and the Mermentau River, has a few improvements scattered within only a few miles radius from the most developed area of Grand Chenier.

The Freshwater Bayou project provides for a -12' MLG by 125' channel, extending from its commencement at Mile 161.2W of the GIWW to Freshwater Bayou Lock. The channel is authorized to -12' MLG by 125' from the lock to Mile 0 (Gulf Shoreline), from which it transitions to a -12' MLG by 250' bar channel. Since the project was completed in FY 82, O&M dredging has only been warranted and performed within the gulf entrance channel (bar channel) reach. Maintenance dredging of the bar channel generally performed on a 3-3.5 year cycle with approximately 650,000 cy of predominantly silty material removed each dredging cycle. Original disposal plan called for the placement of material within confined disposal areas along the banks of the waterway, as well as offshore material placed unconfined within an EPA approved ODMDS. The ODMDS was last used in 1990, and since that time the material removed from between the lock and the outer bar channel limit (approximately 5 miles) has been placed along the Gulf shoreline and west of the channel with all material used 100% beneficially for beach/shoreline nourishment within the Federal standard.

ESTATES

As previously indicated, design for particular projects will be accomplished through individual project studies. Hence, estates are not proposed at this time. Each decision document prepared will propose the exact estates to be acquired. If due to the nature of the particular project, non-standard estates need to be acquired, approval for those estates will be requested in accordance with the Standard Operating Procedures set forth by Mississippi Valley Division.

FEDERALLY OWNED AND STATE OWNED LANDS

The plan may affect federally-owned lands. For those project features that are located in federally owned property, the U.S. Army Corps of Engineers, Mississippi Valley, New Orleans District (CEMVN) will secure right of entry from the other Federal agency.

The plan feature will impact State of Louisiana lands. For those areas that are owned by the State of Louisiana, the state will issue a grant of particular use to the USACE providing right of entry to its property. For planning purposes, it is assumed that the State owns the bed and bottoms of navigable waterways, including areas of open water. A detailed determination of ownership of the State, including any political subdivisions of the State, will be made by CPRA in conjunction with the relevant state entities, including the State Land Office, for each particular project implemented under the LCA BUDMAT Program.

NAVIGATION SERVITUDE

Derived from the Commerce Clause of the U.S. Constitution, article I, section 8, clause 3, the navigation servitude is the dominant right of the United States to use, control and regulate the navigable waters and submerged lands thereunder. The applicability of the navigation servitude depends on both legal and factual determinations. If the legal determination supports assertion of the navigation servitude, then the second step is to determine the geographical area over which the servitude can be asserted. In tidal areas, the servitude extends to all lands below the mean high water mark, whereas in non-tidal areas, the servitude extends to all lands within the bed and banks of a navigable stream that lie below the ordinary high water mark. The effect of the navigation servitude, given the extensive technical analysis required for such a factual determination, has not been determined at this time. The navigation servitude will be asserted where restoration is related to navigation. This includes new restoration feature opportunities or projects as well as modifications to existing projects. No credit will be afforded to the CPRA for lands over which the navigational servitude is exercised.

PROJECT MAP

For a map of the areas targeted for beneficial use, refer to Figure 1-1, Section 1 of the Programmatic Study Report.

INDUCED FLOODING

Induced flooding is not proposed for any of the projects implemented under the LCA BUDMAT Program. However, if a taking is determined from increased water levels, a flowage easement will be acquired.

BASELINE COST ESTIMATE CHART OF ACCOUNTS

The Programmatic Study Report does not include site specific projects, therefore no Real Estate cost estimates were performed. Real costs will be estimated for each project implemented under the LCA BUDMAT Program and will include the estimated value of the LERRDs, including oyster leases if appropriate, and the incidental costs associated with acquisition of the LERRDs. Cost estimates will be prepared for Phase I of the program, and a gross appraisal will be prepared during Phase II. The appraisals will be prepared for each ownership impacted by the project prior to acquisition.

PUBLIC LAW (PL) 91-646

The United States Constitution and the State of Louisiana Constitution require that a property owner be paid just compensation when the Government acquires private property for a public use. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (P.L. 91-646), was enacted to ensure uniformity in the treatment of persons displaced by a Federal project. The Act requires that property owners be offered the market value of the real estate interest to be acquired. The Government is required to conduct good faith negotiations with each landowner in an effort to acquire the property in an amicable manner. No owner is required to surrender possession of their property to the Government prior to the payment of the agreed purchase price or prior to a deposit in court of an amount that is not less than the Government's approved appraisal of the fair market value of the property in a condemnation proceeding. Lastly, if an occupant is to be displaced from a dwelling or business, the Government must provide at least 90 days written notice of the date by which the move must occur and must offer relocation assistance. The assumption at this time is that no displacement of residences, businesses, or farms will occur.

All acquisition of private property for this plan will be done in accordance with the provisions of Public Law 91-646, as amended.

TIMBER ACTIVITY

It is not likely that the project will impact properties with timber. However, if timber is impacted, it is the general intent of the plan to reserve to the landowner the right to harvest timber. Where the estate prohibits timber harvesting, the market value of the timber will be included as part of the overall estimate of land value based upon comparable sales of woodlands. Otherwise, the estimate of value will include an estimate of compensation for the adverse impact of the project on timber.

ROW CROP ACTIVITY

It is not likely that the project will impact properties with agricultural activity. However, if farms are impacted, it is assumed that landowners will be allowed to harvest mature crops prior to construction of the projects. In that instance, compensation would be for the impact of the easement on the value of the property. If time constraints do not permit the landowner to harvest crops, the landowner will also be compensated for the market value of the crops.

OIL AND GAS

It is unlikely that Oil and Gas rights will be acquired. The estates would prohibit the use of the surface. Alternative drilling methods may allow access to the oil and gas, e.g., via directional drilling.

If it is not feasible for a landowner to use alternative methods to extract oil and gas, the landowner might try to assert a takings claim. This assertion might be contingent upon the size of the ownership and the area impacted by the project. During the design phase, when more definitive project footprints are known, ownership research will be conducted to determine the presence of existing oil and gas leases and to quantify the impact, if any, of the project alignments upon those leases.

It is assumed that remote access to the oil and gas would be feasible, e.g., via directional drilling or other methods. However, as for any outstanding third party oil and gas interests, releases or subordinations will be secured from these oil and gas interest holders, to ensure acknowledgment of these future surface use restrictions. The real estate costs prepared for each project implemented under the LCA BUDMAT Program will include sufficient funds to cover negotiations with outstanding third party oil and gas interest holders.

OWNERSHIP OF ACCRETED AND EMERGENT LANDS AND OIL AND GAS RIGHTS

The State claims ownership over the navigable water bottom, including areas over which land had historically been located but where such lands have been submerged through erosion or subsidence. Pursuant to Article IX, Section 3 of the Louisiana Constitution, owners of land contiguous to and abutting navigable waters, bays, arms of the sea, the Gulf of Mexico, and navigable lakes belonging to the State shall have the right to reclaim or recover land lost through erosion, compaction, subsidence, or sea level rise occurring on or after July 1, 1921. Such private efforts to reclaim or restore lost lands can be made at any time. Coastal restoration projects implemented pursuant to R.S. 49:214.1 et seq. (Act 6, Louisiana Wetlands Conservation and Restoration Act, 1989) might, if successful, impinge upon those private reclamation rights. Accordingly, R.S. 41:1702.D (2)(a) provides that the State may enter into negotiated boundary agreements with such disaffected landowners to address the anticipated loss of their ownership and reclamation rights in the area of the proposed plan where the creation of land is anticipated.

In most cases, the State is not asserting or claiming ownership in subsided interior marshes. As such, the appropriate estate(s) will be acquired in these areas to allow restoration and conservation activities over not only on the submerged lands, but also on any emergent lands.

By contrast, in other areas of open water, the State claims ownership of the water bottoms. CPRA will provide the real estate interests necessary for construction of a project implemented under the LCA BUDMAT Program, including such water bottoms. In the event that land emerges from water bottoms claimed by the State, the State acknowledges that the previous landowner may attempt to claim that it was deprived of its reclamation rights to the emergent land. The State believes that the value of such a reclamation rights, if there is any, is too speculative to assess. If a landowner raises a reclamation issue, the State will handle such a claim on a case-by-case basis. The State has asserted that a specific claim may be denied on the basis of lack of evidence of value, or, if warranted by the circumstances, compromised pursuant to rather complex legal provisions. CPRA

has proposed that it be afforded credit towards its cost share for any costs it might incur in asserting ownership over emergent lands. This proposal would have to be consistent with all of the obligations of the Non-Federal Sponsor, especially the LERRD and indemnification obligations.

OYSTER LEASES

In November, 2006, the Louisiana Legislature established the Louisiana Oyster Lease Acquisition and Compensation Program (OLACP), LSA-R.S. 56:432.1 and LAC 43:I:850-869, which enables the State of Louisiana to acquire oyster leases within the direct impact area of a coastal protection, conservation, or restoration project. In the event that oyster leases are impacted by this project, the Non-Federal Sponsor will acquire the lease in accordance with State law.

NON-FEDERAL SPONSOR ASSESSMENT

The Non-Federal Sponsor for the follow-on phase of construction for each of the beneficial use projects implemented under the LCA BUDMAT Program is the CPRA. The CPRA has expressed support for this project. Implementation of specific projects under the LCA BUDMAT Program will be cost shared at a 65 percent Federal and 35 percent non-Federal ratio. The Non-Federal Sponsor share may take the form of cash, lands, easements, or rights-of-way, or any form of in-kind contribution determined to be appropriate. The LCA BUDMAT Program is an extension of an existing navigation Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) activity, and as such, the only cost for OMRR&R would be project-specific monitoring as needed to demonstrate project success. If any additional OMRR&R is deemed appropriate for projects constructed under the LCA BUDMAT Program, the associated costs for those actions would be the responsibility of the Non-Federal Sponsor. A Non-Federal Sponsor Capability Assessment is included in Exhibit A of this report.

ZONING ORDINANCES

No application or enactment of zoning ordinances will be proposed in lieu of, or to facilitate acquisition.

ACQUISITION SCHEDULES

Acquisition schedules will be prepared for each project's decision document.

HABITABLE STRUCTURES

Historically, coastal Louisiana has a rich tradition of hunting, fishing, trapping, and waterfowl activity. Recreational type camps, often consisting of crude structures accessible only by water, are scattered throughout the marshes and navigable waterways. Because of the low elevation, tidal influence, and susceptibility to hurricane damage, the camps are placed on stilts or otherwise raised. In many of the proposed plan areas, the restoration measures indicate that the camps would not be adversely impacted and may be allowed to remain. However, camps may not be able to remain in areas in which there are adverse impacts to the camps such as, but not limited to, camps that can no longer be accessed due to project features. A case-by-case analysis of existing camps will be made prior to the initiation of real estate activities. At this time, it is assumed that existing habitable structures, including camps, will be allowed to remain within the project areas. New temporarily

habitable structures may be allowed within the project footprints, provided they do not interfere with the construction of the project or compromise project benefits. Owners will need to obtain prior written approval from the U.S. and the Non-Federal Sponsor for construction of new camps/habitable structures in the project area. In addition, all camps must comply with Federal, state, and local laws, e.g., section 404 permits under the Clean Water Act. Camp owners will also be required to hold the Government harmless from damage or injury relating to the project.

RELOCATION OF ROADS, BRIDGES, FACILITIES/UTILITIES TOWNS AND CEMETERIES

At this time, detailed relocations information is not available. Relocations of pipelines, roads, new bridges, and utilities will be addressed in each project's decision document as more design detail is developed. Relocation of towns is not planned. It is unlikely that cemeteries will be within the rights-of-way of projects implemented under the LCA BUDMAT Program. Determinations of compensability will be prepared for each decision document.

ENVIRONMENTAL

For each project implemented under the LCA BUDMAT Program, environmental documentation (i.e. NEPA) will be prepared and coordinated as required by law. A preliminary hazardous, toxic, and radioactive waste assessment will be prepared. A determination on each project's potential impact on cultural resources, along with a comprehensive land-use history and recreation assessment will be prepared. If necessary, additional environmental clearances would be conducted with each project's decision document. No acquisition of lands will commence on each specific project until all environmental clearances have been met. A Programmatic Environmental Impact Statement (PEIS) was prepared for the LCA study and a Record of Decision (ROD) was signed on November 18, 2005.

LANDOWNER CONCERNS

Because the specific project alignments have not been determined at this time, the number of landowners affected by the individual projects will be estimated at a future date when design information is more detailed.

All scoping meetings have been conducted. Public outreach meetings are proposed throughout the 10-year LCA BUDMAT Program. The content of the information to be presented to the public will be conceptual and general in nature.

The general public is in favor of environmental restoration projects. It is too early in the study process to determine landowner attitude. Until more detailed alignments/ rights-of-way are available, we will not know how those that are directly impacted by acquisition of their properties may feel about the projects implemented under the LCA BUDMAT Program.

The group expected to be the most vocal are the oyster fishermen. Some fishermen have been in this business for generations and have invested much in their leased sites. Some landowners may be concerned about a specific project's potential impact on existing camps and on new camp construction, as well as the possible impacts on mineral exploration.

NON-FEDERAL SPONSOR NOTIFICATION OF RISKS

At this time, notification of the risks of acquiring LER prior to execution of a Project Partnership Agreement is not applicable, because specific sites have not yet been identified.

OPERATION AND MAINTENANCE

If required, operation and maintenance of projects under the LCA BUDMAT Program is a 100% Non-Federal Sponsor responsibility.

PREPARED BY:

Karen Vance
Realty Specialist

Date: 1-13-10

APPROVED BY:

Linda C. LaBure
Chief, Real Estate Division

Date: 1-13-16

REVIEWED BY:

Judith Y. Gutierrez
Review Appraiser

Date: 1/13/10

EXHIBIT A

ASSESSMENT OF THE NON-FEDERAL SPONSOR'S
REAL ESTATE ACQUISITION CAPABILITY

ASSESSMENT OF NON-FEDERAL SPONSOR'S
REAL ESTATE ACQUISITION CAPABILITY
(Coastal Protection and Restoration Authority (CPRA))

I. Legal Authority:

a. Does the sponsor have legal authority to acquire and hold title to real property for project purposes? **YES**

b. Does the sponsor have the power of eminent domain for this project? **YES**

c. Does the sponsor have "quick-take" authority for this project? **NO**
Although the sponsor does not have quick take authority, if this should be needed for the project, the sponsor may partner with a Levee District or Parish Government which has that authority.

d. Are any of the lands/interests in land required for the project located outside the sponsor's political boundary ? **NO**

e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? **NO**

II. Human Resource Requirements:

a. Will the sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including P.L. 91-646, as amended? **NO**

b. If the answer to II.a. is "yes," has a reasonable plan been developed to provide such training? **N/A**

c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project? **N/A**

d. Is the sponsor's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule?

Not at this time. CPRA is presently under development. It is expected that the staff will continue to grow in the upcoming months/years, provided sufficient budget & proper legal authorities.

e. Can the sponsor obtain contractor support, if required in a timely fashion? **YES**

f. Will the sponsor likely request USACE assistance in acquiring real estate?
It is not likely that the sponsor will request assistance.

III. Other Project Variables:

a. Will the sponsor's staff be located within reasonable proximity to the project site? **YES**

b. Has the sponsor approved the project/real estate schedule/milestones?

At the feasibility level there are too many unknowns to develop a definite project schedule. Once project designs are finalized, the sponsor will be requested to provide an acquisition schedule.

IV. Overall Assessment:

a. Has the sponsor performed satisfactorily on other USACE projects? **YES**

b. With regard to this project, the sponsor is anticipated to be: highly capable/fully capable/moderately capable/marginally capable/insufficiently capable.
Fully capable

V. Coordination:

a. Has this assessment been coordinated with the sponsor?
YES

b. Does the sponsor concur with this assessment?
YES

Prepared by:

Judith Y. Gutierrez
Chief, Appraisal. & Planning Branch

Approved by:

Linda C. LaBure
Chief, Real Estate Division

EXHIBIT B

Quality Control Plan Checklist

Real Estate Plans

And other similar Feasibility-Level Real Estate Planning Documents

ER 405-1-12, Section 12-16, Real Estate Handbook, 1 May 1998

(Although this plan is not a true Real Estate Plan given the lack of specific information available for the project, the following checklist was followed as much as practicable.)

PROJECT __ LOUISIANA COASTAL AREA (LCA), LOUISIANA ECOSYSTEM RESTORATION BENEFICIAL USE OF DREDGED MATERIAL (BUDMAT) PROGRAM STUDY

REPORT TITLE _PROGRAMATIC STUDY REPORT LOUISIANA COASTAL AREA (LCA), LOUISIANA ECOSYSTEM RESTORATION BENEFICIAL USE OF DREDGED MATERIAL (BUDMAT) PROGRAM

Date of Report__November 2009___ Date of REP __January 2010____

1. **Purpose of the REP**. __√___
   a. Describe the purpose of the REP in relation to the project document that it supports.
   b. Describe the project for the Real Estate reviewer.
   c. Describe any previous REPs for the project.

2. **Describe LER**. __√____
   a. Account for all lands, easements, and rights-of-way underlying and required for the construction, OMRR&R of the project, including mitigation, relocations, borrow material and dredged or excavated material disposal, whether or not it will need to be acquired or will be credited to the NFS.
   b. Provide description of total LER required for each project purpose and feature.
   c. Include LER already owned by the Government, the NFS and within the navigation servitude.
   d. Show acreage, estates, number of tracts and ownerships, and estimated value.
   e. Break down total acreage into fee and the various types and durations of easements.
   f. Break down acreage by Government, NFS, other public entity, and private ownership, and lands within the navigation servitude.

3. **NFS-Owned LER**.__(cannot be addressed at this time)____
   a. Describe NFS-owned acreage and interest and whether or not it is sufficient and available for project requirements.
   b. Discuss any crediting issues and describe NFS views on such issues.

4. Include any proposed **Non-Standard Estates**. __√___
   a. Use Standard Estates where possible.

b. Non-standard estates must be approved by HQ to assure they meet DOJ standards for use in condemnations.

c. Provide justification for use of the proposed non-standard estates.

d. Request approval of the non-standard estates as part of document approval.

e. If the document is to be approved at MSC level, the District must seek approval of the non-standard estate by separate request to HQ. This should be stated in the REP.

f. Exception to HQ approval is District Chiefs of RE approval of non-standard estate if it serves intended project purposed, substantially conforms with and does not materially deviate from the standard estates found in the RE Handbook, and does not increase cost or potential liability to the Government. A copy of this approval should be included in the REP. (See Section 12-10c. of RE 405-1-12)

g. Although estates are discussed generally in topic 2, it is a good idea to also state in this section which standard estates are to be acquired and attach a copy as an appendix. The duration of any temporary estates should be stated.

5. **Existing Federal Projects**. __(cannot be addressed at this time) ___

a. Discuss whether there is any existing Federal project that lies fully of partially within LER required for the project.

b. Describe the existing project, all previously-provided interests that are to be included in the current project, and identify the sponsor.

c. Interest in land provided as an item of local cooperation for a previous Federal project is not eligible for credit.

d. Additional interest in the same land is eligible for credit.

6. **Federally-Owned Lands** ___(cannot be addressed at this time) ____

a. Discuss whether there is any Federally owned land included within the LER required for the project.

b. Describe the acreage and interest owned by the Government.

c. Provide description of the views of the local agency representatives toward use of the land for the project and issues raised by the requirement for this land.

7. **Navigation Servitude**. __√___

a. Identify LER required for the project that lies below the Ordinary High Water Mark, or Mean High Water Mark, as the case may be, of a navigable watercourse.

b. Discuss whether navigation servitude is available

c. Will it be exercised for project purposes? Discuss why or why not.

d. Lands over which the navigation servitude is exercised are not to be acquired nor eligible for credit for a Federal navigation or flood control project or other project to which a navigation nexus can be shown.

e. See paragraph 12-7 of ER 405-1-12.

8. **Map** _√____

a. An aid to understanding

b. Clearly depicting project area and tracts required, including existing LER, LER to be acquired, and lands within the navigation servitude.

c. Depicts significant utilities and facilities to be relocated, any known or potential HTRW lands.

9. **Induced Flooding** can create a requirement for real estate acquisition. ___√___

a. Discuss whether there will be flooding induced by the construction and OMRR&R of the project.

b. If reasonably anticipated, describe nature, extent and whether additional acquisition of LER must or should occur.

c. Physical Takings Analysis (separate from the REP) must be done if significant induced flooding anticipated considering depth, frequency, duration, and extent of induced flooding.

. d. Summarize findings of Takings Analysis in REP. Does it rise to the level of a taking for which just compensation is owed?

10. **Baseline Cost Estimate** as described in paragraph 12-18. _(cannot be addressed at this time)

a. Provides information for the project cost estimates.

b. Gross Appraisal includes the fair market value of all lands required for project construction and OMRR&R.

c. PL 91-646 costs

d. Incidental acquisition costs

e. Incremental real estate costs discussed/supported.

f. Is Gross Appraisal current? Does Gross Appraisal need to be updated due to changes in project LER requirements or time since report was prepared?

11. **Relocation Assistance Benefits** Anticipated. __(addressed on a general basis) ___

a. Number of persons, farms, and businesses to be displaced and estimated cost of moving and reestablishment.

b. Availability of replacement housing for owners/tenants

c. Need for Last Resort Housing benefits

d. Real Estate closing costs

e. See current 49 CFR Part 24

12. **Mineral Activity**. __√___

a. Description of present or anticipated mineral activity in vicinity that may affect construction, OMRR&R of project.

b. Recommendation, including rationale, regarding acquisition of mineral rights or interest, including oil or gas.

c. Discuss other surface or subsurface interests/timber harvesting activity

d. Discuss effect of outstanding 3rd party mineral interests.

e. Does estate properly address mineral rights in relation to the project?

13. **NFS Assessment** _√____

a. Assessment of legal and professional capability and experience to acquire and provide LER for construction, OMRR&R of the Project.

b. Condemnation authority

c. Quick-take capability

d. NFS advised of URA requirements

e. NFS advised of requirements for documenting expenses for credit.

f. If proposed that Government will acquire project LER on behalf of NFS, fully explain the reasons for the Government performing work.

g. A copy of the signed and dated Assessment of Non-Federal Sponsor's Real Estate Acquisition Capability (Appendix 12-E) is attached to the REP.

14. **Zoning** in Lieu of Acquisition __√___

a. Discuss type and intended purpose

b. Determine whether the proposed zoning proposal would amount to a taking for which compensation will be due.

15. **Schedule** ____(cannot be addressed at this time) ___

a. Reasonable and detailed Schedule of land acquisition milestones, including LER certification.

b. Dates mutually agreed upon by Real Estate, PM, and NFS. _____

16. **Facility or Utility Relocations** ____(cannot be addressed at this time) ___

a. Describe the relocations, identity of owners, purpose of facilities/utilities, whether owners have compensable real property interest.

b. A synopsis of the findings of the Preliminary Attorney's Investigation and Report of Compensable Interest is included in the REP as well as statements required by Sections 12-17c.(5) and (6).

c. Erroneous determinations can affect the accuracy of the project cost estimate and can confuse Congressional authorization.

d. Eligibility for substitute facility

1. Project impact
2. Compensable interest
3. Public utility or facility
4. Duty to replace
5. Fair market value too difficult to determine or its application would result in an injustice to the landowner or the public.

e. See Sections 12-8, 12-17, and 12-22 of ER 405-1-12.

17. **HTRW** and Other Environmental Considerations __√____

a. Discussion the impacts on the Real Estate acquisition process and LER value estimate due to known or suspected presence of contaminants.

b. Status of District's investigation of contaminants.

c. Are contaminants regulated under CERCLA, other statues, or State law?

d. Is clean-up or other response required of non-CERCLA regulated material?

e. If cost share, who is responsible for performing and paying cost of work?

f. Status of NEPA and NHPA compliances

g. See ER 1165-2-132, Hazardous, Toxic, and Radioactive Waste (HTRW) Guidance for Civil Works Projects.

18. **Landowner Attitude**. ___(cannot be addressed at this time) ____

a. Is there support, apathy, or opposition toward the project?

b. Discuss any landowner concerns on issues such as condemnation, willing seller provisions, estates, acreages, etc.?

19. A statement that the **NFS has been notified in writing about the risks of acquiring LER before the execution of the PPA**. If not applicable, so state. _√____

20. **Other Relevant Real Estate Issues**. Anything material to the understanding of the RE aspects of the project. ___√____

A copy of the completed Checklist is attached to the REP. _√___
(Draft REPs must contain a draft checklist and draft Technical Review Guide)

I have prepared and thoroughly reviewed the REP and all information, as required by Section 12-16 of ER 405-1-12, is contained in the Plan.

Karen Vance _____ 1-13-10 _____
Preparer: Karen Vance Date

A copy of the Real Estate Internal Technical Review Guide for Civil Works Decision Documents is attached and signed by me as the Reviewer

_____ _____
RE Internal Technical Reviewer Date

The REP has been signed and dated by the Preparer and the District Chief of Real Estate.
___√_____

MAIN REPORT

ATTACHMENT 1

Non-Federal Sponsor’s Letter of Intent

Coastal Protection and Restoration Authority of Louisiana

State of Louisiana

BOBBY JINDAL
GOVERNOR

January 15, 2010

Colonel Alvin B. Lee
New Orleans District
US Army Corps of Engineers
PO Box 60267
New Orleans, LA 70160-0267

Dear Col. Lee:

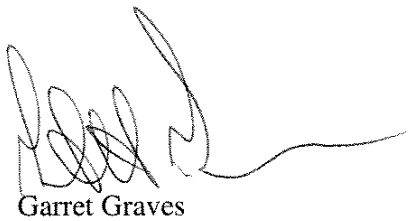
The State of Louisiana is pleased to offer its continuing support of the Louisiana Coastal Area Beneficial Use of Dredged Material Program as authorized in the Water Resources Development Act of 2007. The State has always supported the USACE in maximizing the beneficial use of sediment from the maintenance dredging of federally authorized navigation channels. This program is a critical component of the overall LCA Program and a vital step in rehabilitating the natural system of coastal Louisiana that serves to protect the economic and energy security of both the state and nation, the safety of more than 2 million Louisiana residents, the ecological balance of the Gulf region, and the survival of a unique culture.

This letter, while not legally binding on the State as an obligation of future funds appropriated by the State Legislature, declares our full support for the LCA Beneficial Use of Dredged Material Program as described in the draft LCA BUDMAT report dated November 2009, with cost sharing as required in the Water Resources Development Act of 2007 (WRDA 2007). The State understands that the draft LCA BUDMAT report requires a 35% non-Federal cost share for construction elements. Accordingly, we currently understand our financial obligation for this project to be $35,000,000 out of the total $100,000,000 program cost. However, we assert that Congressional intent in Section 7003 of WRDA 2007 was to implement the Beneficial Use of Dredged Material Program at a non-Federal cost share at 25% as outlined in the January 2005 Chief's Report.

The Coastal Protection and Restoration Authority plans to fulfill all duties of the non-Federal sponsor for this project as they are required by Corps' regulations and guidance. However, the Coastal Protection and Restoration Authority and the State of Louisiana reserve the rights to seek the enactment of Federal law or to seek a change of the Government's interpretation of law with respect to the non-Federal cost share, or to otherwise dispute this interpretation. Additionally, the State will continue to urge the Corps of Engineers and Congress to make beneficial use of dredged material an integral part of the management of the Mississippi River, and to eliminate Louisiana's cost share for beneficial use in light of negative impacts to the nation's economy, energy security and environment caused by coastal land loss in Louisiana. We reserve our right to contest the consistency of the Corps' current dredging practices in Louisiana with the Coastal Zone Management Act or Louisiana's Coastal Zone Management Provisions.

The State of Louisiana and the Coastal Protection and Restoration Authority whole-heartedly endorse this and other Corps' efforts to use dredged material beneficially, and we look forward to working with Corps on the implementation of this important project.

Respectfully,



Garret Graves
Chair

MAIN REPORT

ATTACHMENT 2

Non-Federal Sponsor’s Self-Certification of Financial Capability

NON-FEDERAL SPONSOR'S
SELF-CERTIFICATION OF FINANCIAL CAPABILITY
FOR DECISION DOCUMENTS

I, Garret Graves, do hereby certify that I am the Chairman of the Coastal Protection and Restoration Authority of Louisiana (the 'Non-Federal Sponsor'); that I am aware of the financial obligations of the Non-Federal Sponsor for the Louisiana Coastal Area Beneficial Use of Dredged Material Program; and that the Non-Federal Sponsor will have the financial capability to satisfy the Non-Federal Sponsor's obligations for that program. I understand that the Government's acceptance of this self-certification shall not be construed as obligating either the Government or the Non-Federal Sponsor to implement the program.

IN WITNESS WHEREOF, I have made and executed this certification this 13th day of January, 2010.

BY: _____

TITLE: Chairman

DATE: 01/13/10