	UAO COST ESTIMATE JULY 2012	EXPENDED TO DATE POST SETTLEMENT 04/30/2017	COST TO COMPLETE REMAINING 2017-2021	TOTAL COST AT COMPLETION IN 5 YEARS	TOTAL COST AT COMPLETION WITH CONTINGENCIES	% Contingency	Cost to complete with contingency	NOTES
			Project Complete in 5 Years					
MassDEP Funding		$ 600,000	$ 1,000,000	$ 1,600,000	$ 1,600,000	0%	$ 1,000,000	2014-2021 - ETD for 3 years - Needs verification from 3/9/17 meeting - based on EPA comment
USACE Funding		$ 3,900,000	$ 8,300,000	$ 12,200,000	$ 13,420,000	10%	$ 9,130,000	Per Corps - $3.9M (2014-2016), 2.5M (2017-2018) $1.1M/yr (2019 - 2021)
Pro-Serv Contract (WQM/Monit)		$ 7,500,000	$ 12,500,000	$ 20,000,000	$ 22,000,000	10%	$ 13,750,000	assumes $2.5M/yr - cost provided by Corps
Intertidal	$ 78,400,763						$ -	
UH Intertidal		$ -	$ 39,564,088	$ 39,564,088	$ 47,476,906	20%	$ 47,476,906	Assume work start in 3/18 and is fully funded and east and west sides done simultaneously, totaled using below two items.
Eastern shoreline			$ 30,844,140					Costs based upon engineers estimate $878/yd, inc excavation, restoration, T&D -see backup
Western Shoreline			$ 8,719,948					Costs based upon engineers estimate $604/yd, incl excavation, restoration, T&D - see backup
Parcel 265		$ 2,229,750	$ -	$ 2,229,750	$ 2,229,750	0%	$ -	Not included in UAO estimate
PMC		$ 6,194,045	$ 1,131,014	$ 7,325,060	$ 7,691,313	5%	$ 1,187,565	UAO included this with intertidal volume. CTC includes SES, T&D, restoration, demob
LH			$ 201,940	$ 201,940	$ 242,328	20%	$ 242,328	Assumes 230 cu yds from Miguel propoerty only @ $878/yd
BtB		$ -	$ 667,280	$ 667,280	$ 734,008	10%	$ 734,008	Assumes 760 cubic yards @ $878/yd
Marsh Island	$ 3,380,452		$ 2,282,220	$ 2,282,220	$ 2,510,442	10%	$ 2,510,442	Cost from RAC TO#3 negotiated proposal june 30 2017 - less management time - needs to go to TO#2, part of fixed.
Aerovox							$ -	
Aerovox Interim Cap		$ -	$ 4,800,000	$ 4,800,000	$ 6,240,000	30%	$ 6,240,000	Assumed 3 ft carbon sand cover (per Corps direction). Temporary solution does not complete final remedy.
Interim Cap LTM			$ 750,000	$ 750,000	$ 900,000	20%	$ 900,000	Assumed annual benthic and sampling of cover and reporting. No replacement costs.
							$ -	
Cell 1	$ 23,958,630						$ -	
Cell 1 Interim Remedy			$ 1,000,000	$ 1,000,000	$ 1,200,000	20%	$ 1,200,000	
							$ -	
Full Demob	$ 7,977,325	$ -	$ 5,785,460	$ 5,785,460	$ 7,810,370	35%	$ 7,810,370	CTC from May 2016 Jacobs proposal. Contingency based upon undefined future status and necessary improvement of Areas C and D.
Dredge & Fill LHCC	$ 39,838,604			$ -	$ -	0%	$ -	
Construct CAD Cell		$ 9,563,000	$ -	$ 9,563,000	$ 9,563,000	0%	$ -	UAO costs for all work related to CAD Cell, less the $11.3M from EPA HQ (need to verify if paid back)
Dredge and Fill LHCC - Jacobs		$ 14,155,772		$ 14,155,772	$ 14,155,772	0%	$ -	complete
Pre-BV - UH & LH to LHCC Mechanical - Jacobs		$ 4,663,907	$ 462,280	$ 5,126,187	$ 5,382,496	5%	$ 485,394	UH and LH Mech dredge - MU 25, 28, silt curtains, Moby Dick
Post BV - UH & LH to LHCC Mechanical - Jacobs			$ 1,643,400	$ 1,643,400	$ 1,807,740	10%	$ 1,807,740	One plant 120 days (existing UH CTC plus 37C&D, MU25, T&T'), includes current Jacobs costs
Dredge and Fill LHCC - BV		$ -	$ 14,915,983	$ 14,915,983	$ 14,915,983	0%	$ 14,915,983	Per USACE Email (3/16/17) changed from $18M to $17M. Fixed Cost Contract estimate
Survey Contract - BV		$ -	$ 700,000	$ 700,000	$ 700,000	0%	$ 700,000	Per USACE Email (3/16/17) changed from $800k to $700k. Based on award to Bryant
Between the Bridges Subtidal		$ -	$ 6,612,274	$ 6,612,274	$ 7,273,501	10%	$ 7,273,501	Negotated and Awarded, added fee in Rev9
Dredge Cleanup Passes - Jacobs			$ 3,083,220	$ 3,083,220	$ 3,391,542	10%	$ 3,391,542	10% cleanup passes, based on BV CTC
Cap LHCC	$ 5,780,303	$ -	$ 5,100,000	$ 5,100,000	$ 5,992,500	18%	$ 5,992,500	Cost estimate from EPA
Hydraulic Dredging	$ 154,456,091	$ 51,365,786	$ -	$ 51,365,786	$ 51,365,786	0%	$ -	2014 through 2016 dredging less $12M, PMC, Parcel 265, and fixed costs
Temporary Pipeline Relo		$ -	$ 1,235,659	$ 1,235,659	$ 1,235,659	0%	$ 1,235,659	Negotated and Awarded
Capping DDA		$ -	$ -	$ -	$ -	20%	$ -	Capping of DDA cost estimated from ESD 4
Sand Cover		$ -	$ 2,925,000	$ 2,925,000	$ 3,217,500	10%	$ 3,217,500	This is an assumed volume of 100,000 cy, mechanical placement - ASSUMES ONLY 25% COVER USED - ORIGINALLY $11.7 AND 12.87 W/C
LTM Restoration			$ 500,000	$ 500,000	$ 550,000	10%	$ 550,000	Year 1 after restoration and Year 5 - Not previously included.
LHCC O&M	$ 580,163	$ -	$ 689,052	$ 689,052	$ 723,504	5%	$ 723,504	Cost to Complete is escalated UAO cost (3.5%)
Seafood Monitoring	$ 721,387	$ -	$ 579,290	$ 579,290	$ 579,290	0%	$ 579,290	Costs from MassDEP
Site Wide Benthic LTM	$ 818,703	$ 536,021	$ 550,000	$ 1,086,021	$ 1,140,322	5%	$ 577,500	Cost to Complete is escalated UAO cost (3.5%), assume 1/5yr
Fixed Costs	$ 54,927,518						$ -	Jacobs Fixed Costs,
Project Management and Admin		$ 6,741,999	$ 11,388,511	$ 18,130,510	$ 19,943,561	10%	$ 12,527,363	
Site Ops and Warehouse		$ 2,750,625	$ 4,646,326	$ 7,396,950	$ 8,136,645	10%	$ 5,110,958	
Air Monitoring		$ 1,043,984	$ 828,838	$ 1,872,822	$ 2,060,105	10%	$ 911,722	
Hybrid Dedging							$ -	
Cable Crossing			$ 27,443,740	$ 27,443,740	$ 30,188,114	10%	$ 30,188,114	Based on initial proposal for TO#4
SCENARIO #1								**Using items totaled above to determine gross area available for hybrid subtidal dredge**
SUBTOTAL	$ 370,839,939	$ 111,244,888		$ 272,530,461	$ 296,378,135		$ 182,369,888	
SETTLEMENT AMOUNT				$ 366,250,000	$ 366,250,000		$ -	
INTEREST				$ 6,500,000	$ 6,500,000		$ -	EPA assumption, correct interest rates and values to be provided, per EPA $2M in avail. Funding but not in contingency.
AVAILABLE FOR FUTURE SUBTIDAL				*$ 100,219,539*	*$ 76,371,865*		$ 76,371,865	**Settlement plus intererst less Subtotal of work listed above.**
SUBTIDAL CUBIC YARDS - HYBRID				*199,903.34*	*148,873.03*		$ -	$501.34 Includes Hybrid dredging, desanding, dewatering and T&D.
ESTIMATED SUBTIDAL DREDGE DAYS				**334**	**249**			Assume 600 CY/Day production
SCENARIO #2								**Using items subtotaled above, but using area specific volumes determined using SWAC/RAL from Comprehensive Plan PLUS 4 inches overdredge**
Future Subtidal using HYBRID METHOD			$ 82,847,638	$ 82,847,638	$ 91,132,402	10%	$ 91,132,402	This is the sum of the subtidal areas listed below using the hybrid rate of $501.34/yd. Additional data gap sampling is being conducted to revise these areas and potentially reduce the subtidal cost. Overdredge of 4 inches was included in the volume calculation.
Area O			$ 14,719,593	$ 14,719,593	$ 16,191,552	10%	$ 16,191,552	Includes 4 inches overdredge
Area N			$ 7,020,615	$ 7,020,615	$ 7,722,676	10%	$ 7,722,676	Includes 4 inches overdredge
Area H			$ 8,482,171	$ 8,482,171	$ 9,330,389	10%	$ 9,330,389	Includes 4 inches overdredge
Area P			$ 3,654,217	$ 3,654,217	$ 4,019,639	10%	$ 4,019,639	Includes 4 inches overdredge
Area I			$ 3,493,287	$ 3,493,287	$ 3,842,616	10%	$ 3,842,616	Includes 4 inches overdredge
Area R			$ 9,238,292	$ 9,238,292	$ 10,162,122	10%	$ 10,162,122	Includes 4 inches overdredge
Area L			$ 4,562,194	$ 4,562,194	$ 5,018,413	10%	$ 5,018,413	Includes 4 inches overdredge
Area S			$ 9,827,517	$ 9,827,517	$ 10,810,269	10%	$ 10,810,269	Includes 4 inches overdredge
MU-22			$ 257,488	$ 257,488	$ 283,237	10%	$ 283,237	Includes 4 inches overdredge
MU-26			$ 2,483,137	$ 2,483,137	$ 2,731,451	10%	$ 2,731,451	Includes 4 inches overdredge
MU-29			$ 6,430,788	$ 6,430,788	$ 7,073,867	10%	$ 7,073,867	Includes 4 inches overdredge
PMC			$ 11,372,397	$ 11,372,397	$ 12,509,636	10%	$ 12,509,636	Includes 4 inches overdredge
MU-31			$ 1,305,941	$ 1,305,941	$ 1,436,535	10%	$ 1,436,535	Includes 4 inches overdredge
TOTAL USING AREA SPECIFIC CALCULATIONS				$ 355,378,099	$ 387,510,537		$ 387,510,537	Total
SETTLEMENT plus Interest				**$ 372,750,000**	**$ 372,750,000**		**$ 372,750,000**	
BALANCE				**$ 17,371,901**	**$ (14,760,537)**		**$ (14,760,537)**	Remaining funding
SCENARIO #3								**Using items subtotaled above and specific area calculations usig SWAC/RAL - using mechanical excavation for listed volumes to LHCC for disposal.**
ASSUME AREAS TO LHCC NOT HYBRID								CALCULATED USING SPECIFIC VOLUMES LISTED ABOVE
MU-22			$ 102,720	$ 102,720.00	$ 112,992.00	10%	$ 112,992.00	Includes 4 inches of over dredge using mechanical method to LHCC (513.6)
MU-26			$ 990,600	$ 990,600.00	$ 1,089,660.00	10%	$ 1,089,660.00	Includes 4 inches of over dredge using mechanical method to LHCC (4953)
MU-29			$ 2,565,440	$ 2,565,440.00	$ 2,821,984.00	10%	$ 2,821,984.00	Includes 4 inches of over dredge using mechanical method to LHCC (12827.2)
PMC			$ 4,536,800	$ 4,536,800.00	$ 4,990,480.00	10%	$ 4,990,480.00	Includes 4 inches of over dredge using mechanical method to LHCC (22684)
MU-31			$ 520,980	$ 520,980.00	$ 573,078.00	10%	$ 573,078.00	Includes 4 inches of over dredge using mechanical method to LHCC (2604.9)
								Total cubic yards to LHCC - 43582.7. After BV and cleanup passes, approximately 44,000 cubic yards available in LHCC
DEDUCTION FOR CHANGE FROM HYB TO MEC				***$ 13,133,211***	***$ 14,446,532***			Cost savings by changing disposal
REVISED TOTAL COST				$ 342,244,889	$ 373,064,005			Total
SETTLEMENT plus Interest				**$ 372,750,000**	**$ 372,750,000**			
Balance				**30,505,111**	**-314,005**			Remaining funding
UNFUNDED EXPENSES								
Aerovox Sediment Removal		$ -	$ 18,627,241	$ 18,627,241	$ 27,940,861	50%	$ 27,940,861.47	
LTM Costs after 2021							$ -	LHCC O&M, Seafood and Benthic
Capping DDA	$ 1,781,530	$ -	$ 1,781,530	$ 1,781,530	$ 2,137,836	20%	$ 2,137,836.00	Included in Cells #123 Final Remedy.
Cells 1,2, 3 Final Remedy - no mixed waste				$ 16,613,069	$ 21,596,990	30%	$ 21,596,989.70	
Cells 1, 2, 3 Final Remedy			$ 22,969,595	$ 22,969,595	$ 29,860,474	30%	$ 29,860,473.50	Includes $1,781,530 to cap the DDA.