

**MARYLAND DEPARTMENT OF THE ENVIRONMENT  
BAY RESTORATION FUND  
ENHANCED NUTRIENT REMOVAL PROGRAM**

 Planning/Design Phase  
 Construction Phase

WWTP - NAME	SEP 2005 Estimate ENR Cost (\$ M)	ESTIMATED PROJECT SCHEDULE										
		FY										
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
APG-Aberdeen	\$ -	Fed \$ (5.5M)										
BACK RIVER	\$ 150.00											
BRUNSWICK	\$ 2.00											
CELANESE	\$ 2.02											
CHESTERTOWN	\$ 2.00											
COX CREEK	\$ 33.00											
CRISFIELD	\$ 4.23											
DELMAR	\$ 1.20											
EASTON	\$ 7.89											
ELKTON	\$ 4.00											
FEDERALSBURG	\$ 2.27											
FREDERICK CITY	\$ 10.00											
HURLOCK	\$ 0.88											
INDIAN HEAD	\$ 3.30											
KENT ISL.	\$ 6.50											
LEONARDTOWN	\$ 4.20											
PATAPSCO	\$ 120.00											
PERRYVILLE	\$ 3.44											
SALISBURY	\$ 3.00											
SENECA	\$ 5.00											
SNOW HILL	\$ 1.00											
ST. MICHAEL'S (Talbot)	\$ 1.72											
SWAN POINT	\$ -	Pvt. \$										
WESTERN BR.	\$ 33.50											
ANNAPOLIS	\$ 5.06											
BALLENGER	\$ 4.83											
BLUE PLAINS	\$ 200.00	TBD ??										
BOWIE	\$ 1.00											
BROADNECK	\$ 10.10											
BROADWATER	\$ 3.87											
CHESAPEAKE BEACH	\$ 3.34											
CONOCOCHIEAGUE	\$ 5.20											
CUMBERLAND	\$ 16.50											
DAMASCUS	\$ 0.75											
DENTON	\$ 3.10											
DORSEY RUN	\$ 3.87											
GEORGE'S CREEK	\$ 2.98											
HAGERSTOWN	\$ 8.90											
HAVRE DeGRACE	\$ 4.06											
JOPPATOWNE	\$ 3.20											
MARYLAND CITY	\$ 4.18											
MATTAWOMAN	\$ 21.60											
MAYO LARGE COMMUNAL	\$ 3.38											
PARKWAY	\$ 8.30											
PATUXENT	\$ 7.36											
PISCATAWAY	\$ 1.40											
SOD RUN	\$ 22.57											
ABERDEEN	\$ 5.14											
CAMBRIDGE	\$ 6.00											
CENTREVILLE	\$ 1.00											
EMMITSBURG	\$ 3.07											
FREEDOM DISTRICT	\$ 3.47											
FRUITLAND	\$ 3.10											
LaPLATA	\$ 3.55											
LITTLE PATUXENT	\$ 28.00											
MARLAY TAYLOR	\$ 11.36											
MCI	\$ 15.30											
MT. AIRY	\$ 3.20											
NORTHEAST	\$ 3.87											
POCOMOKE CITY	\$ 3.48											
POOLESVILLE	\$ 3.07											
PRIN ANNE	\$ -	May not need										
TANEYTOWN	\$ 3.29											
THURMONT	\$ 3.23											
WESTMINSTER	\$ 8.60											
WINEBRENNER WWTP	\$ 3.23											
CASH FLOW (\$ Million)	\$ 858.67	\$ -	\$ 30	\$ 70	\$ 105	\$ 163	\$ 193	\$ 129	\$ 78	\$ 45	\$ 45	
			2006	2007	2008	2009	2010	2011	2012	2013	2014	

09/26/05

SEP 2005 Estimate ENR Cost (\$ M)	PROJECTED CASH FLOW (\$ MILLION)										Total Check (\$ M)	
	FY 2005	2006	2007	2008	2009	2010	2011	2012	2013	2104		
\$ -	Fed \$											\$ -
\$ 150,000,000		\$ 10.00	\$ 20.00	\$ 20.00	\$ 33.33	\$ 33.33	\$ 33.33					\$ 150.00
\$ 2,000,000	\$ 0.60	\$ 1.40										\$ 2.00
\$ 2,022,000	\$ 2.02											\$ 2.02
\$ 2,000,000	\$ 0.20	\$ 1.80										\$ 2.00
\$ 33,000,000		\$ 11.85	\$ 10.58	\$ 10.58								\$ 33.00
\$ 4,231,000	\$ 4.23											\$ 4.23
\$ 1,200,000		\$ 0.20	\$ 1.00									\$ 1.20
\$ 7,894,000	\$ 7.89											\$ 7.89
\$ 4,000,000	\$ 0.40	\$ 3.60										\$ 4.00
\$ 2,273,000	\$ 0.27	\$ 2.00										\$ 2.27
\$ 10,000,000	\$ 0.20	\$ 9.80										\$ 10.00
\$ 875,000	\$ 0.88											\$ 0.88
\$ 3,300,000	\$ 0.80	\$ 2.50										\$ 3.30
\$ 6,500,000	\$ 6.50											\$ 6.50
\$ 4,200,000		\$ 4.20										\$ 4.20
\$ 120,000,000		\$ 8.00	\$ 37.33	\$ 37.33	\$ 37.33							\$ 120.00
\$ 3,438,000	\$ 0.08	\$ 3.36										\$ 3.44
\$ 3,000,000	\$ 3.00											\$ 3.00
\$ 5,000,000	\$ 0.50	\$ 1.00	\$ 3.50									\$ 5.00
\$ 1,000,000	\$ 0.20	\$ 0.80										\$ 1.00
\$ 1,722,000	\$ 1.72											\$ 1.72
\$ -												\$ -
\$ 33,500,000	\$ 0.50	\$ 9.50	\$ 11.75	\$ 11.75								\$ 33.50
\$ 5,062,000			\$ 0.51	\$ 2.28	\$ 2.28							\$ 5.06
\$ 4,831,000			\$ 0.48	\$ 2.17	\$ 2.17							\$ 4.83
\$ 200,000,000		\$ 6.67	\$ 6.67	\$ 6.67	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00				\$ 200.00
\$ 1,000,000			\$ 0.10	\$ 0.45	\$ 0.45							\$ 1.00
\$ 10,100,000			\$ 1.01	\$ 4.55	\$ 4.55							\$ 10.10
\$ 3,866,000			\$ 0.39	\$ 1.74	\$ 1.74							\$ 3.87
\$ 3,344,000			\$ 0.33	\$ 1.50	\$ 1.50							\$ 3.34
\$ 5,202,000			\$ 0.52	\$ 2.34	\$ 2.34							\$ 5.20
\$ 16,500,000			\$ 1.65	\$ 7.43	\$ 7.43							\$ 16.50
\$ 750,000			\$ 0.08	\$ 0.34	\$ 0.34							\$ 0.75
\$ 3,103,000			\$ 0.31	\$ 1.40	\$ 1.40							\$ 3.10
\$ 3,866,000			\$ 0.39	\$ 1.74	\$ 1.74							\$ 3.87
\$ 2,976,000			\$ 0.30	\$ 1.34	\$ 1.34							\$ 2.98
\$ 8,900,000			\$ 0.89	\$ 4.01	\$ 4.01							\$ 8.90
\$ 4,057,000			\$ 0.41	\$ 1.83	\$ 1.83							\$ 4.06
\$ 3,198,000			\$ 0.32	\$ 1.44	\$ 1.44							\$ 3.20
\$ 4,184,000			\$ 0.42	\$ 1.88	\$ 1.88							\$ 4.18
\$ 21,600,000			\$ 2.16	\$ 9.72	\$ 9.72							\$ 21.60
\$ 3,380,000			\$ 0.34	\$ 1.52	\$ 1.52							\$ 3.38
\$ 8,300,000			\$ 0.83	\$ 3.74	\$ 3.74							\$ 8.30
\$ 7,364,000			\$ 0.74	\$ 3.31	\$ 3.31							\$ 7.36
\$ 1,400,000			\$ 0.14	\$ 0.63	\$ 0.63							\$ 1.40
\$ 22,568,000			\$ 2.26	\$ 10.16	\$ 10.16							\$ 22.57
\$ 5,138,000				\$ 0.51	\$ 2.31	\$ 2.31						\$ 5.14
\$ 6,000,000				\$ 0.60	\$ 2.70	\$ 2.70						\$ 6.00
\$ 1,000,000				\$ 0.10	\$ 0.45	\$ 0.45						\$ 1.00
\$ 3,071,000				\$ 0.31	\$ 1.38	\$ 1.38						\$ 3.07
\$ 3,472,000				\$ 0.35	\$ 1.56	\$ 1.56						\$ 3.47
\$ 3,103,000				\$ 0.31	\$ 1.40	\$ 1.40						\$ 3.10
\$ 3,548,000				\$ 0.35	\$ 1.60	\$ 1.60						\$ 3.55
\$ 28,000,000				\$ 2.80	\$ 12.60	\$ 12.60						\$ 28.00
\$ 11,356,000				\$ 1.14	\$ 5.11	\$ 5.11						\$ 11.36
\$ 15,300,000				\$ 1.53	\$ 6.89	\$ 6.89						\$ 15.30
\$ 3,198,000				\$ 0.32	\$ 1.44	\$ 1.44						\$ 3.20
\$ 3,866,000				\$ 0.39	\$ 1.74	\$ 1.74						\$ 3.87
\$ 3,484,000				\$ 0.35	\$ 1.57	\$ 1.57						\$ 3.48
\$ 3,071,000				\$ 0.31	\$ 1.38	\$ 1.38						\$ 3.07
\$ -	\$3.4M (may not need)											\$ -
\$ 3,294,000				\$ 0.33	\$ 1.48	\$ 1.48						\$ 3.29
\$ 3,230,000				\$ 0.32	\$ 1.45	\$ 1.45						\$ 3.23
\$ 8,600,000				\$ 0.86	\$ 3.87	\$ 3.87						\$ 8.60
\$ 3,230,000				\$ 0.32	\$ 1.45	\$ 1.45						\$ 3.23
\$ 858,667,000	\$ -	\$ 30.00	\$ 70.00	\$ 105.38	\$ 163.02	\$ 193.21	\$ 128.72	\$ 78.33	\$ 45.00	\$ 45.00		\$ 858.67
		2006	2007	2008	2009	2010	2011	2012	2013	2014		

\$5M per MDE/\$15.9 pr WSSC

\$55M per WSSC

\$1.4M per WSSC

\$0.75M per WSSC

\$8.3M per WSSC

\$1.4M per WSSC

??

**Bay Restoration Fund  
WWTP Upgrade Cashflow Projection (does not include Septics)**

15 Year Revenue Bonds

Fiscal Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Totals
<b>Revenues</b>												
	Actual	Projected >>	Assume 1% revenue growth rate									
Net WWTP Revenue (less MDE Admin. Fee)	\$ 6,917,327	\$ 56,000,000	\$ 56,560,000	\$ 57,125,600	\$ 57,696,856	\$ 58,273,825	\$ 58,856,563	\$ 59,445,128	\$ 60,039,580	\$ 60,639,976	\$ 61,246,375	\$ 592,801,229
Net Bond Sale Proceeds (1)	\$ -	\$ -	\$ -	\$ 49,250,000	\$ 128,050,000	\$ 177,300,000	\$ 128,050,000	\$ 39,400,000	\$ -	\$ -	\$ -	\$ 522,050,000
Interest (Assume 2% APR on Avg. Balance)	\$ 38,738	\$ 280,000	\$ 282,800	\$ 285,628	\$ 288,484	\$ 291,369	\$ 294,283	\$ 297,226	\$ 300,198	\$ 303,200	\$ 306,232	\$ 2,968,158
<b>Total Revenue for ENR/Sewer Upgrades</b>	<b>\$ 6,956,065</b>	<b>\$ 56,280,000</b>	<b>\$ 56,842,800</b>	<b>\$ 106,661,228</b>	<b>\$ 186,035,340</b>	<b>\$ 235,865,194</b>	<b>\$ 187,200,846</b>	<b>\$ 99,142,354</b>	<b>\$ 60,339,778</b>	<b>\$ 60,943,175</b>	<b>\$ 61,552,607</b>	<b>\$ 1,111,272,777</b>
<b>Expenditures</b>												
<b>ENR Capital Grants to WWTPs</b>	<b>\$ -</b>	<b>\$ 30,000,000</b>	<b>\$ 70,000,000</b>	<b>\$ 105,000,000</b>	<b>\$ 163,000,000</b>	<b>\$ 193,000,000</b>	<b>\$ 129,000,000</b>	<b>\$ 78,000,000</b>	<b>\$ 45,000,000</b>	<b>\$ 45,000,000</b>		<b>\$ 858,000,000</b>
Sewer Infrastructure Grants	\$ -	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000,000
ENR O&M Grants to WWTPs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 30,000,000
Debt Service Reserve (10% of bond issue)	\$ -	\$ -	\$ -	\$ 5,000,000	\$ 13,000,000	\$ 18,000,000	\$ 13,000,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 53,000,000
Debt Service	\$ -	\$ -	\$ -	\$ -	\$ 4,817,114	\$ 17,341,612	\$ 34,683,224	\$ 47,207,721	\$ 51,061,412	\$ 51,061,412	\$ 51,061,412	\$ 257,233,908
<b>Total Expenditure for ENR/Sewer Upgrades</b>	<b>\$ -</b>	<b>\$ 35,000,000</b>	<b>\$ 75,000,000</b>	<b>\$ 115,000,000</b>	<b>\$ 185,817,114</b>	<b>\$ 233,341,612</b>	<b>\$ 181,683,224</b>	<b>\$ 134,207,721</b>	<b>\$ 101,061,412</b>	<b>\$ 101,061,412</b>	<b>\$ 56,061,412</b>	<b>\$ 1,218,233,908</b>
<b>Fund Balances</b>												
Beginning Balance	\$ -	\$ 6,956,065	\$ 28,236,065	\$ 10,078,865	\$ 1,740,093	\$ 1,958,319	\$ 4,481,901	\$ 9,999,523	\$ (25,065,844)	\$ (65,787,479)	\$ (105,905,716)	
Ending Balance	\$ 6,956,065	\$ 28,236,065	\$ 10,078,865	\$ 1,740,093	\$ 1,958,319	\$ 4,481,901	\$ 9,999,523	\$ (25,065,844)	\$ (65,787,479)	\$ (105,905,716)	\$ (100,414,521)	
<b>Bond Issuance</b>												
<b>Bonds Sold (2)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 50,000,000</b>	<b>\$ 130,000,000</b>	<b>\$ 180,000,000</b>	<b>\$ 130,000,000</b>	<b>\$ 40,000,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 530,000,000</b>

(1) Net of Bond Issuance Costs, estimated at 1.5% of bond issuance

(2) Assumes 15-year term at 5% interest rate with level debt service  
9/26/2005

Fiscal Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Totals
Bonds Sold (@ 5% interest rate, 15 year term)	\$ -	\$ -	\$ -	\$ 50,000,000	\$ 130,000,000	\$ 180,000,000	\$ 130,000,000	\$ 40,000,000	\$ -	\$ -	\$ -	\$ 530,000,000
Outstanding Debt	\$ -	\$ -	\$ -	\$ 50,000,000	\$ 177,682,886	\$ 349,225,418	\$ 462,003,465	\$ 477,895,918	\$ 450,729,301	\$ 422,204,354	\$ 392,253,159	
Cum. Principal Payment	\$ -	\$ -	\$ -	\$ -	\$ 2,317,114	\$ 8,457,467	\$ 17,221,953	\$ 24,107,548	\$ 27,166,617	\$ 28,524,947	\$ 29,951,195	
Cum. Interest Payment	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	\$ 8,884,144	\$ 17,461,271	\$ 23,100,173	\$ 23,894,796	\$ 22,536,465	\$ 21,110,218	
Cum. D/S Payment	\$ -	\$ -	\$ -	\$ -	\$ 4,817,114	\$ 17,341,612	\$ 34,683,224	\$ 47,207,721	\$ 51,061,412	\$ 51,061,412	\$ 51,061,412	