CE-QUAL-W2 Model for Lake Murray— Update on Calibration and Applications

Presented by Andy Sawyer and Jim Ruane

Reservoir Environmental Management, Inc

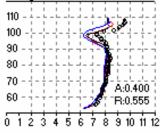
November 13, 2006

1996 Lake Murray Forebay DO Profiles Model vs. Data [Overall Statistics: ABS = 0.57, RMS = 0.89]

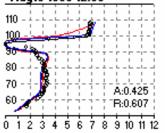
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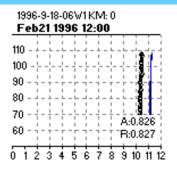
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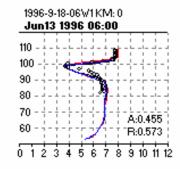
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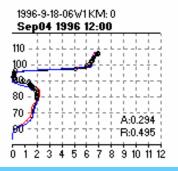


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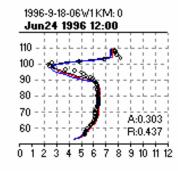


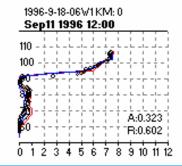




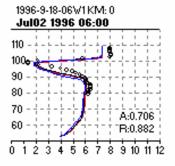


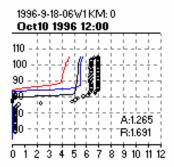
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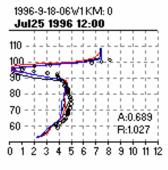




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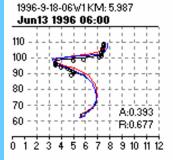




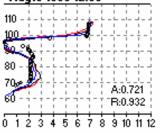


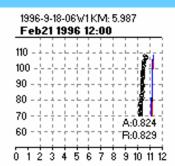
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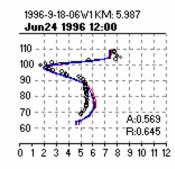
1996 Lake Murray DO Profiles – 6 Km Upstream of Dam Model vs. Data [Overall Statistics: ABS = 0.65, RMS = 1.00]

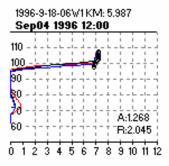


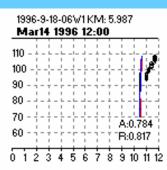


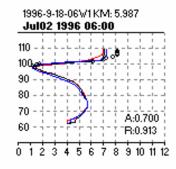


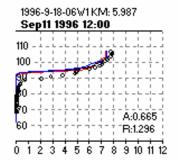


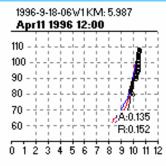


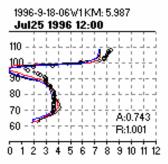


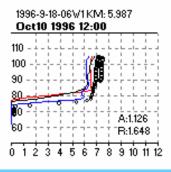


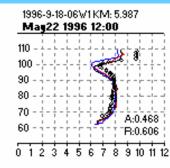


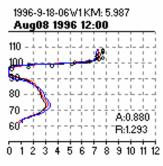




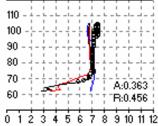




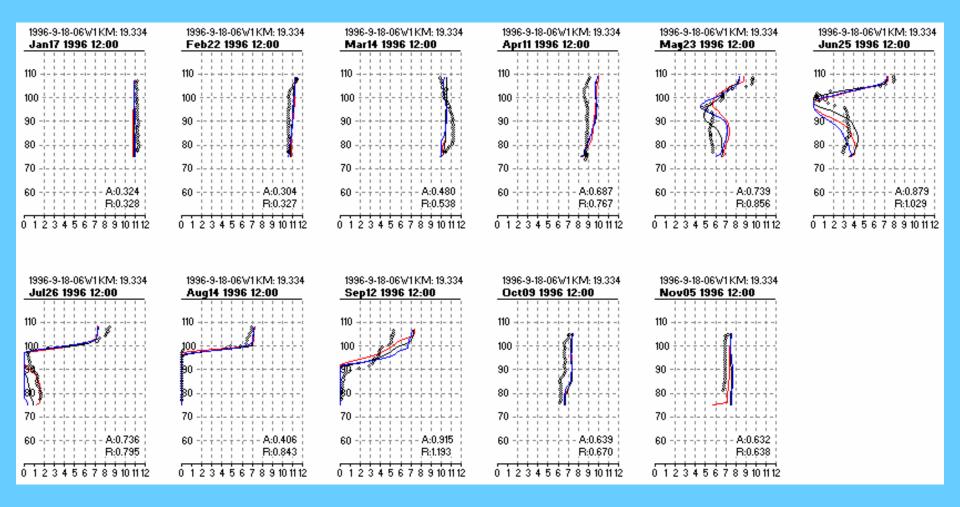




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1996 Lake Murray DO Profiles – 19 Km Upstream of Dam Model vs. Data [Overall Statistics: ABS = 0.61, RMS = 0.77]

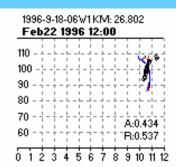


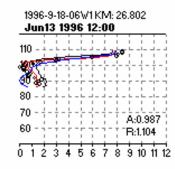
1996 Lake Murray DO Profiles – 27 Km Upstream of Dam Model vs. Data [Overall Statistics: ABS = 1.01, RMS = 1.54]

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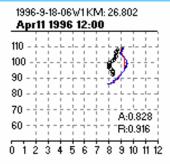


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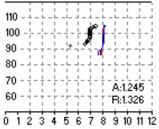
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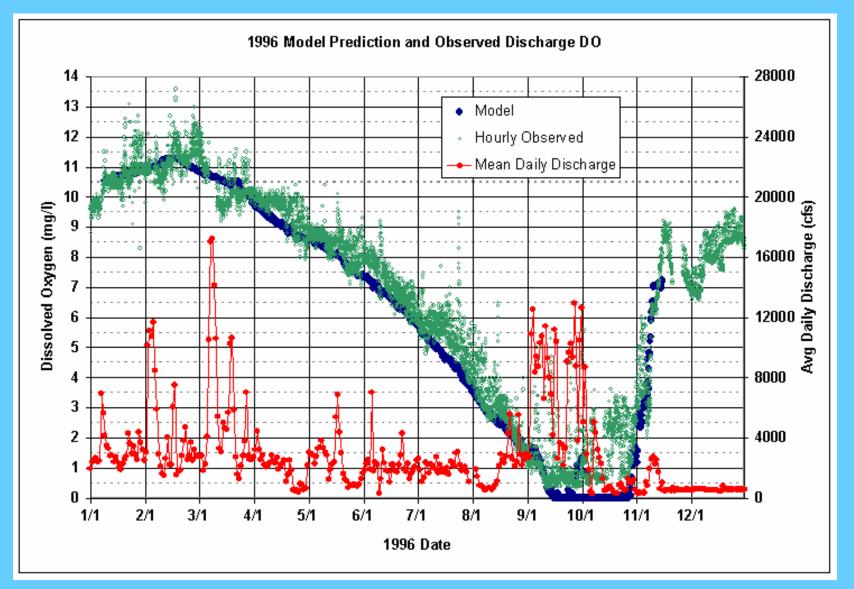
1996 Statistics

	Kilometers From Dam									
	0.0		6		19		27		Overall	
	AME	RMS	AME	RMS	AME	RMS	AME	RMS	AME	RMS
Temperature	0.49	0.67	0.57	0.80	0.63	0.84	0.94	1.28	0.66	0.90
DO	0.56	0.86	0.86	1.21	0.56	0.75	0.68	0.99	0.67	0.95

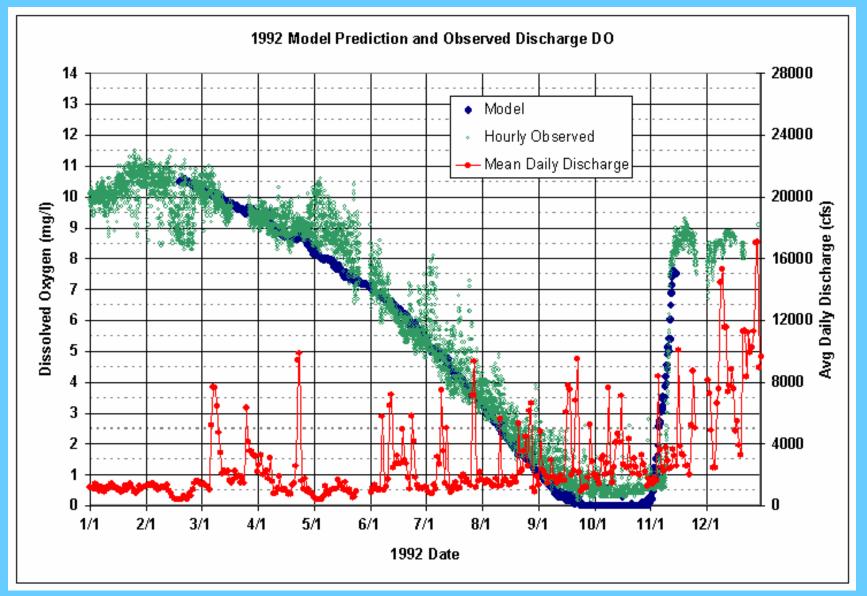
1996 DO

		Kilometers From Dam									
		0.0		6.0		19.3		26.8		Average	
D ate	Julian Day	AME	RMS	AME	RMS	AME	RMS	AME	RMS	AME	RMS
1/17 -18	17-18	0.07	0.08	0.45	0.77	0.32	0.33	0.85	1.66	0.42	0.71
2/21-22	52-53	0.83	0.83	0.82	0.83	0.30	0.33	0.43	0.54	0.60	0.63
3/13-14	73-74	0.30	0.32	0.78	0.82	0.48	0.54	0.29	0.33	0.46	0.50
4/10-11	101-103	0.25	0.31	0.14	0.15	0.69	0.77	0.83	0.92	0.48	0.54
5/9-10	130-131	0.69	0.74	0.47	0.61			1.97	2.40	1.04	1.25
5/22-23	143-144	0.40	0.56	0.39	0.68	0.74	0.86	1.78	2.09	0.83	1.04
6/13	165	0.46	0.57	0.57	0.65			0.99	1.10	0.67	0.77
6/24-25	176-177	0.30	0.44	0.70	0.91	0.88	1.03	0.62	0.90	0.63	0.82
7/2	184	0.71	0.88	0.74	1.00			3.32	4.04	1.59	1.97
7/25-26	207-208	0.69	1.03	0.88	1.29	0.74	0.80	0.64	1.10	0.74	1.05
8/13-14	226-227	0.43	0.61	0.72	0.93	0.41	0.84	1.21	1.89	0.69	1.07
9/4	248	0.29	0.50	1.27	2.05					0.78	1.27
9/11-12	255-257	0.32	0.60	0.67	1.30	0.92	1.19	0.83	1.07	0.68	1.04
10/9-10	283-284	1.27	1.69	1.13	1.65	0.64	0.67	0.49	0.57	0.88	1.14
11/5-6	310-311	0.95	1.34	0.36	0.46	0.63	0.64	1.25	1.33	0.80	0.94
	Overall	0.57	0.89	0.65	1.00	0.61	0.77	1.01	1.54	0.65	1.00

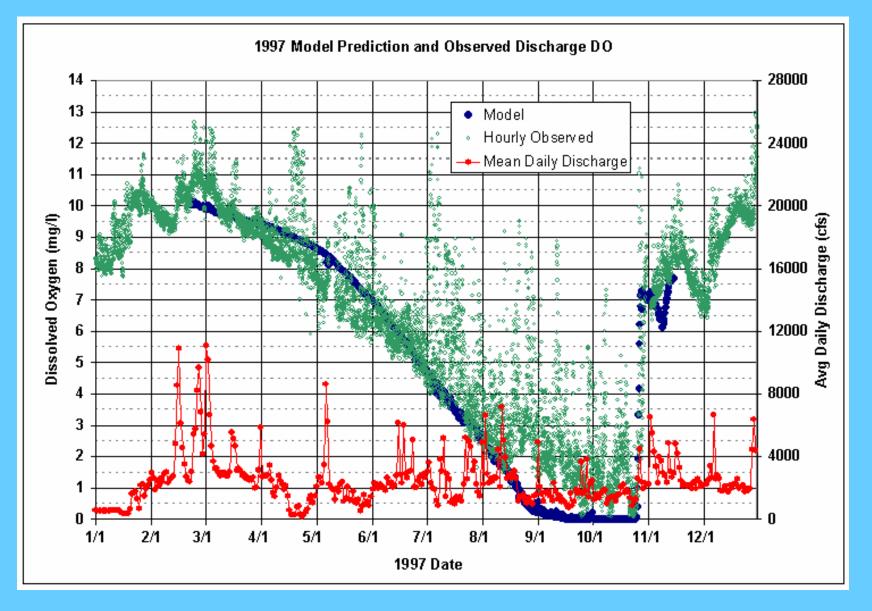
1996 Comparison of Modeled versus Measured Saluda Release DO



1992 Comparison of Modeled versus Measured Saluda Release DO

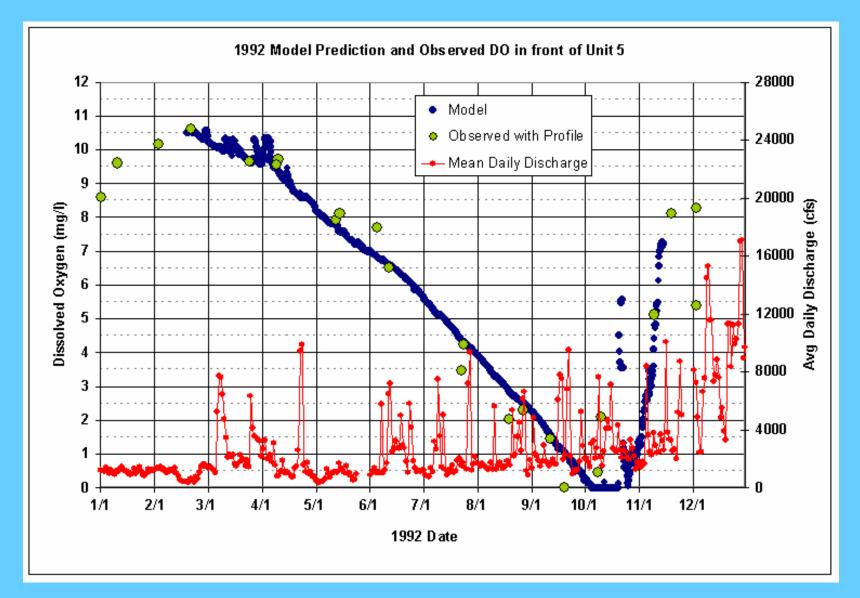


1997 Comparison of Modeled versus Measured Saluda Release DO

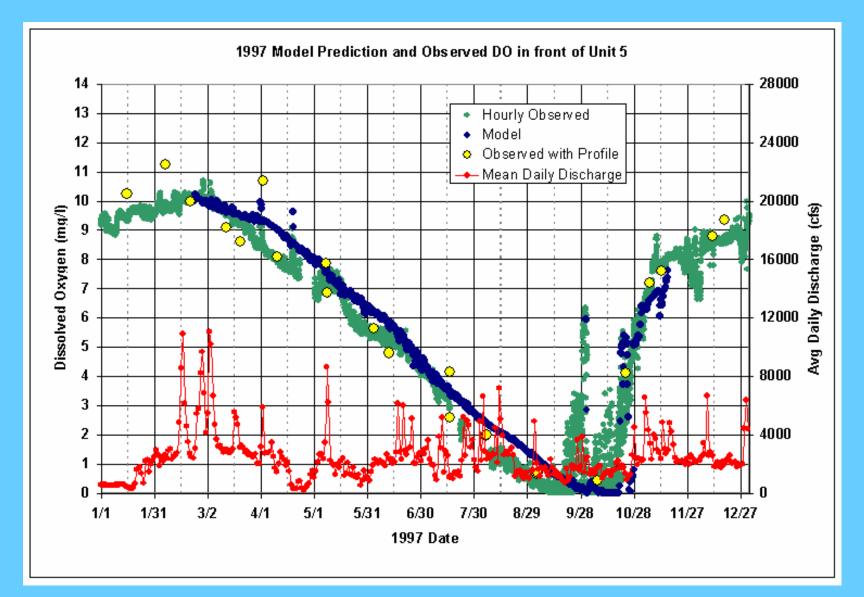


1996 Modeled versus Measured DO at the level of the Unit 5 Intake

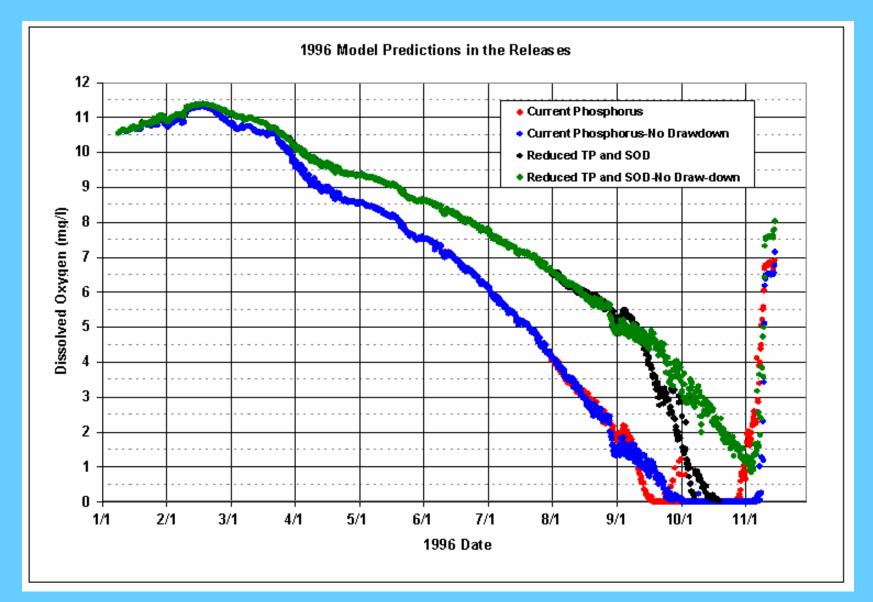
1992 Modeled versus Measured DO at the level of the Unit 5 Intake



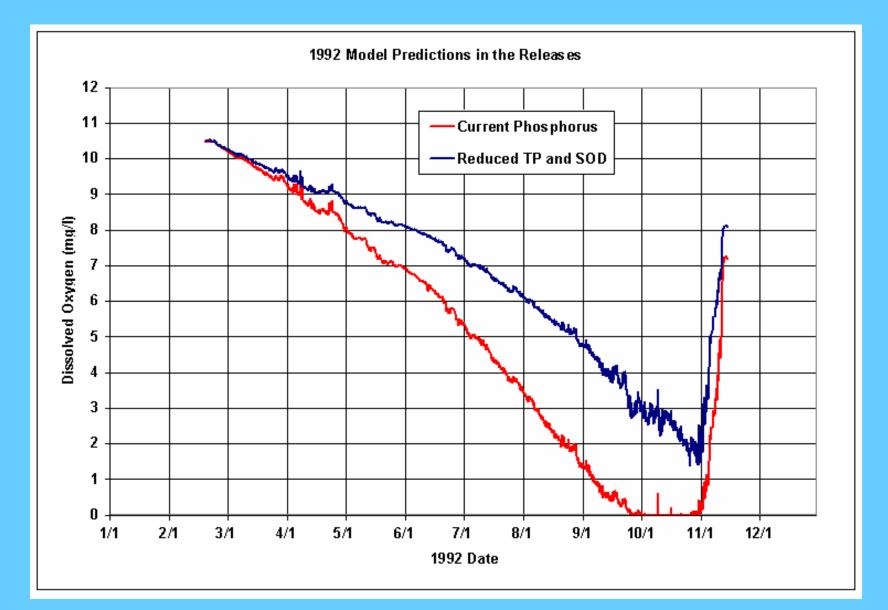
1997 Modeled versus Measured DO at the level of the Unit 5 Intake



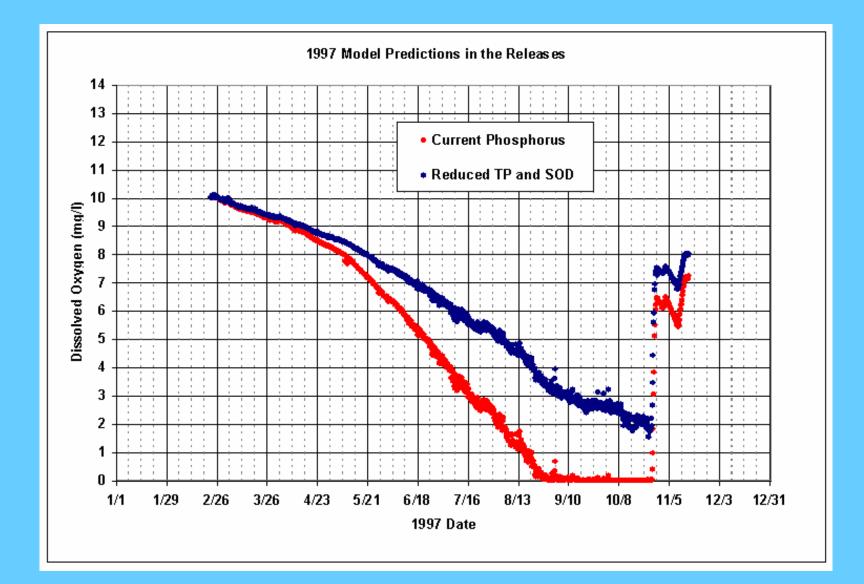
1996 Discharge DO for Current and Reduced Phosphorus, and without the Special Drawdown



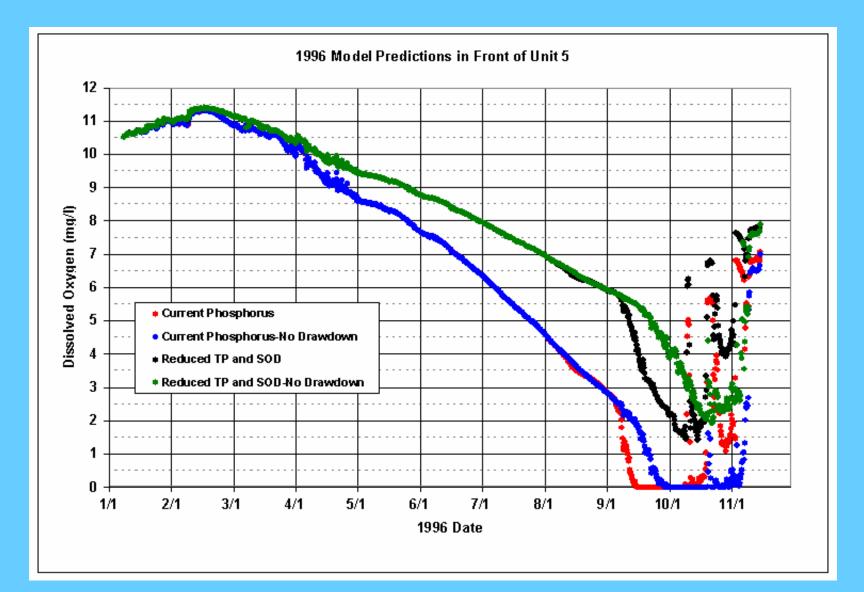
1992 Discharge DO for Current and Reduced Phosphorus



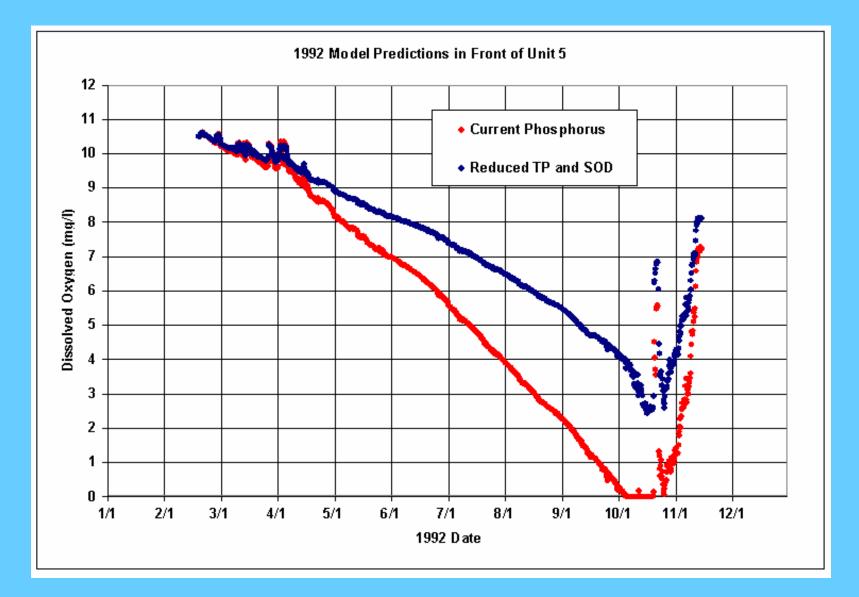
1997 Discharge DO for Current and Reduced Phosphorus



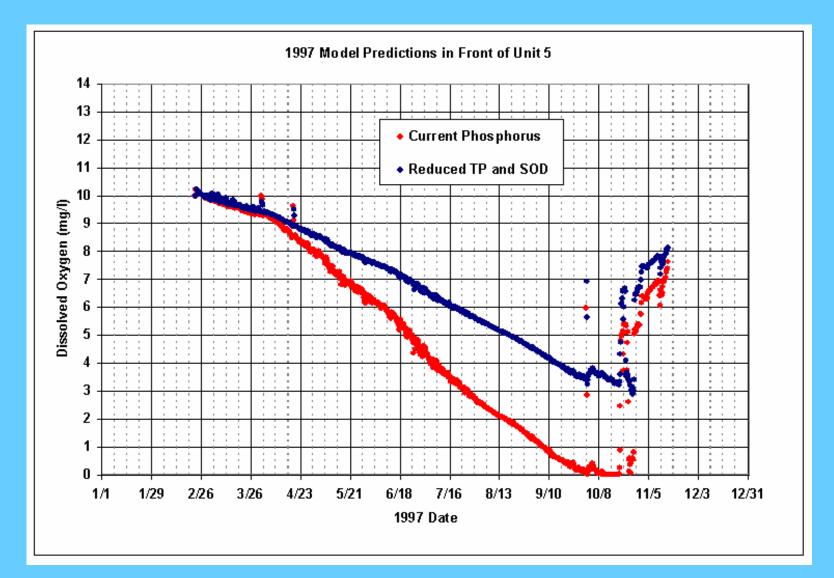
1996 DO at the Elevation of the Unit 5 Intake for Current and Reduced Phosphorus, and without the Special Drawdown



1992 DO at the Level of the Unit 5 Intake for Current and Reduced Phosphorus



1997 DO at the Level of the Unit 5 Intake for Current and Reduced Phosphorus



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