Basinwide Cap Load Analysis: Findings and Recommendations

Water Quality Steering Committee

April 15, 2009

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And the CBP Modeling Team

Overview

- Presentation of loads of initial key scenarios and the Bay DO and chlorophyll *a* attainment response.
- Presentation of summary tabular and graphical analyses using key dissolved oxygen and chlorophyll *a* metrics like percent bottom area in non-attainment, percent volume in non-attainment, segments in nonattainment, etc.
- Bay DO responses to incremental loading reductions—The Movie.
- Analysis of each of the remaining 'problem segments' in non-attainment with recommendations on a solution.
- Recommended initial preliminary draft basinwide cap loads needed to meet the states' Bay water quality standards.

Total Nitrogen and Total Phosphorus Loads of the Phase 5.1 and Phase 5.2 Scenarios IN Millions of Pounds

Scenario	Phase 5.1 TN	Phase 5.2 TN	Phase 5.1 TP	Phase 5.2 TP
1985	**420**		**28.4**	
Intermediate C	**378**	**-**	**24.5**	**-**
'91-'00 Base	**340**		**24.1**	
2002	**333**		**20.9**	
Intermediate B	**279**	**-**	**17.2**	**-**
Tributary Strat.	**236**		**21.1**	
Intermediate A	**209**	**-**	**13.7**	**-**
2003 Allocation	**175**		**12.8**	
Intermediate D	**159**	**-**	**12.3**	**-**
E3	**138**		**12.0**	

Loads of the Coupled Phase 5.1 and WQSTM Scenarios By Basin

Total Nitrogen Loads by Basin (millions of pounds/year)

Basin	1985 Scenario	Intermediate C Scenario	1991-2000 Base Scenario	2002 Scenario	Intermediate B Scenario	2010 Tributary Strategy Scenario	Intermediate A Scenario	2003 Allocation Scenario	Intermediate D Scenario	E3 2010 Scenario
Susquehanna	162.0	146.3	136.0	136.1	109.5	88.0	83.2	76.3	64.8	56.9
Eastern Shore	43.0	38.7	36.5	34.4	28.7	26.3	21.5	14.8	16.5	14.4
Western Shore	28.4	25.1	18.8	16.0	17.5	10.9	12.1	11.1	8.2	6.6
Patuxent	5.2	4.7	4.6	4.5	3.7	3.9	3.0	2.4	2.4	2.2
Potomac	111.1	99.2	84.7	87.1	71.5	60.4	59.2	39.3	43.3	36.5
Rappahannock	12.8	11.7	10.5	10.5	9.0	8.1	7.1	5.1	5.8	5.3
York	11.0	10.0	9.1	9.1	7.7	7.2	6.0	5.5	4.9	4.4
James	46.9	42.3	39.4	36.1	31.8	30.9	24.3	25.7	19.0	16.8
Total	**420.4**	**378.1**	**339.6**	**333.9**	**279.4**	**235.7**	**216.3**	**180.1**	**165.0**	**142.9**

Loads of the Coupled Phase 5.1 and WQSTM Scenarios By Basin

Total Phosphorus Loads by Basin (millions of pounds/year)

Basin	1985 Scenario	Intermediate C Scenario	1991-2000 Base Scenario	2002 Scenario	Intermediate B Scenario	2010 Tributary Strategy Scenario	Intermediate A Scenario	2003 Allocation Scenario	Intermediate D Scenario	E3 2010 Scenario
Susquehanna	6.27	5.32	5.32	4.94	3.51	4.02	2.62	2.52	2.27	2.21
Eastern Shore	4.03	3.40	3.66	2.73	2.21	2.37	1.63	1.22	1.40	1.36
Western Shore	1.82	1.48	1.07	0.95	0.83	0.75	0.52	0.84	0.39	0.37
Patuxent	0.54	0.45	0.45	0.40	0.27	0.33	0.18	0.21	0.15	0.14
Potomac	6.02	5.29	6.19	5.29	3.92	4.71	3.13	3.35	2.87	2.83
Rappahannock	1.36	1.24	1.29	1.11	1.02	1.27	0.91	0.62	0.86	0.86
York	1.07	0.91	0.83	0.67	0.62	0.69	0.47	0.48	0.41	0.40
James	7.25	6.43	5.27	4.89	4.86	6.82	4.10	3.42	3.80	3.75
Total	**28.36**	**24.52**	**24.08**	**20.97**	**17.24**	**20.96**	**13.57**	**12.64**	**12.15**	**11.93**

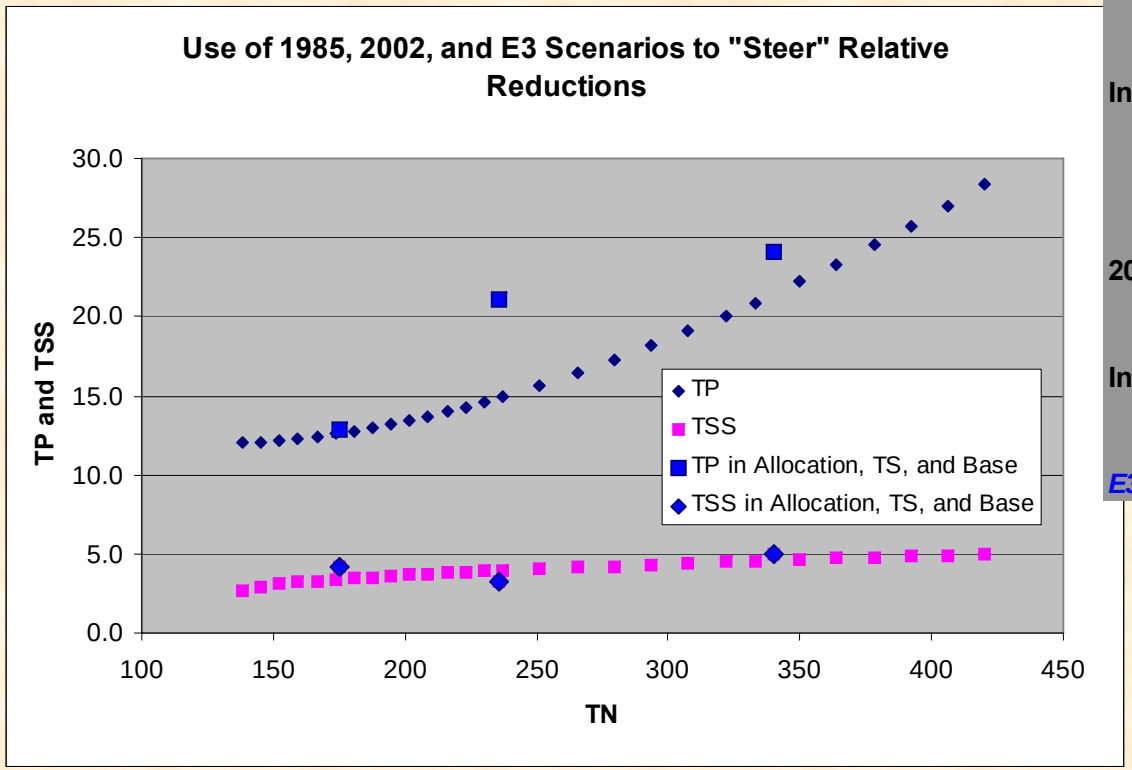
Loads of the Coupled Phase 5.1 and WQSTM Scenarios By Basin

Total Sediment Loads by Basin (millions of tons/year)

Basin	1985 Scenario	Intermediate C Scenario	1991-2000 Base Scenario	2002 Scenario	Intermediate B Scenario	2010 Tributary Strategy Scenario	Intermediate A Scenario	2003 Allocation Scenario	Intermediate D Scenario	E3 2010 Scenario
Susquehanna	1.57	1.51	1.46	1.46	1.34	0.96	1.18	0.98	1.02	0.85
Eastern Shore	0.20	0.19	0.18	0.17	0.16	0.13	0.14	0.17	0.12	0.10
Western Shore	0.16	0.15	0.14	0.14	0.12	0.10	0.10	0.10	0.08	0.05
Patuxent	0.10	0.10	0.10	0.09	0.08	0.07	0.07	0.10	0.06	0.04
Potomac	1.34	1.29	1.52	1.26	1.16	0.94	0.94	1.36	0.83	0.71
Rappahannock	0.32	0.31	0.29	0.28	0.28	0.23	0.26	0.29	0.24	0.21
York	0.10	0.10	0.09	0.08	0.08	0.06	0.07	0.11	0.06	0.05
James	1.27	1.21	1.19	1.12	1.05	0.79	0.90	0.95	0.74	0.57
Total	**5.05**	**4.85**	**4.97**	**4.60**	**4.29**	**3.29**	**3.67**	**4.05**	**3.14**	**2.58**

An Initial Look At What A Bay-Wide Allocation May Look Like

In gray are the Phase 5.1 scenarios we'll use to examine the loads leading up to, and in the neighborhood of, the nutrient and sediment loads needed to achieve the DO and chlorophyll water quality standards.



Scenario		TN	TP	TSS
1985	*1.000*	*420*	*28.4*	*4.97*
	0.950	406	27.0	4.9
	0.900	392	25.8	4.84
Intermediate C	**0.850**	**378**	**24.5**	**4.77**
	0.800	364	23.3	4.70
	0.750	350	22.2	4.62
91-'00 Base		**340**	**24.1**	**4.97**
2002	*0.690*	*333*	*20.9*	*4.53*
	0.650	322	20.1	4.47
	0.600	308	19.1	4.39
	0.550	293	18.1	4.31
Intermediate B	**0.500**	**279**	**17.2**	**4.22**
	0.450	265	16.4	4.13
	0.400	251	15.6	4.04
	0.350	237	14.9	3.94
Tributary Strategy)		**236**	**21.1**	**3.29**
	0.325	230	14.6	3.89
	0.300	223	14.3	3.83
	0.275	216	14.0	3.78
Intermediate A	**0.250**	**209**	**13.7**	**3.72**
	0.225	202	13.4	3.65
	0.200	195	13.2	3.59
	0.175	188	13.0	3.52
	0.150	181	12.8	3.45
2003 Allocation		**175**	**12.8**	**4.20**
	0.125	174	12.6	3.37
	0.100	167	12.4	3.28
Intermediate D	0.075	159	12.3	3.19
	0.050	152	12.2	3.07
	0.025	145	12.1	2.93
E3	*0.000*	*138*	*12.0*	*2.62*

Key scenarios have also been run on the Phase 5.2 model.

Simplified DO Stoplight Plot for Monthly Deep Water Showing Only the Worst Three-Year Contiguous Period (’96-’98) of the 1991-2000 Simulation.

DO Stoplight SIMPLE 4-7-09 92 segments.xls

Cbseg	State	1985 Scenario, 420TN 28.4TP DO Deep Water Monthly '96-'98	Intermediate C Scenario, 378TN 24.5TP DO Deep Water Monthly '96-'98	91 -'00 Base Scenario, 340TN 24.1TP DO Deep Water Monthly '96-'98	2002 Scenario, 333TN 20.9TP DO Deep Water Monthly '96-'98	Intermediate B Scenario, 279TN 17.2TP DO Deep Water Monthly '96-'98	Tributary Strategy 2010a Scenario, 236TN 21.1TP DO Deep Water Monthly '96-'98	Intermediate A Scenario, 209TN 13.7TP DO Deep Water Monthly '96-'98	2003 Allocation Scenario, 175TN 12.8TP DO Deep Water Monthly '96-'98	Intermediate D Scenario, 159TN 12.3TP DO Deep Water Monthly '96-'98	E3 2010 Scenario, 138TN 12.0TP DO Deep Water Monthly '96-'98	Draft 2008 303(d) Results DO Deep Water Monthly '96-'98
	Scenario →											
	Year →											
CB1TF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB2OH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB3MH	MD	3.3%	2.0%	1.9%	1.6%	0.9%	0.4%	0.3%	0.2%	0.0%	0.0%	3.7%
CB4MH	MD	26.3%	23.4%	23.2%	21.7%	18.7%	15.2%	11.6%	8.0%	0.0%	4.5%	19.5%
MD5MH	MD	13.4%	10.7%	10.2%	8.9%	5.5%	3.3%	1.8%	0.6%	0.0%	0.1%	12.1%
VA5MH	VA	3.3%	0.7%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5%
CB6PH	VA	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%
CB7PH	VA	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB8PH	VA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BSHOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GUNOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MIDOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BACOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PATMH	MD	12.7%	9.1%	8.3%	4.9%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	10.9%
MAGMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SEVMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOUMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RHDMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WSTMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WBRTF	MD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAXTF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXMH	MD	14.6%	4.9%	4.5%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.6%
DCPTF	DC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MDPTF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
POVTF	VA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MDATF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DCATF	DC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

The 10-Year Version of the Detailed DO Stoplight Plot

DO Stoplight DETAILED 2-13-09.xls

Cbseg	Scenario→ State Year →	2003 Allocation Scenario (175TN/12.8TP), 10-Year Output DO Deep Water Monthly '91-'93	'92-'94	'93-'95	'94-'96	'95-'97	'96-'98	'97-'99	'98-'00	E3 2010 Scenario (138TN/12.0TP), 10-Year Output DO Deep Water Monthly '91-'93	'92-'94	'93-'95	'94-'96	'95-'97	'96-'98	'97-'99	'98-'00
CB1TF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C11TF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C12TF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB2OH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB3MH	MD	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB4MH	MD	0.0%	1.1%	3.8%	4.5%	3.1%	8.0%	3.3%	4.4%	0.0%	0.1%	1.5%	2.3%	1.1%	4.5%	0.5%	0.6%
CB5MH	both	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MD5MH	MD	0.0%	0.0%	0.0%	0.3%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%
VA5MH	VA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB6PH	VA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB7PH	VA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB8PH	VA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BSHOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GUNOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GU1OH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GU2OH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MIDOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BACOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PATMH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MAGMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SEVMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOUMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RHDMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WSTMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXTF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXMH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PA1MH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PA2MH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PA3MH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PA4MH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PA5MH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PA6MH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
POTTF	both	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DCPTF	DC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Deep Channel Standard of the Simplified DO Stoplight Plot

DO Stoplight SIMPLE 4-7-09 92 segments.xls

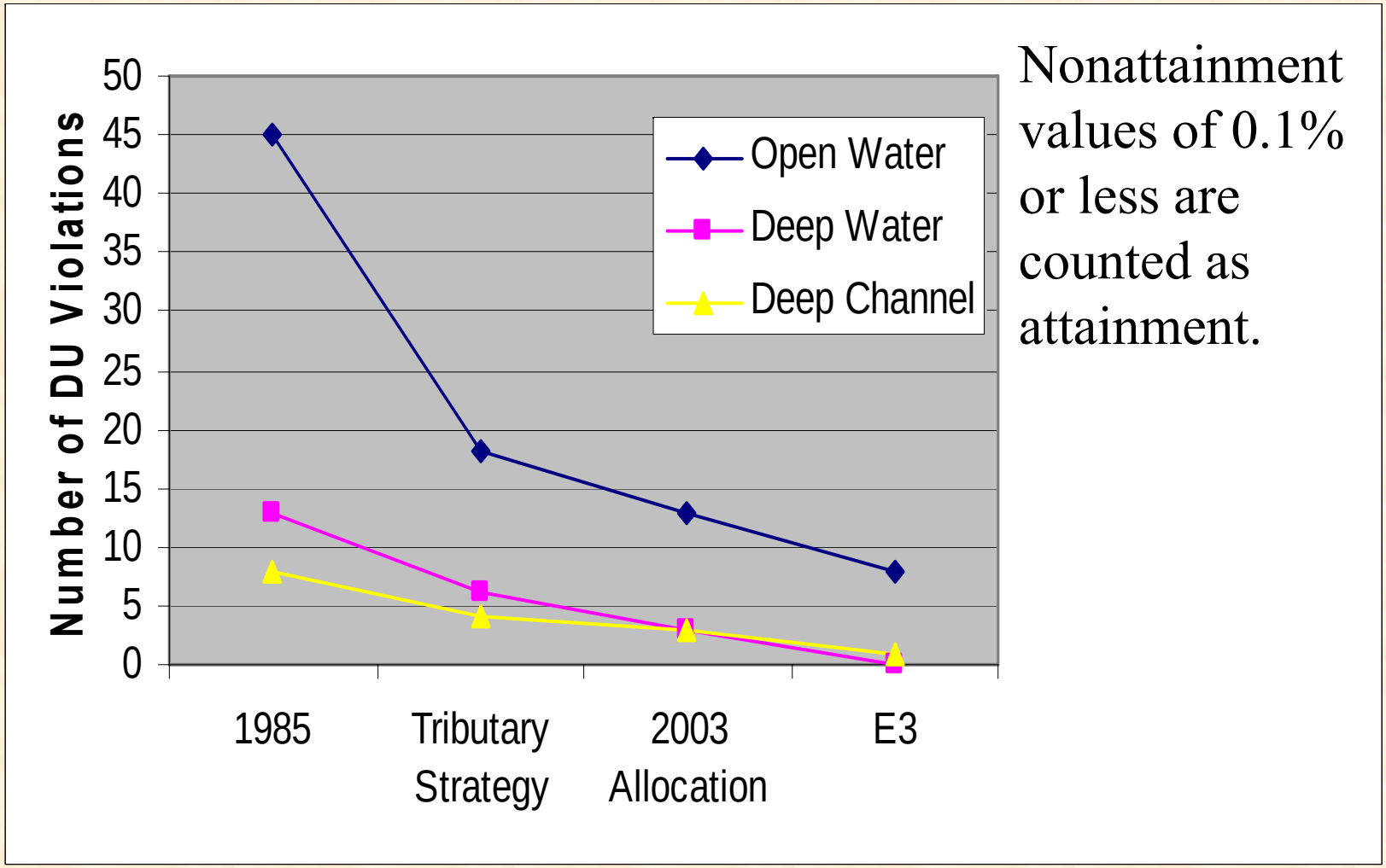
Cbseg	State	1985 Scenario, 420TN 28.4TP	Intermediate C Scenario, 378TN 24.5TP	91 -'00 Base Scenario, 340TN 24.1TP	2002 Scenario, 333TN 20.9TP	Intermediate B Scenario, 279TN 17.2TP	Tributary Strategy 2010a Scenario, 236TN 21.1TP	Intermediate A Scenario, 209TN 13.7TP	2003 Allocation Scenario, 175TN 12.8TP	Intermediate D Scenario, 159TN 12.3TP	E3 2010 Scenario, 138TN 12.0TP	Draft 2008 303(d) Results
	Year →	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98	DO Deep Channel Instantan-eous '96-'98
CB1TF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB2OH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB3MH	MD	8.1%	6.6%	6.3%	6.0%	5.1%	3.9%	1.8%	0.4%	0.0%	0.0%	6.6%
CB4MH	MD	51.3%	47.9%	47.4%	45.3%	37.5%	21.4%	7.7%	0.5%	0.0%	0.0%	44.7%
MD5MH	MD	31.0%	26.0%	24.3%	20.3%	8.6%	0.7%	0.0%	0.0%	0.0%	0.0%	23.8%
VA5MH	VA	3.8%	1.3%	0.9%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%
CB6PH	VA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB7PH	VA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB8PH	VA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BSHOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GUNOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MIDOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BACOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PATMH	MD	20.7%	15.5%	12.8%	9.0%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	13.7%
MAGMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SEVMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOUMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RHDMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WSTMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WBRTF	MD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAXTF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXOH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXMH	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DCPTF	DC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MDPTF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
POVTF	VA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MDATF	MD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DCATF	DC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Open Water Standard of the Simplified DO Stoplight Plot

DO Stoplight SIMPLE 4-7-09 92 segments.xls

Cbseg	State	1985 Scenario, 420TN 28.4TP	Intermediate C Scenario, 378TN 24.5TP	91 -'00 Base Scenario, 340TN 24.1TP	2002 Scenario, 333TN 20.9TP	Intermediate B Scenario, 279TN 17.2TP	Tributary Strategy 2010a Scenario, 236TN 21.1TP	Intermediate A Scenario, 209TN 13.7TP	2003 Allocation Scenario, 175TN 12.8TP	Intermediate D Scenario, 159TN 12.3TP	E3 2010 Scenario, 138TN 12.0TP	Draft 2008 303(d) Results
	Year →	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98	DO Open Water Summer Monthly '96-'98
CB1TF	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB2OH	MD	2.0%	1.4%	1.4%	1.0%	0.5%	0.3%	0.3%	0.2%	0.0%	0.1%	2.2%
CB3MH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB4MH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MD5MH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
VA5MH	VA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB6PH	VA	4.3%	2.9%	2.8%	2.3%	0.9%	0.2%	0.1%	0.0%	0.0%	0.0%	1.4%
CB7PH	VA	8.5%	6.8%	6.3%	5.4%	3.1%	1.4%	0.6%	0.2%	0.0%	0.1%	4.8%
CB8PH	VA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BSHOH	MD	3.6%	0.0%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	0.0%	0.0%	0.0%
GUNOH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MIDOH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BACOH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PATMH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MAGMH	MD	11.2%	10.1%	8.7%	8.2%	7.1%	7.1%	2.9%	4.3%	0.0%	0.9%	17.2%
SEVMH	MD	10.0%	8.4%	8.4%	7.9%	4.1%	0.1%	0.0%	0.0%	0.0%	0.0%	17.2%
SOUMH	MD	16.7%	18.1%	18.1%	17.4%	14.5%	10.7%	10.7%	10.4%	0.0%	5.3%	23.3%
RHDMH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%
WSTMH	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.5%
WBRTF	MD	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAXTF	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.3%
PAXOH	MD	21.8%	16.3%	12.6%	7.9%	0.3%	0.9%	0.0%	0.0%	0.0%	0.0%	55.4%
PAXMH	MD	14.3%	7.8%	6.6%	3.7%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	15.4%
DCPTF	DC	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%
MDPTF	MD	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
POVTF	VA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MDATF	MD	16.6%	10.0%	23.7%	23.2%	3.7%	8.4%	1.4%	0.0%	0.0%	0.0%	6.1%
DCATF	DC	14.2%	10.8%	14.9%	12.3%	4.5%	7.0%	2.9%	0.1%	0.0%	0.0%	1.2%

DO Response to Nutrient Load Reductions



Nonattainment values of 0.1% or less are counted as attainment.

420 TN	236 TN	175 TN	138 TN
28.4 TP	21.1 TP	12.8 TP	12.0 TP

Assessment of Simulated Chlorophyll Standard Violations (With Data Correction) Compared To Monitoring Data

		Monitoring Data								Linked Phase 5.1 and WQST Models							
season	CB Seg	91-'93	92-'94	93-'95	94-'96	95-'97	96-'98	97-'99	98-'00	91-'93	92-'94	93-'95	94-'96	95-'97	96-'98	97-'99	98-'00
spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	JMSTFL	20.3%	9.3%	10.7%	14.9%	29.2%	21.2%	37.3%	25.5%	25.1%	13.3%	12.9%	20.6%	35.3%	27.4%	44.5%	27.6%
	JMSTFU	0.9%	21.4%	20.8%	31.6%	12.0%	12.0%	1.4%	1.6%	0.9%	21.4%	20.8%	31.6%	12.0%	12.0%	1.4%	1.6%
	JMSOH	13.0%	10.9%	0.0%	10.1%	14.2%	21.9%	22.2%	32.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%
	JMSMH	34.4%	10.1%	0.0%	8.8%	26.9%	25.2%	26.3%	8.7%	34.4%	10.1%	0.0%	8.8%	26.6%	24.9%	26.0%	8.7%
	JMSPH	51.5%	26.7%	14.0%	21.8%	21.8%	21.8%	0.0%	0.0%	46.1%	21.8%	0.0%	21.8%	21.8%	21.8%	0.0%	0.0%
summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
	DCPTF	21.8%	46.1%	70.9%	46.1%	46.1%	46.1%	46.1%	21.8%	21.8%	46.1%	70.9%	46.1%	46.1%	46.1%	46.1%	21.8%
	JMSTFL	56.4%	57.6%	42.2%	17.4%	23.6%	38.5%	52.8%	44.4%	52.5%	55.0%	39.4%	15.1%	19.2%	34.1%	48.1%	40.2%
	JMSTFU	27.6%	27.7%	19.6%	2.7%	16.4%	28.7%	48.4%	39.4%	27.6%	27.7%	19.6%	2.7%	16.4%	28.7%	48.4%	39.4%
	JMSOH	5.7%	5.7%	0.0%	0.0%	0.9%	0.9%	0.9%	0.0%	24.3%	19.3%	11.4%	0.3%	9.5%	13.6%	13.6%	4.5%
	JMSMH	0.0%	0.0%	0.0%	0.0%	4.9%	4.9%	29.2%	21.8%	0.0%	0.0%	0.0%	0.0%	4.9%	4.9%	29.2%	21.8%
	JMSPH	0.0%	0.0%	21.8%	46.1%	46.1%	21.8%	21.8%	46.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.8%	21.8%

Key:

DCATF = DC Anacostia Tidal Fresh

DCPTF = DC Potomac Tidal Fresh

JMSTFU = James Upper Tidal Fresh

JMSTFL = James Lower Tidal Fresh

JMSOH = James Oligohaline

JMSMH = James Mesohaline

JMSPH = James Polyhaline

A Guide to the Chlorophyll Numeric Standards for the James and DC's Tidal Potomac and Anacostia

1. ANATF-DC and POTTF-DC have DC seasonal average standard ≤25ug/L July 1 to September 30.
2. JMSTF2-SPG - Upper James tidal fresh spring standard ≤10ug/L March 1 to May 31.
3. JMSTF2-SUM - Upper James tidal fresh summer standard ≤15ug/L July 1 to Sept 31.
4. JMSTF1-SPG - Lower James tidal fresh spring standard ≤15ug/L March 1 to May 31.
5. JMSTF1-SUM - Lower James tidal fresh summer standard ≤23ug/L July 1 to Sept 31.
6. JMSOH-SPG - James oligohaline spring standard ≤15ug/L March 1 to May 31.
7. JMSOH-SUM - James oligohaline summer standard ≤22ug/L July 1 to Sept 31.
8. JMSMH-SPG - James mesohaline spring standard ≤12ug/L March 1 to May 31.
9. JMSMH-SUM - James mesohaline summer standard ≤10ug/L July 1 to Sept 31.
10. JMSPH-SPG - James polyhaline spring standard ≤12ug/L March 1 to May 31.
11. JMSPH-SUM - James polyhaline summer standard ≤10ug/L July 1 to Sept 31.

Scenario:	1985								
Season:	**CB Seg**	**91-'93**	**92-'94**	**93-'95**	**94-'96**	**95-'97**	**96-'98**	**97-'99**	**98-'00**
Spring	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1985	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario	JMSTFL	26.6%	34.6%	33.1%	48.4%	48.4%	25.7%	35.3%	49.5%
	JMSTFU	5.1%	25.7%	22.6%	37.4%	37.4%	18.6%	6.0%	11.2%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	4.2%
	JMSMH	30.6%	10.6%	0.7%	11.3%	11.3%	31.8%	44.2%	20.7%
	JMSPH	46.1%	21.8%	0.0%	21.8%	21.8%	21.8%	21.8%	21.8%
Summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
1985	DCPTF	21.8%	46.1%	70.9%	46.1%	46.1%	21.8%	21.8%	0.0%
Scenario	JMSTFL	55.7%	57.2%	43.8%	18.9%	18.9%	37.2%	51.7%	51.6%
	JMSTFU	23.1%	24.6%	17.1%	3.8%	3.8%	23.1%	40.8%	37.4%
	JMSOH	4.2%	4.2%	4.2%	0.0%	0.0%	4.6%	4.6%	0.0%
	JMSMH	0.1%	0.0%	0.0%	0.0%	0.0%	27.9%	52.7%	31.5%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	21.8%	46.1%	46.1%

Scenario:	Intermediate C								
Season:	**CB Seg**	**91-'93**	**92-'94**	**93-'95**	**94-'96**	**95-'97**	**96-'98**	**97-'99**	**98-'00**
Spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inter. C	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario	JMSTFL	27.2%	34.5%	32.4%	47.8%	26.3%	25.9%	35.3%	49.6%
	JMSTFU	4.4%	25.6%	22.1%	37.6%	13.0%	18.8%	4.9%	10.3%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	4.6%
	JMSMH	32.5%	8.2%	0.0%	9.6%	30.3%	28.3%	40.8%	20.5%
	JMSPH	21.8%	0.0%	0.0%	21.8%	21.8%	21.8%	21.8%	21.8%
Summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
Inter. C	DCPTF	0.0%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	0.0%
Scenario	JMSTFL	54.7%	56.0%	43.9%	19.1%	16.7%	37.6%	52.0%	53.1%
	JMSTFU	23.9%	25.1%	17.7%	3.3%	10.2%	23.9%	42.5%	39.1%
	JMSOH	3.9%	3.9%	3.9%	0.0%	4.4%	4.4%	4.4%	0.0%
	JMSMH	0.0%	0.0%	0.0%	0.0%	5.3%	8.3%	33.2%	24.9%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	21.8%	46.1%	46.1%

Scenario:	2002								
season	**CB Seg**	**91-'93**	**92-'94**	**93-'95**	**94-'96**	**95-'97**	**96-'98**	**97-'99**	**98-'00**
spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	JMSTFL	11.2%	11.2%	11.2%	11.2%	27.5%	20.4%	45.2%	28.4%
	JMSTFU	0.0%	21.2%	21.2%	21.6%	2.5%	2.5%	2.1%	2.3%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	3.1%
	JMSMH	31.2%	7.0%	0.0%	7.6%	25.1%	24.7%	32.6%	15.3%
	JMSPH	21.8%	0.0%	0.0%	21.8%	21.8%	21.8%	0.0%	0.0%
summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
	DCPTF	0.0%	21.8%	46.1%	46.1%	46.1%	21.8%	21.8%	0.0%
	JMSTFL	43.7%	46.3%	37.3%	13.0%	21.8%	37.6%	51.8%	42.8%
	JMSTFU	10.6%	10.9%	7.3%	0.0%	16.4%	28.3%	47.8%	39.3%
	JMSOH	0.0%	0.0%	0.0%	0.0%	4.3%	4.3%	4.3%	0.0%
	JMSMH	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	21.8%	19.5%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.8%	21.8%

Scenario:	Intermediate B								
season	CB Seg	91-'93	92-'94	93-'95	94-'96	95-'97	96-'98	97-'99	98-'00
spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	JMSTFL	11.2%	11.2%	11.2%	11.2%	26.3%	18.3%	43.1%	27.5%
	JMSTFU	0.0%	18.2%	18.2%	18.7%	2.0%	2.0%	1.7%	2.3%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	3.3%
	JMSMH	30.5%	6.2%	0.0%	6.3%	15.2%	15.5%	16.9%	8.0%
	JMSPH	21.8%	0.0%	0.0%	21.8%	21.8%	21.8%	0.0%	0.0%
summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
	DCPTF	0.0%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	0.0%
	JMSTFL	11.1%	23.8%	23.8%	10.2%	21.8%	35.6%	42.4%	31.9%
	JMSTFU	7.4%	7.4%	5.6%	0.0%	16.2%	26.5%	45.3%	34.3%
	JMSOH	0.0%	0.0%	0.0%	0.0%	3.6%	3.6%	3.6%	0.0%
	JMSMH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Scenario:	Tributary Strategy								
season	CB Seg	91-'93	92-'94	93-'95	94-'96	95-'97	96-'98	97-'99	98-'00
spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	JMSTFL	13.7%	12.2%	11.2%	25.5%	40.4%	39.9%	49.9%	43.3%
	JMSTFU	0.0%	0.0%	0.0%	9.3%	15.4%	17.2%	4.9%	2.8%
	JMSOH	7.7%	0.0%	0.0%	0.0%	0.0%	8.2%	16.4%	16.4%
	JMSMH	30.3%	6.0%	0.0%	7.7%	25.0%	26.6%	25.8%	8.1%
	JMSPH	21.8%	0.0%	0.0%	21.8%	21.8%	21.8%	0.0%	0.0%
summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
	DCPTF	0.0%	21.8%	46.1%	46.1%	46.1%	21.8%	21.8%	0.0%
	JMSTFL	11.2%	25.3%	25.3%	11.5%	21.8%	35.7%	49.7%	39.7%
	JMSTFU	15.4%	15.8%	12.3%	0.0%	16.8%	32.7%	52.7%	45.6%
	JMSOH	0.0%	0.0%	0.0%	0.0%	4.5%	4.5%	4.5%	0.0%
	JMSMH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Scenario:	Intermediate A								
season	CB Seg	91-'93	92-'94	93-'95	94-'96	95-'97	96-'98	97-'99	98-'00
spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	JMSTFL	0.0%	0.0%	9.4%	9.4%	19.7%	8.2%	23.0%	12.4%
	JMSTFU	0.0%	12.7%	12.7%	16.5%	4.4%	4.4%	0.8%	0.0%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	1.7%
	JMSMH	26.5%	4.6%	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%
	JMSPH	21.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
	DCPTF	0.0%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	0.0%
	JMSTFL	0.0%	0.0%	0.0%	0.0%	21.8%	25.1%	25.1%	1.2%
	JMSTFU	0.0%	0.0%	0.0%	0.0%	13.9%	13.9%	16.8%	6.0%
	JMSOH	0.0%	0.0%	0.0%	0.0%	2.9%	2.9%	2.9%	0.0%
	JMSMH	1.3%	1.3%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Scenario:	2003 Allocation								
season	CB Seg	91-'93	92-'94	93-'95	94-'96	95-'97	96-'98	97-'99	98-'00
spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	JMSTFL	0.0%	0.0%	8.3%	8.3%	12.5%	1.8%	9.9%	5.7%
	JMSTFU	0.0%	10.4%	10.4%	14.8%	3.7%	3.7%	0.0%	0.0%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSMH	28.8%	4.6%	0.0%	0.0%	0.0%	0.0%	5.7%	5.6%
	JMSPH	21.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
	DCPTF	0.0%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	0.0%
	JMSTFL	0.0%	0.0%	0.0%	0.0%	21.8%	30.3%	30.3%	13.4%
	JMSTFU	0.0%	0.0%	0.0%	0.0%	8.5%	8.5%	10.3%	5.1%
	JMSOH	0.0%	0.0%	0.0%	0.0%	3.4%	3.4%	3.4%	0.0%
	JMSMH	1.4%	1.4%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Scenario:	Intermediate D								
season	CB Seg	91-'93	92-'94	93-'95	94-'96	95-'97	96-'98	97-'99	98-'00
spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	JMSTFL	0.0%	0.0%	6.6%	6.6%	6.6%	0.0%	6.4%	6.4%
	JMSTFU	0.0%	11.0%	11.0%	11.5%	0.0%	0.0%	0.0%	0.0%
	JMSOH	0.6%	0.0%	0.0%	0.0%	0.0%	3.0%	6.2%	6.2%
	JMSMH	15.5%	2.8%	0.0%	0.0%	0.8%	1.2%	4.7%	1.2%
	JMSPH	21.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
	DCPTF	0.0%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	0.0%
	JMSTFL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSTFU	0.0%	0.0%	0.0%	0.0%	4.1%	4.1%	5.1%	0.6%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSMH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Scenario:	E3								
season	CB Seg	91-'93	92-'94	93-'95	94-'96	95-'97	96-'98	97-'99	98-'00
spring:	DCATF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DCPTF	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	JMSTFL	0.0%	0.0%	6.1%	6.1%	6.1%	0.0%	6.3%	6.3%
	JMSTFU	0.0%	0.0%	0.0%	0.3%	0.0%	0.2%	0.0%	0.0%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	7.8%	7.8%
	JMSMH	8.8%	1.2%	0.0%	0.0%	2.2%	2.8%	2.8%	0.0%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
summer	DCATF	NoData	NoData	NoData	NoData	NoData	NoData	0.0%	0.0%
	DCPTF	0.0%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	0.0%
	JMSTFL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSTFU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	1.2%
	JMSOH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSMH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	JMSPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Chlorophyll Stoplight Plot Prototype

Using a nonapplicable metric of ≤ 100 ug/l daily maximum for the narrative chlorophyll standard.

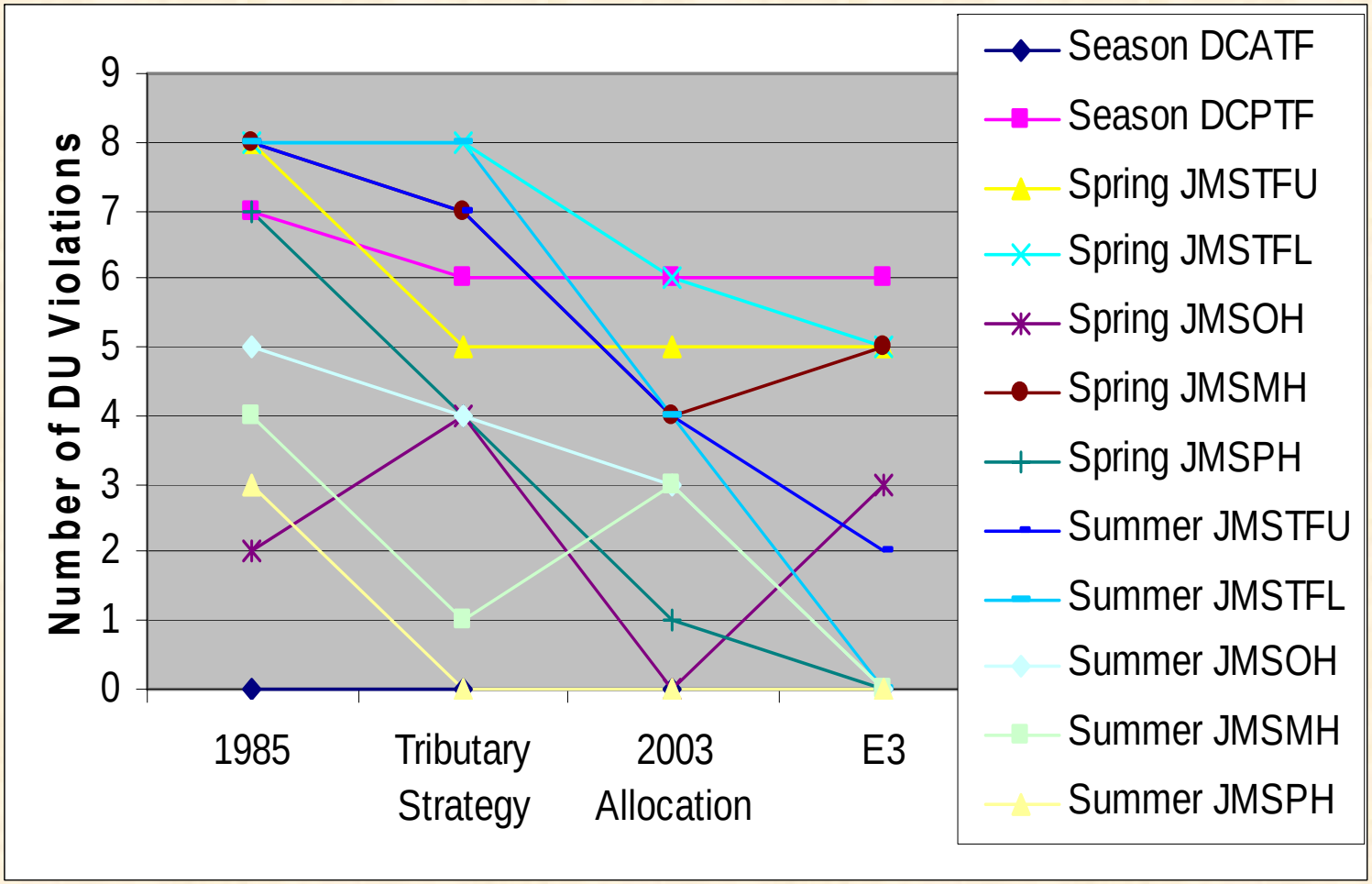
Cbseg	Scenario / State / Year ?	1991 - 2000 10-Year Output BASE 1991 - 2000 '91-'93	'92-'94	'93-'95	'94-'96	'95-'97	'96-'98	'97-'99	'98-'00	1991 - 2000 10-Year Output 2003 Allocation (175TN/12.8TP) '91-'93	'92-'94	'93-'95	'94-'96	'95-'97	'96-'98	'97-'99	'98-'00
ANATF		19.0%	8.2%	11.1%	5.3%	6.3%	11.6%	17.8%	14.6%	0.2%	0.2%	0.2%	0.0%	0.0%	0.1%	3.0%	3.0%
APPTF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BACOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BI1MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BI2MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BIGMH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BOHOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BSHOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
C11TF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
C12TF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB1TF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB2OH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB3MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB4MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB5MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB6PH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB7PH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB8PH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CDDOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHKOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHOMH1		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHOMH2		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHOOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHOTF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHSMH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHSOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHSTF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CMDOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CNDOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CRRMH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DENTF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EASMH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Chlorophyll Stoplight Plot Prototype

Using a nonapplicable metric of ≤ 50 ug/l rolling 30 day mean for the narrative chlorophyll standard.

Cbseg	Scenari State	1991 - 2000 10-Year Output BASE 1991 - 2000								1991 - 2000 10-Year Output 2003 Allocation (175TN/12.8TP)							
	Year ?	'91-'93	'92-'94	'93-'95	'94-'96	'95-'97	'96-'98	'97-'99	'98-'00	'91-'93	'92-'94	'93-'95	'94-'96	'95-'97	'96-'98	'97-'99	'98-'00
ANATF		75.4%	60.2%	59.3%	33.3%	44.0%	46.4%	66.5%	42.7%	23.7%	17.1%	17.7%	5.6%	5.9%	16.3%	30.9%	25.7%
APPTF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BACOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BI1MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BI2MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BIGMH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BOHOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BSHOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
C11TF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
C12TF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB1TF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB2OH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB3MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB4MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB5MH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB6PH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB7PH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB8PH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CDDOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHKOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHOMH1		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHOMH2		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHOOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHOTF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHSMH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHSOH		0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CHSTF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CMDOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CNDOH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CRRMH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DENTF		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EASMH		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Numeric Chlorophyll Response in James and DC Tidal Waters to Nutrient Load Reductions



420 TN
28.4 TP

236 TN
21.1 TP

175 TN
12.8 TP

138 TN
12.0 TP

Counting the number of three-year contiguous periods of nonattainment out of 8 possible 3-year contiguous periods from the simulation period of 1991 to 2000.

Summary Information From the DO and Chlorophyll Stoplight Plots

Modeled water quality response to five key basinwide nutrient levels.

Modeled Responses	E3	2003 Allocation	Tributary Strategy	'91-'00 Base	1985
Nitrogen Loading (millions of pouds/year)	138	175	236	340	420
Phosphorus Loading (millions of pouds/year)	12.0	12.8	21.1	24.1	28.4
Number of Open Water segments with < 1% dissolved oxygen non-attainment	5	7	13	29	38
Number of Deep and Channel segments with < 1% dissolved oxygen nonattainment	0	2	6	16	18
Volume of Bay in non-attainment for DO (> 0% nonattainment)	26% (14 failed DUs)	37% (21 failed DUs)	55% (34 failed DUs)	75% (52 failed DUs)	83% (69 failed DUs)
Number of designated uses not meeting numeric chlorophyll standards	18	35	53	68	67

Do the movies!

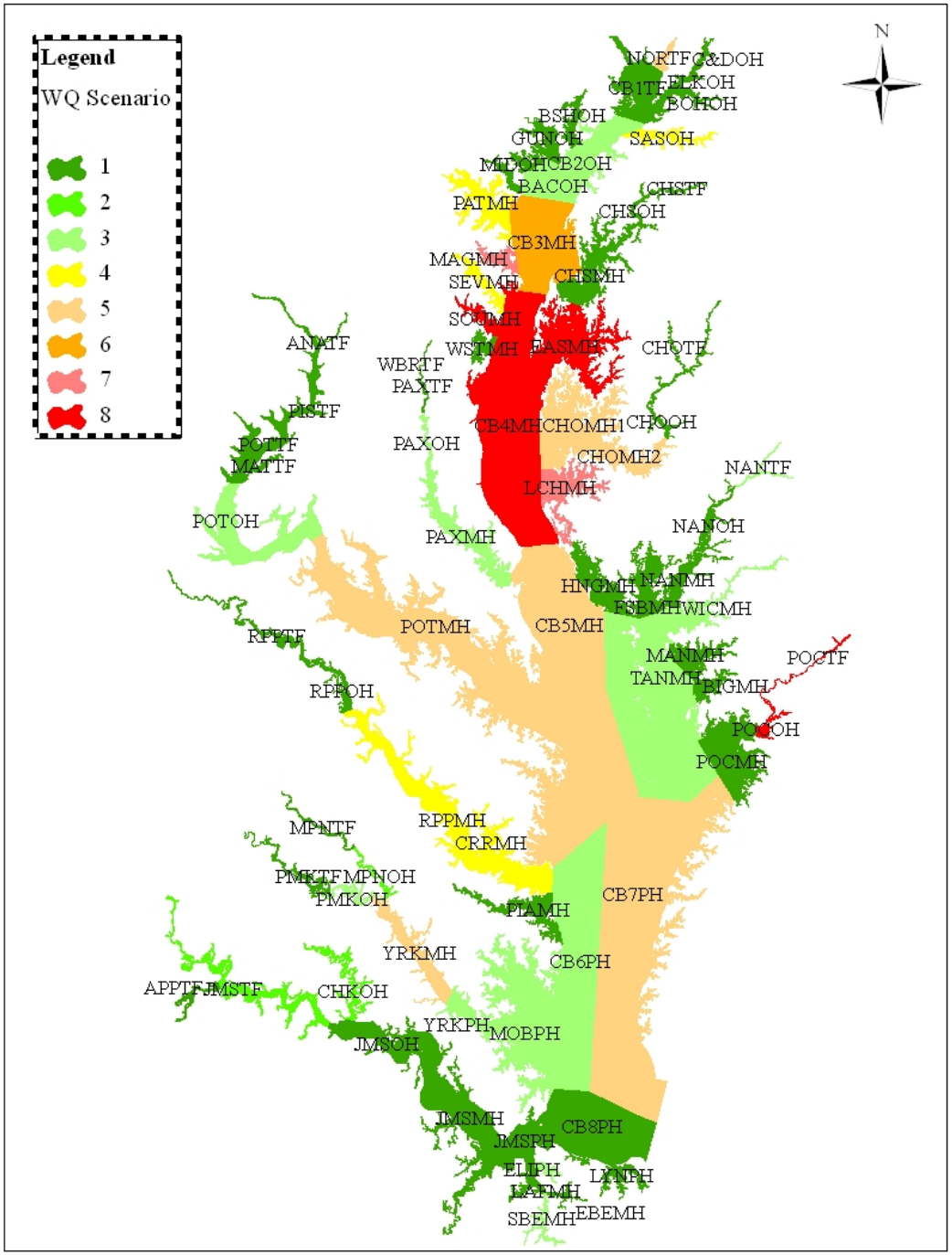
Incremental Scenario Analysis

Using the scenario results from the "simple" dissolved oxygen stoplight plots (1996-1998), we assigned each scenario a unique code. Next, a scenario code was assigned to each CB water quality segment based on when the CB wq segment went into attainment, assuming when loads decrease the dissolved oxygen exceedence will decrease. If a segment never reached attainment (i.e. not less than 1% exceedence), then it was assigned a scenario code of "8". Note that the variance for CB4 was not included. Using the results, the CB water quality segments were plotted and then color coded according to the scenario that resulted in attainment of the dissolved oxygen standards. Scenarios are as follows and map is on page two.

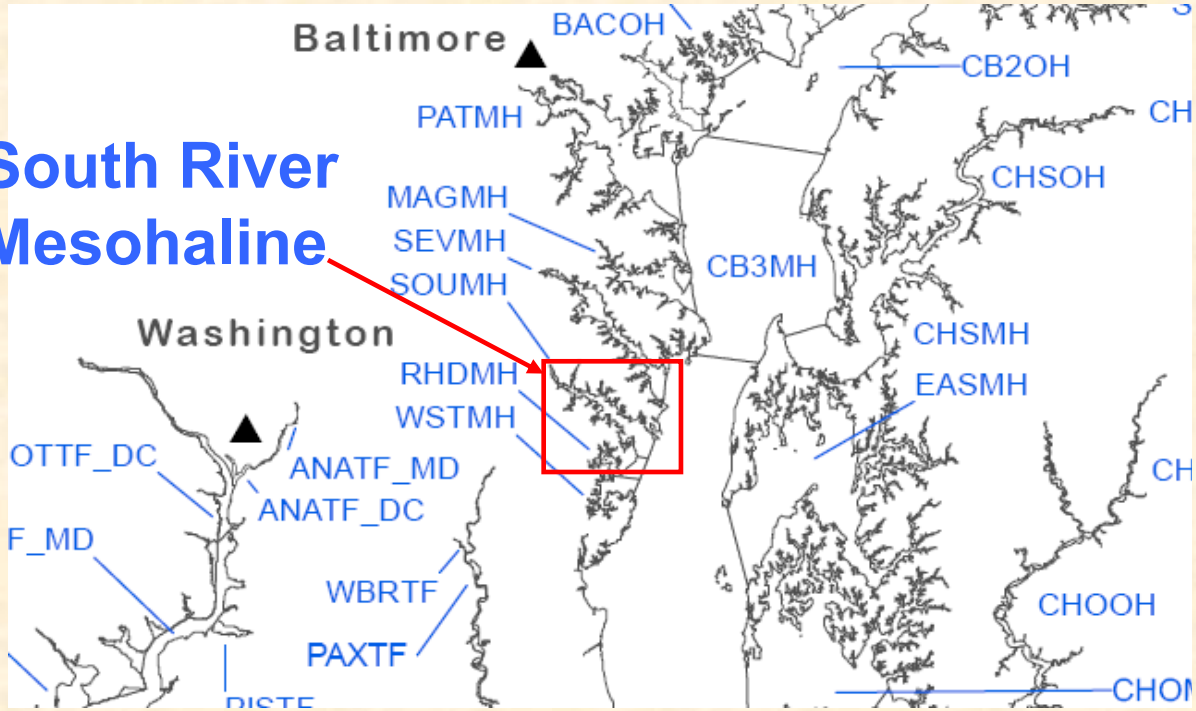
Table 1 – Incremental Scenarios

Code	Scenario
	1985 Scenario, 420TN 28.4TP
1	Intermediate C Scenario, 378TN 24.5TP
2	91 -'00 Base Scenario, 340TN 24.1TP
3	Intermediate B Scenario, 279TN 17.2TP
4	Tributary Strategy 2010a Scenario, 236TN 21.1TP
5	Intermediate A Scenario, 209TN 13.7TP
6	2003 Allocation Scenario, 175TN 12.8TP
7	E3 2010 Scenario, 138TN 12.0TP
8	Does not meet WQS at E3

Code	Scenario
	1985 Scenario, 420TN 28.4TP
1	Intermediate C Scenario, 378TN 24.5TP
2	91 -'00 Base Scenario, 340TN 24.1TP
3	Intermediate B Scenario, 279TN 17.2TP
4	Tributary Strategy 2010a Scenario, 236TN 21.1TP
5	Intermediate A Scenario, 209TN 13.7TP
6	2003 Allocation Scenario, 175TN 12.8TP
7	E3 2010 Scenario, 138TN 12.0TP
8	Does not meet WQS at E3

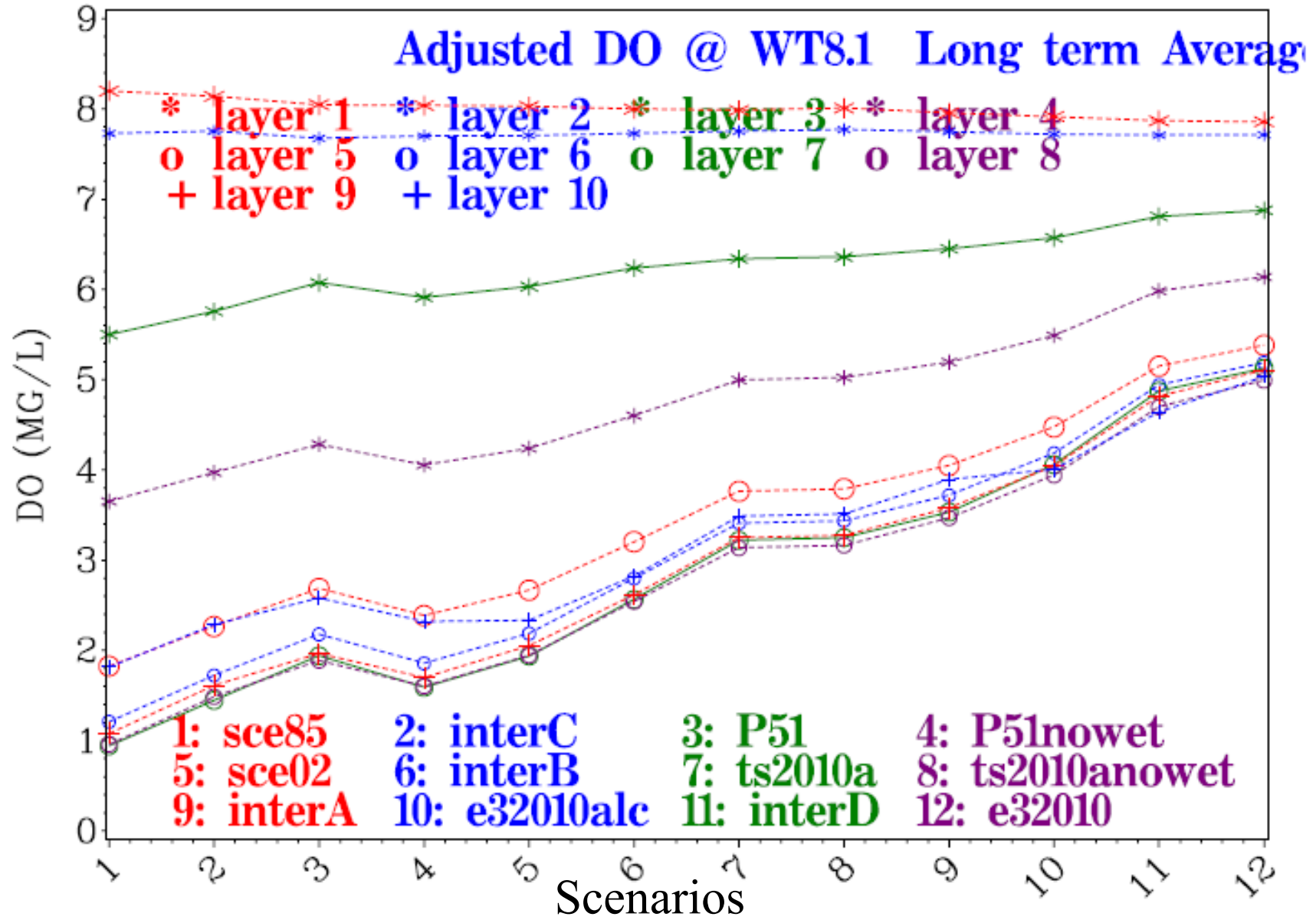


Location of the South River Mesohaline

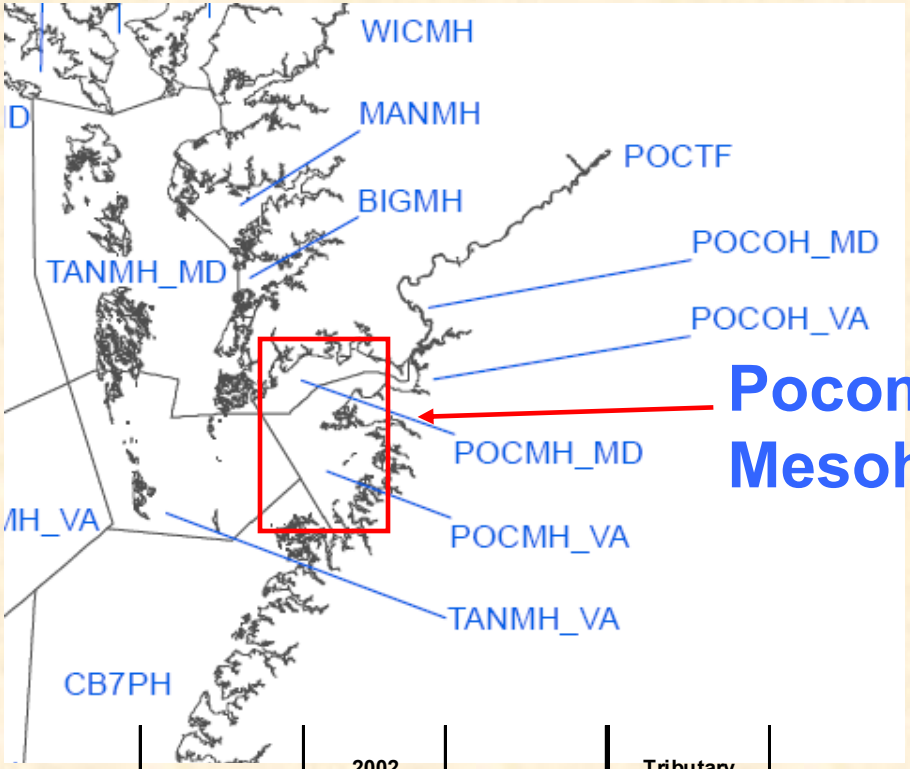


Cbseg	Scenario? State Year ?	1985 Scenario, 420TN 28.4TP DO Open Water Summer Monthly '96-'98	Intermediate C Scenario, 378TN 24.5TP DO Open Water Summer Monthly '96-'98	91 -'00 Base Scenario, 340TN 24.1TP DO Open Water Summer Monthly '96-'98	2002 Scenario, 333TN 20.9TP DO Open Water Summer Monthly '96-'98	Intermediate B Scenario, 279TN 17.2TP DO Open Water Summer Monthly '96-'98	Tributary Strategy 2010a Scenario, 236TN 21.1TP DO Open Water Summer Monthly '96-'98	Intermediate A Scenario, 209TN 13.7TP DO Open Water Summer Monthly '96-'98	2003 Allocation Scenario, 175TN 12.8TP DO Open Water Summer Monthly '96-'98	Intermediate D Scenario, 159TN 12.3TP DO Open Water Summer Monthly '96-'98	E3 2010 Scenario, 138TN 12.0TP DO Open Water Summer Monthly '96-'98
SOUMH	MD	16.7%	18.1%	18.1%	17.4%	14.5%	10.7%	10.7%	10.4%	0.0%	5.3%

South River Mesohaline Estimated DO In One Meter Depth Increments for Key CBP Scenarios

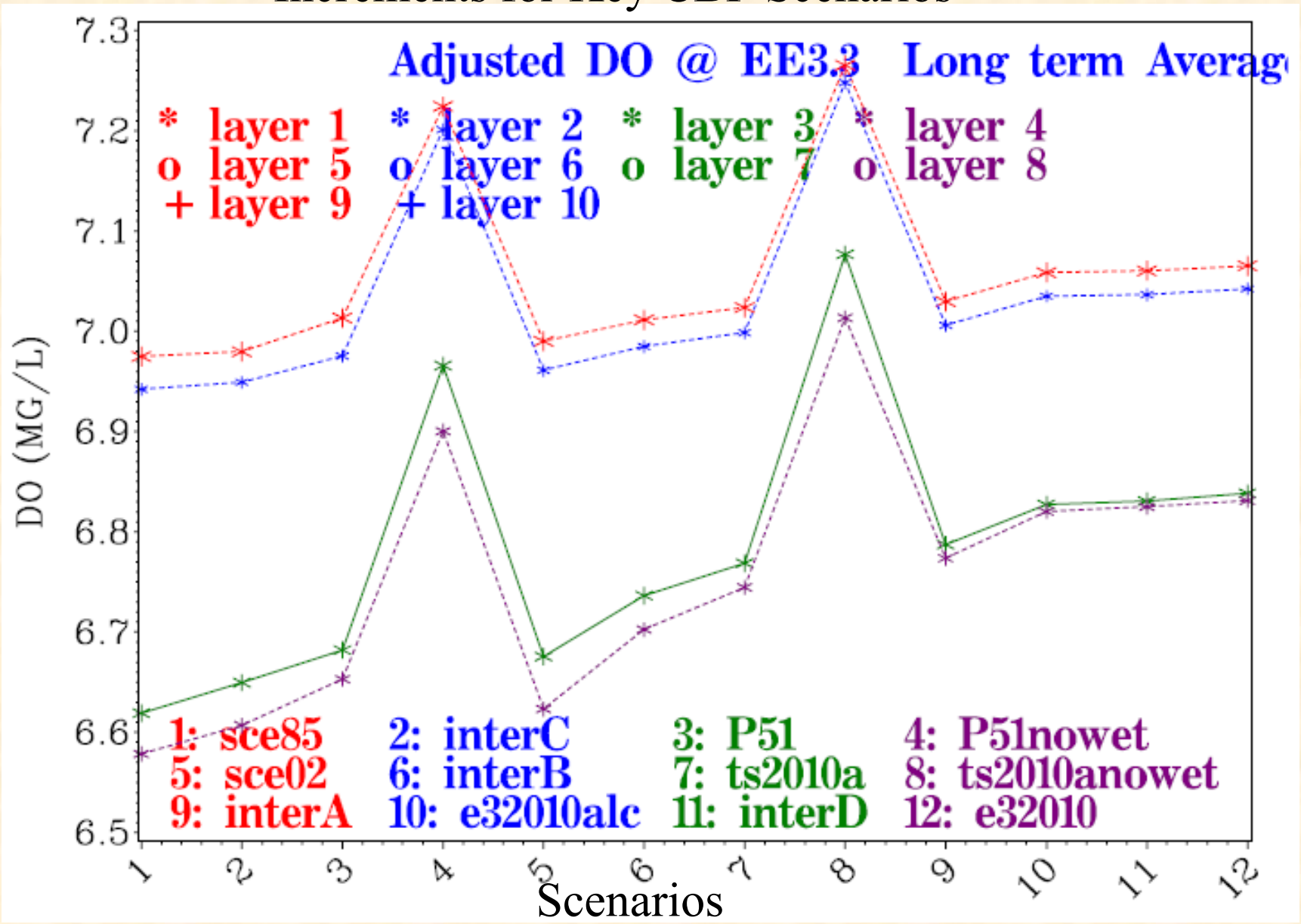


Location of the Pocomoke Mesohaline

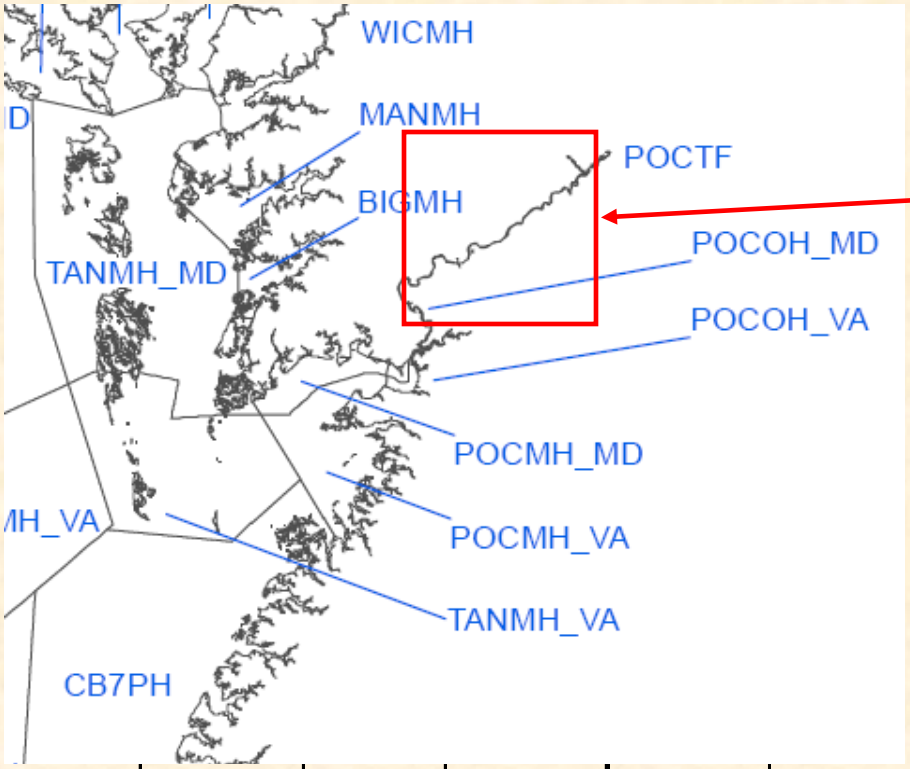


Cbseg	Scenario? / State Year ?	1985 Scenario, 420TN 28.4TP DO Open Water Summer Monthly '96-'98	Intermediate C Scenario, 378TN 24.5TP DO Open Water Summer Monthly '96-'98	91 -'00 Base Scenario, 340TN 24.1TP DO Open Water Summer Monthly '96-'98	2002 Scenario, 333TN 20.9TP DO Open Water Summer Monthly '96-'98	Intermediate B Scenario, 279TN 17.2TP DO Open Water Summer Monthly '96-'98	Tributary Strategy 2010a Scenario, 236TN 21.1TP DO Open Water Summer Monthly '96-'98	Intermediate A Scenario, 209TN 13.7TP DO Open Water Summer Monthly '96-'98	2003 Allocation Scenario, 175TN 12.8TP DO Open Water Summer Monthly '96-'98	Intermediate D Scenario, 159TN 12.3TP DO Open Water Summer Monthly '96-'98	E3 2010 Scenario, 138TN 12.0TP DO Open Water Summer Monthly '96-'98
POCMH	both	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Pocomoke Mesohaline Estimated DO In One Meter Depth Increments for Key CBP Scenarios



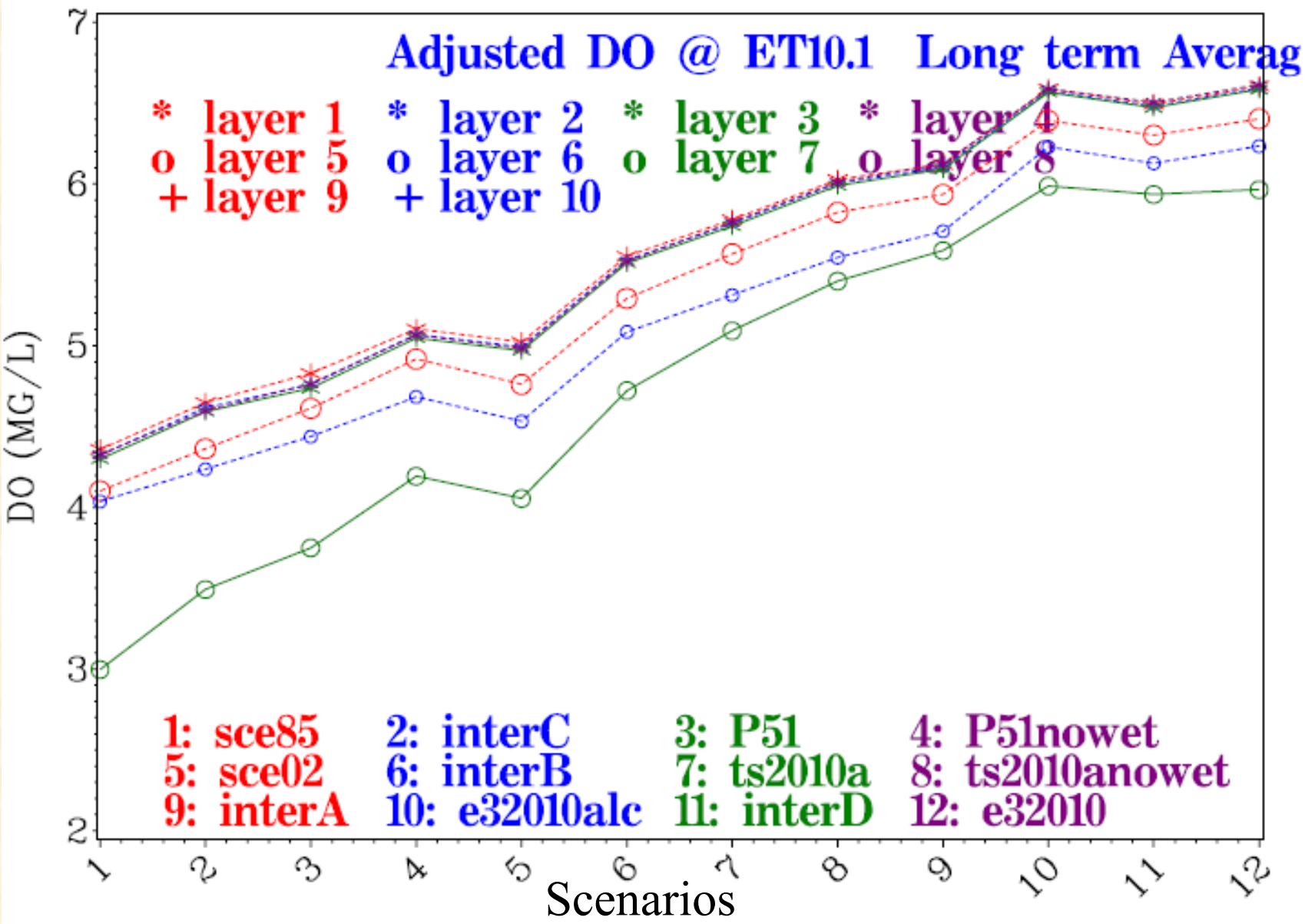
Location of the Pocomoke Tidal Fresh



Pocomoke Tidal Fresh

Cbseg	Scenario? State Year ?	1985 Scenario, 420TN 28.4TP DO Open Water Summer Monthly '96-'98	Intermediate C Scenario, 378TN 24.5TP DO Open Water Summer Monthly '96-'98	91 -'00 Base Scenario, 340TN 24.1TP DO Open Water Summer Monthly '96-'98	2002 Scenario, 333TN 20.9TP DO Open Water Summer Monthly '96-'98	Intermediate B Scenario, 279TN 17.2TP DO Open Water Summer Monthly '96-'98	Tributary Strategy 2010a Scenario, 236TN 21.1TP DO Open Water Summer Monthly '96-'98	Intermediate A Scenario, 209TN 13.7TP DO Open Water Summer Monthly '96-'98	2003 Allocation Scenario, 175TN 12.8TP DO Open Water Summer Monthly '96-'98	Intermediate D Scenario, 159TN 12.3TP DO Open Water Summer Monthly '96-'98	E3 2010 Scenario, 138TN 12.0TP DO Open Water Summer Monthly '96-'98
POCTF	MD	78.5%	63.1%	63.1%	63.1%	55.4%	55.4%	40.0%	17.2%	24.7%	10.0%

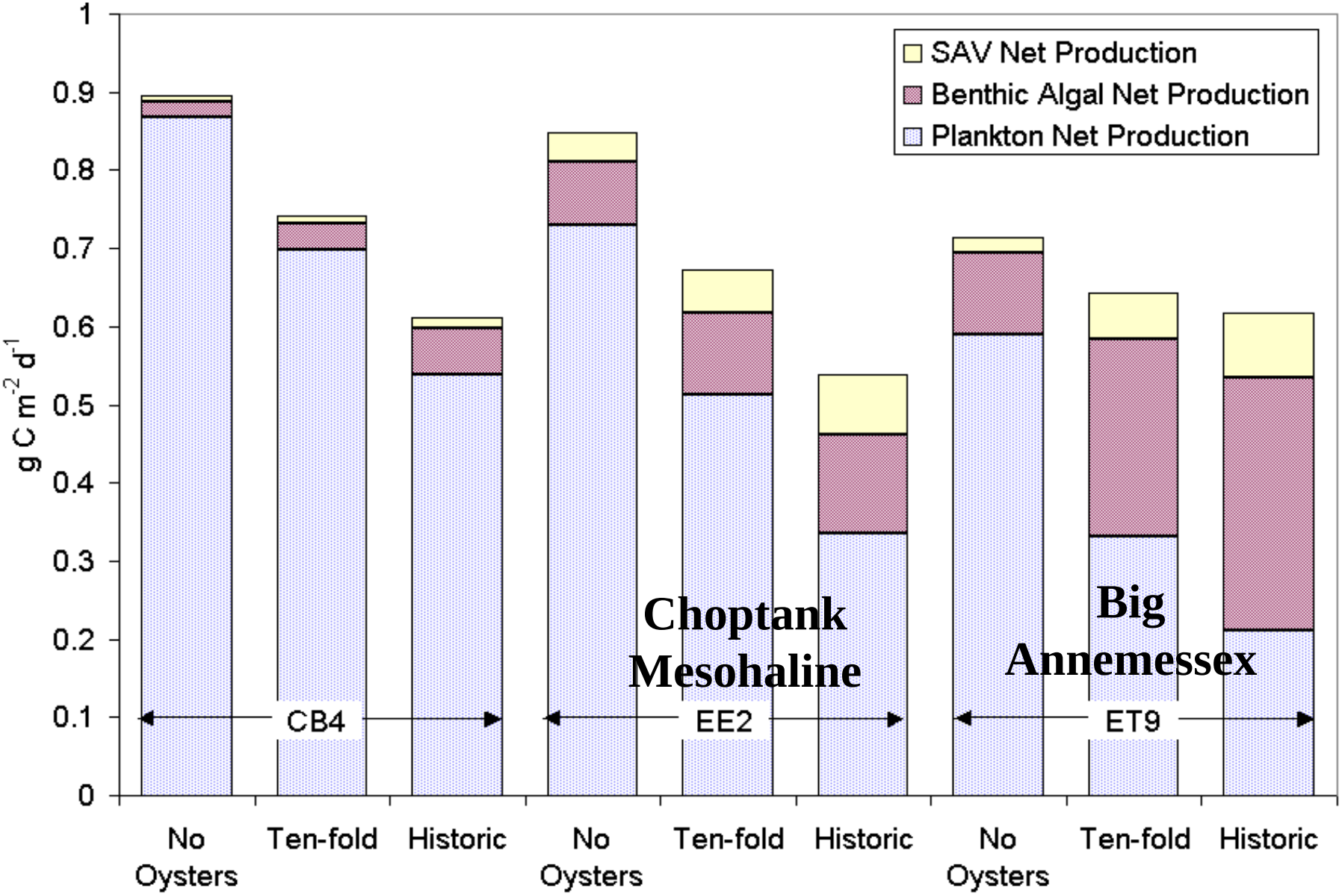
Pocomoke Tidal Fresh Estimated DO In One Meter Depth Increments for Key CBP Scenarios



DO Deep Water Standard With Highlighted '91-'00 Base and Tributary Strategy Scenarios With and Without the Wetland Effect

Cbseg	State	Scenario?	1985 Scenario, 420TN 28.4TP	Intermediate C Scenario, 378TN 24.5TP	'91 -'00 Base Scenario, 340TN 24.1TP	'91 -'00 Base - No Wetland, 340TN 24.1TP	2002 Scenario, 333TN 20.9TP	Intermediate B Scenario, 279TN 17.2TP	Tributary Strategy 2010 Scenario, 236TN 21.1TP	TS 2010 No Wetland, 236TN 21.1TP	Intermediate A Scenario, 209TN 13.7TP	2003 Allocation Scenario, 175TN 12.8TP	Intermediate D Scenario, 159TN 12.3TP	E3 2010 Scenario, 138TN 12.0TP
	Year ?		DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98	DO Deep Water Monthly '96-'98
CB1TF	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB2OH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB3MH	MD		3.3%	2.0%	1.9%	1.7%	1.6%	0.9%	0.4%	0.4%	0.3%	0.2%	0.0%	0.0%
CB4MH	MD		26.3%	23.4%	23.2%	22.7%	21.7%	18.7%	15.2%	15.1%	11.6%	8.0%	0.0%	4.5%
CB5MH	both		9.2%	6.5%	6.2%	5.8%	5.1%	2.5%	1.1%	1.1%	0.7%	0.3%	0.0%	0.0%
CB6PH	VA		1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB7PH	VA		0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CB8PH	VA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BSHOH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GUNOH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MIDOH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BACOH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PATMH	MD		12.7%	9.1%	8.3%	5.2%	4.9%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MAGMH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SEVMH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOUMH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RHDMH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WSTMH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXTF	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXOH	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PAXMH	MD		14.6%	4.9%	4.5%	3.7%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
POTTF	both		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ANATF														
PISTF	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MATTF	MD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
POTOH	both		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
POTMH	both		10.5%	7.6%	7.6%	7.2%	6.4%	3.9%	2.2%	2.1%	0.0%	0.0%	0.0%	0.0%
RPPTF	VA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RPPOH	VA		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RPPMH	VA		13.4%	10.4%	9.9%	9.5%	8.3%	6.0%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%

Reminder: If we incorporate oyster management into our recommendations for achieving the SAV/clarity standard, this will



Decision Requested

Water Quality Steering Committee agreement on the ***range*** in basinwide loading caps to achieve the State's Chesapeake Bay water quality standards to be further refined with the major basin by jurisdiction allocation discussion