

# **Appendix A**

## **Project Cost Estimate**

- 1. 2005 GRR Poplar Island Cost Estimate**
- 2. FY 2013 Poplar Island Cost Estimate**
- 3. Poplar Island Existing, Cost by FY, updated to FY 2013 Price Level**
- 4. Poplar Island Expansion, Cost by FY, updated to FY 2013 Price Level**

TOTAL PROJECT COST SUMMARIES

ALL CONTRACTS

THIS ESTIMATE IS BASED ON THE GRR STUDY, DATED SEPTEMBER 2005

PROJECT: POPLAR ISLAND EXPANSION STUDY (NMFS Option)

PREPARED BY : CENAB-EN-DT OLIVER LEIMBACH

LOCATION : POPLAR ISLAND, MARYLAND

P.O.C.: JOHN NAUROT, CHIEF, ESTIMATING & SPECIFICATIONS SECTION

ACCOUNT NUMBER	ITEM DESCRIPTION	CURRENT MCACES ESTIMATE 25 MAY 05 EFFECTIVE PRICING LEVEL 10CT 04				AUTHORIZ./BUDGET YEAR EFFECTIVE PRICING LEVEL:			FULLY FUNDED ESTIMATE		
		COST (\$K)	CNTG (\$K)	CNTG %	TOTAL (\$K)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)	COST (\$K)	CNTG (\$K)	FULL (\$K)
12	NAVIGATION, PORTS & HARBORS	\$534,998	\$36,048	6.7%	\$571,045	\$534,998	\$36,048	\$571,045	\$608,148	\$43,363	\$651,511
	TOTAL CONSTRUCTION COST	\$534,998	\$36,048	6.7%	\$571,045	\$534,998	\$36,048	\$571,045	\$608,148	\$43,363	\$651,511
01	LANDS AND DAMAGES	\$39	\$0	0.0%	\$39	\$39	\$0	\$39	\$39	\$0	\$39
30	PLANNING, ENGINEERING AND DESIGN	\$33,216	\$2,925	8.8%	\$36,141	\$33,216	\$2,925	\$36,141	\$44,976	\$4,101	\$49,077
31	CONSTRUCTION MANAGEMENT	\$15,959	\$1,089	6.8%	\$17,047	\$15,959	\$1,089	\$17,047	\$20,044	\$1,497	\$21,541
	*** TOTAL PROJECT COSTS	\$584,211	\$40,061	6.9%	\$624,273	\$584,211	\$40,061	\$624,273	\$673,207	\$48,961	\$722,168

\*\*\* The Total Project Cost of \$722,168,312 includes \$6,436,155 in betterments. The betterments are due to phasing the construction of the dikes at the sponsor's request.

DISTRICT APPROVED:

DIVISION APPROVED:

John Naurot CHIEF, ESTIMATING AND SPECIFICATIONS SECTION  
James S. Tucker CHIEF, REAL ESTATE DIVISION  
Thomas S. Boney CHIEF, PLANNING DIVISION  
Donald J. May CHIEF, ENGINEERING DIVISION  
Christina E. Romale CHIEF, OPERATIONS DIVISION  
Debra E. Hitt CHIEF, PROGRAMS MANAGEMENT BRANCH  
Scott Johnson PROJECT MANAGER  
John A. Clark DDE (PM)

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 CHIEF, COST ENGINEERING  
 \_\_\_\_\_  
 DIRECTOR REALESTATE  
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 CHIEF, PROGRAMS MANAGEMENT  
 \_\_\_\_\_  
 DIRECTOR OF PPMD  
 \_\_\_\_\_  
 APPROVED DATE: \_\_\_\_\_

**WALLA WALLA COST ENGINEERING  
MANDATORY CENTER OF EXPERTISE**

**COST AGENCY TECHNICAL REVIEW**

**CERTIFICATION STATEMENT**

For

**NAB – PAUL S. SARBANES ECOSYSTEM RESTORATION  
POPLAR ISLAND LRR, BALTIMORE**

The Poplar Island Ecosystem Restoration LRR, as presented by Baltimore District, has undergone a successful Cost Agency Technical Review (Cost ATR), performed by the Walla Walla District Cost Engineering Mandatory Center of Expertise (Cost MCX) team. The Cost ATR included study of the project scope, report, cost estimates, schedules, escalation, and risk-based contingencies. This certification signifies the products meet the quality standards as prescribed in ER 1110-2-1150 Engineering and Design for Civil Works Projects and ER 1110-2-1302 Civil Works Cost Engineering.

As of December 10, 2012, the Cost Engineering MCX certifies the estimated total project cost of:

**EXISTING ISLAND EFFORT (PH 1 & 2)**

FY 2013 Price Level: \$360,815,000  
Fully Funded Amount: \$729,084,000 including \$308,352,000 spent costs

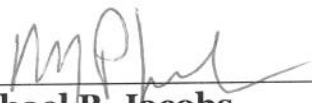
**ISLAND EXPANSION EFFORT**

FY 2013 Price Level: \$564,587,000  
Fully Funded Amount: \$701,123,000 (no spent costs)

It remains the responsibility of the District to correctly reflect these cost values within the Final Report and to implement effective project management controls and implementation procedures including risk management throughout the life of the project.



**US Army Corps  
of Engineers®**

  
\_\_\_\_\_  
**Michael P. Jacobs**  
Chief, Cost Engineering MCX  
Walla Walla District

Date 10 Dec 2012

\*\*\*\* TOTAL PROJECT COST SUMMARY \*\*\*\*

PROJECT: POPLAR ISLAND, PHASE 1 AND 2  
LOCATION: Poplar Island, MD

DISTRICT: NAB Baltimore  
POC: CHIEF, COST ENGINEERING, Daniel S. Durski

PREPARED: 11/20/2012

Limited Reevaluation Report Dated December 2012

This Estimate reflects the scope and schedule in report;

WBS Structure	ESTIMATED COST					PROJECT FIRST COST (Constant Dollar Basis)					TOTAL PROJECT COST (FULLY FUNDED)				
	COST (\$K) C	CNTG (\$K) D	CNTG (%) E	TOTAL (\$K) F	ESC (%) G	COST (\$K) H	CNTG (\$K) I	TOTAL (\$K) J	Spent Thru: 1-Oct-12 (\$K) K	L	COST (\$K) M	CNTG (\$K) N	FULL (\$K) O		
12	\$287,713	\$60,420	21%	\$348,133	0.0%	\$287,713	\$60,420	\$348,133	\$289,344		\$334,360	\$70,216	\$693,920		
<b>CONSTRUCTION ESTIMATE TOTALS:</b>						\$287,713	\$60,420	\$348,133	\$289,344		\$334,360	\$70,216	\$693,920		
01									\$39				\$39		
30	\$8,898	\$1,869	21%	\$10,766	0.0%	\$8,898	\$1,869	\$10,766	\$11,650		\$11,436	\$2,402	\$25,488		
31	\$1,583	\$333	21%	\$1,916	0.0%	\$1,583	\$333	\$1,916	\$7,319		\$1,916	\$402	\$9,637		
<b>PROJECT COST TOTALS:</b>						\$298,194	\$62,621	\$360,815	\$308,352		\$347,713	\$73,020	\$729,084		

CHIEF, COST ENGINEERING, Daniel S. Durski

PROJECT MANAGER, Kevin Brennan

CHIEF, REAL ESTATE, James S. Turkel

CHIEF, PLANNING, Amy M. Guise

CHIEF, ENGINEERING, Ronald J. Maj

CHIEF, OPERATIONS, Robert S. Pace

CHIEF, CONSTRUCTION, Jeff J. Werner

CHIEF, CONTRACTING, Renee Cairo-Iocco

CHIEF, PP-C, Christopher M. Nolita

CHIEF, DPM, David B. Morrow

ESTIMATED FEDERAL COST: 75%

ESTIMATED NON-FEDERAL COST: 25%

ESTIMATED TOTAL PROJECT COST: \$729,084

\*\*\*\* TOTAL PROJECT COST SUMMARY \*\*\*\*

PROJECT: POPLAR ISLAND, PHASE III - EXPANSION  
LOCATION: Poplar Island, MD

DISTRICT: NAB Baltimore  
POC: CHIEF, COST ENGINEERING, Daniel S. Durski

PREPARED: 11/20/2012

This Estimate reflects the scope and schedule in report; Limited Reevaluation Report Dated December 2012

WBS Structure	ESTIMATED COST				PROJECT FIRST COST (Constant Dollar Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
	COST (\$K) C	CNTG (\$K) D	CNTG (%) E	TOTAL (\$K) F	ESC (%) G	COST (\$K) H	CNTG (\$K) I	TOTAL (\$K) J	Spent Thru: 1-Oct-12 (\$K) K	L	COST (\$K) M	CNTG (\$K) N	FULL (\$K) O
WBS NUMBER A	Civil Works Feature & Sub-Feature Description B												
12	\$434,798	\$91,308	21%	\$526,105	0.0%	\$434,798	\$91,308	\$526,105	\$0		\$527,818	\$110,842	\$638,660
<b>CONSTRUCTION ESTIMATE TOTALS:</b>				\$526,105	0.0%	\$434,798	\$91,308	\$526,105	\$0		\$527,818	\$110,842	\$638,660
01	LANDS AND DAMAGES												
30	\$22,015	\$4,623	21%	\$26,638	0.0%	\$22,015	\$4,623	\$26,638	\$0		\$35,585	\$7,473	\$43,058
31	\$9,789	\$2,056	21%	\$11,844	0.0%	\$9,789	\$2,056	\$11,844	\$0		\$16,038	\$3,368	\$19,406
<b>PROJECT COST TOTALS:</b>				\$564,567	21%	\$466,601	\$97,986	\$564,567	\$0		\$579,441	\$121,883	\$701,123

CHIEF, COST ENGINEERING, Daniel S. Durski  
PROJECT MANAGER, Kevin Brennan  
CHIEF, REAL ESTATE, James S. Turkel  
CHIEF, PLANNING, Amy M. Guise  
CHIEF, ENGINEERING, Ronald J. Maj  
CHIEF, OPERATIONS, Robert S. Pace  
CHIEF, CONSTRUCTION, Jeff J. Werner  
CHIEF, CONTRACTING, Renee Cairo-Iocco  
CHIEF, PP-C, Christopher M. Nolta  
CHIEF, DPM, David B. Morrow

ESTIMATED FEDERAL COST: 65% \$455,730  
ESTIMATED NON-FEDERAL COST: 35% \$245,393  
ESTIMATED TOTAL PROJECT COST: \$701,123

O&M OUTSIDE OF TOTAL PROJECT COST:

TOTAL PROJECT COST SUMMARY

ALL CONTRACTS STARTING: FY- 12

THIS ESTIMATE IS BASED ON DESIGN CONTAINED IN THE GENERAL REEVALUATION REPORT DATED **SEPTEMBER 2005**

PREPARED BY: **CENAB-EN-DT, LUAN NGO**

PROJECT: **POPLAR ISLAND, PHASE 1 AND 2**

P.O.C.: **DANIEL DURSKI, CHIEF, ESTIMATING AND SPECS SECTION**

LOCATION: **POPLAR ISLAND, MARYLAND**

ACCOUNT NUMBER	ITEM DESCRIPTION	Spent thru 2010 (\$K)	CURRENT MII ESTIMATE: 2012				AUTHORIZ./BUDGET YEAR: 2012			FULLY FUNDED ESTIMATE:		
			EFFECTIVE PRICING LEVEL: 1-Oct-11				EFFECTIVE PRICING LEVEL: 1-Oct-11			COST (\$K)	CNTG (\$K)	FULL (\$K)
			COST (\$K)	CNTG (\$K)	CNTG %	TOTAL (\$K)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)			
12	NAVIGATION, PORT, & HARBORS Spent thru 1 Oct 2010 <b>TOTAL CONSTRUCTION COST</b>	272,039	319,168	67,025	21%	386,193	319,168	67,025	386,193	370,153	77,732	447,886
			<b>319,168</b>	<b>67,025</b>	<b>21%</b>	<b>386,193</b>	<b>319,168</b>	<b>67,025</b>	<b>386,193</b>	<b>370,153</b>	<b>77,732</b>	<b>719,925</b>
01	LAND AND DAMAGES Spent thru 1 Oct 2010	39										39
30	PLANNING, ENGINEERING AND DESIGN Spent thru 1 Oct 2010	10,580	9,538	2,003	21%	11,541	9,538	2,003	11,541	12,536	2,633	15,169
31	CONSTRUCTION MANAGEMENT Spent thru 1 Oct 2010	7,031	1,697	356	21%	2,054	1,697	356	2,054	2,097	440	2,537
	<b>TOTAL PROJECT COSTS</b>	<b>289,689</b>	<b>330,403</b>	<b>69,385</b>	<b>21%</b>	<b>399,788</b>	<b>330,403</b>	<b>69,385</b>	<b>399,788</b>	<b>384,787</b>	<b>80,805</b>	<b>\$465,592</b>

Total Existing  
755,281

DISTRICT APPROVED:

DIVISION APPROVED:

Federal 75% \$349,194  
Non-Federal 25% \$116,398

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CHIEF, ESTIMATING AND SPECIFICATIONS SECTION

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CHIEF, REAL ESTATE DIVISION

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CHIEF, PLANNING DIVISION

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CHIEF, CIVIL PROGRAMS BRANCH

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CHIEF, ENGINEERING DIVISION

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CHIEF, OPERATIONS DIVISION

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CHIEF, PROGRAMS MANAGEMENT BRANCH

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PROJECT MANAGER

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DDE (PM)

\_\_\_\_\_  
CHIEF, COST ENGINEERING

\_\_\_\_\_  
DIRECTOR REALESTATE

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CHIEF, PROGRAMS MANAGEMENT

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DIRECTOR OF PPMD

APPROVED DATE: \_\_\_\_\_

TOTAL PROJECT COST SUMMARY  
 ALL CONTRACTS STARTING: **FY- 12**  
 THIS ESTIMATE IS BASED ON DESIGN CONTAINED IN THE GENERAL REEVALUATION REPORT DATED **SEPTEMBER 2005**  
 PREPARED BY: **CENAB-EN-DT, LUAN NGO**  
 P.O.C.: **DANIEL DURSKI, CHIEF, ESTIMATING AND SPECS SECTION**

PROJECT: **POPLAR ISLAND, EXPANSION**  
 LOCATION: **POPLAR ISLAND, MARYLAND**

ACCOUNT NUMBER	ITEM DESCRIPTION	CURRENT MII ESTIMATE: <b>2012</b>				AUTHORIZ./BUDGET YEAR: <b>2012</b>			FULLY FUNDED ESTIMATE:		
		EFFECTIVE PRICING LEVEL: <b>10/1/2011</b>				EFFECTIVE PRICING LEVEL: <b>1-Oct-11</b>			COST (\$K)	CNTG (\$K)	FULL (\$K)
		COST (\$K)	CNTG (\$K)	CNTG %	TOTAL (\$K)	COST (\$K)	CNTG (\$K)	TOTAL (\$K)			
12	NAVIGATION, PORT, & HARBORS	431,420	90,598	21%	522,018	431,420	90,598	522,018	520,570	109,320	629,889
	<b>TOTAL CONSTRUCTION COST</b>	<b>431,420</b>	<b>90,598</b>	<b>21%</b>	<b>522,018</b>	<b>431,420</b>	<b>90,598</b>	<b>522,018</b>	<b>520,570</b>	<b>109,320</b>	<b>629,889</b>
30	PLANNING, ENGINEERING AND DESIGN	24,091	5,059	21%	29,150	24,091	5,059	29,150	39,419	8,278	47,697
31	CONSTRUCTION MANAGEMENT	8,796	1,847	21%	10,643	8,796	1,847	10,643	14,918	3,133	18,051
	<b>TOTAL PROJECT COSTS</b>	<b>464,306</b>	<b>97,504</b>	<b>21%</b>	<b>561,810</b>	<b>464,306</b>	<b>97,504</b>	<b>561,810</b>	<b>574,907</b>	<b>120,730</b>	<b>\$695,637</b>

695,637,334

DISTRICT APPROVED:

DIVISION APPROVED:

*Federal* 75% \$521,728  
*Non-Federal* 25% \$173,909

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 CHIEF, ESTIMATING AND SPECIFICATIONS SECTION

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 CHIEF, COST ENGINEERING

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 CHIEF, REAL ESTATE DIVISION

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 DIRECTOR REALESTATE

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 CHIEF, PLANNING DIVISION

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 CHIEF, PROGRAMS MANAGEMENT

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 CHIEF, CIVIL PROGRAMS BRANCH

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 DIRECTOR OF PPMD

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 CHIEF, ENGINEERING DIVISION

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 CHIEF, OPERATIONS DIVISION

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 CHIEF, PROGRAMS MANAGEMENT BRANCH

APPROVED DATE: \_\_\_\_\_

\_\_\_\_\_  
 PROJECT MANAGER

\_\_\_\_\_  
 DDE (PM)

Poplar Island Existing, Cost by FY, updated to FY 2013 Price Level

		Total Costs	Discounted Costs
-15	1998	\$9,899	\$17,195
-14	1999	\$35,389	\$59,252
-13	2000	\$17,273	\$27,875
-12	2001	\$51,322	\$51,322
-11	2002	\$23,185	\$23,185
-10	2003	\$13,338	\$13,338
-9	2004	\$16,870	\$16,870
-8	2005	\$14,718	\$14,718
-7	2006	\$15,427	\$15,427
-6	2007	\$17,213	\$17,213
-5	2008	\$21,499	\$21,499
-4	2009	\$17,525	\$17,525
-3	2010	\$15,958	\$15,958
-2	2011	\$10,343	\$10,343
-1	2012	\$25,911	\$25,911
0	2013	\$22,582	\$22,582
1	2014	\$21,357	\$20,585
2	2015	\$21,357	\$19,841
3	2016	\$22,264	\$19,936
4	2017	\$41,148	\$35,514
5	2018	\$40,725	\$33,878
6	2019	\$22,989	\$18,433
7	2020	\$20,376	\$15,747
8	2021	\$20,376	\$15,178
9	2022	\$20,376	\$14,629
10	2023	\$9,893	\$6,846
11	2024	\$13,469	\$8,984
12	2025	\$7,694	\$4,946
13	2026	\$6,061	\$3,756
14	2027	\$6,061	\$3,620
15	2028	\$5,974	\$3,439
16	2029	\$5,710	\$3,168
17	2030	\$5,710	\$3,054
18	2031	\$5,710	\$2,943
19	2032	\$5,710	\$2,837
20	2033	\$5,710	\$2,734
21	2034	\$5,710	\$2,636
22	2035	\$5,710	\$2,540
23	2036	\$5,710	\$2,449
24	2037	\$5,488	\$2,268
25	2038	\$1,158	\$461
26	2039	\$1,158	\$445
27	2040	\$1,158	\$429



28	2041	\$1,157	\$413
29	2042	\$1,157	\$398
30	2043	\$1,157	\$383

TOTAL            \$666,685            \$622,704

Annual cost over 30 years            \$34,926  
Annual cost over 37 years            \$31,391

Note: Since benefits are already accruing, IDC is not included.

Poplar Island Expansion, Cost by FY, updated to FY 2013 Price Level

		Total Costs	Discounted Costs
0	2013	\$0	\$0
1	2014	\$1,295	\$1,248
2	2015	\$1,295	\$1,203
3	2016	\$68,314	\$61,171
4	2017	\$41,573	\$35,881
5	2018	\$37,693	\$31,356
6	2019	\$21,361	\$17,127
7	2020	\$22,764	\$17,593
8	2021	\$22,764	\$16,957
9	2022	\$22,764	\$16,344
10	2023	\$32,627	\$22,579
11	2024	\$32,627	\$21,762
12	2025	\$34,640	\$22,270
13	2026	\$34,640	\$21,465
14	2027	\$33,512	\$20,016
15	2028	\$36,895	\$21,240
16	2029	\$36,720	\$20,375
17	2030	\$15,962	\$8,537
18	2031	\$5,971	\$3,078
19	2032	\$7,750	\$3,851
20	2033	\$5,753	\$2,755
21	2034	\$6,334	\$2,924
22	2035	\$6,334	\$2,818
23	2036	\$5,971	\$2,560
24	2037	\$5,823	\$2,407
25	2038	\$5,465	\$2,177
26	2039	\$5,465	\$2,098
27	2040	\$3,069	\$1,136
28	2041	\$3,069	\$1,095
29	2042	\$3,069	\$1,055
30	2043	\$3,068	\$1,017
		\$564,587	\$386,093

Annual cost over 30 years: \$21,655

Annual cost over 37 years: \$19,463