

**Sensitivity of STA Performance to Settling Rate & Target Concentration**  
**BMP Performance: 25% (ECP Design)**  
**Restudy Alternative: ALT-D13R**                      **Period: 1965-1995**

**Inflows + Bypasses**

	<b>Flow</b> <u>kac-ft/yr</u>	<b>Load</b> <u>mt/yr</u>	<b>Conc</b> <u>ppb</u>	<b>Fw</b> <u>%</u>	<b>P</b> <u>m/yr</u>	<b>E</b> <u>m/yr</u>
STA_1E	122.4	28.0	185	100.0%	1.50	1.14
STA_1W	178.5	46.1	209	99.8%	1.43	1.43
STA_2	214.6	42.7	161	100.0%	1.30	1.49
STA_3+4	724.9	83.2	93	100.0%	1.29	1.51
STA_5	159.9	44.6	226	100.0%	1.22	1.42
STA_6	26.3	5.9	182	98.2%	1.32	1.29
Total	1426.7	250.6	142			

**Sensitivity to Phosphorus Settling Rate**

	<b>STA Design</b>	<b>Low Est.</b>	<b>WCA-2A Water Col.</b>	<b>&lt;----- ENR Project -----&gt;</b>		<b>ECP</b>
<u>Ke (m/yr)</u>	<u>10.2</u>	<u>8.0</u>	<u>12.0</u>	<u>15.0</u>	<u>20.0</u>	

**Outflow Concentrations for ECP Treatment Areas (ppb)**

STA_1E	45	59	36	25	15	50
STA_1W	62	79	51	37	22	50
STA_2	62	75	52	40	26	50
STA_3+4	46	53	41	33	24	50
STA_5	99	118	85	67	45	50
STA_6	60	76	50	37	23	50
Total	56	68	48	38	26	50

**Treatment Areas (acres) to Achieve**

				<b>30</b>	<b>ppb</b>	
STA_1E	7054	9146	5943	4707	3496	5350
STA_1W	10976	14227	9248	7326	5442	6670
STA_2	11426	14813	9626	7624	5662	6430
STA_3+4	26611	34755	22331	17611	13024	16480
STA_5	10185	13190	8586	6805	5058	4118
STA_6	1420	1803	1210	971	730	870
Total	67673	87934	56944	45045	33413	39918

**Treatment Areas (acres) to Achieve**

				<b>20</b>	<b>ppb</b>	
STA_1E	8898	11657	7457	5873	4338	5350
STA_1W	13615	17805	11421	9005	6659	6670
STA_2	14405	18777	12102	9558	7079	6430
STA_3+4	36780	48326	30772	24190	17835	16480
STA_5	12406	16143	10432	8247	6114	4118
STA_6	1751	2228	1491	1194	897	870
Total	87856	114937	73674	58066	42922	39918

**Treatment Areas (acres) to Achieve**

				<b>10</b>	<b>ppb</b>	
STA_1E	12779	17416	10519	8136	5915	5350
STA_1W	19126	25959	15781	12242	8925	6670
STA_2	20283	27090	16854	13165	9656	6430
STA_3+4	56696	76478	46870	36405	26557	16480
STA_5	16746	22244	13949	10922	8028	4118
STA_6	2393	3096	2021	1607	1199	870
Total	128024	172283	105995	82477	60279	39918

**Sensitivity of STA Performance to Settling Rate & Target Concentration**  
**BMP Performance: 25% (ECP Design)**  
**Restudy Alternative: 50Base**      **Period: 1965-1995**

**Inflows + Bypasses**

	<b>Flow</b> <u>kac-ft/yr</u>	<b>Load</b> <u>mt/yr</u>	<b>Conc</b> <u>ppb</u>	<b>Fw</b> <u>%</u>	<b>P</b> <u>m/yr</u>	<b>E</b> <u>m/yr</u>
STA_1E	116.9	26.7	185	100.0%	1.50	1.14
STA_1W	160.8	41.5	209	99.2%	1.43	1.42
STA_2	258.9	51.6	161	100.0%	1.30	1.49
STA_3+4	664.8	98.8	120	100.0%	1.29	1.51
STA_5	131.9	42.4	261	97.4%	1.22	1.39
STA_6	23.9	5.4	184	89.8%	1.32	1.27
<b>Total</b>	<b>1357.2</b>	<b>266.4</b>	<b>159</b>			

**Sensitivity to Phosphorus Settling Rate**

	<b>STA Design</b>	<b>Low Est.</b>	<b>WCA-2A Water Col.</b>	<b>&lt;----- ENR Project -----&gt;</b>		<b>ECP</b>
<b>Ke (m/yr)</b>	<b>10.2</b>	<b>8.0</b>	<b>12.0</b>	<b>15.0</b>	<b>20.0</b>	

**Outflow Concentrations for ECP Treatment Areas (ppb)**

STA_1E	42	57	34	23	13	50
STA_1W	55	72	44	31	18	50
STA_2	73	86	64	51	35	50
STA_3+4	55	65	48	39	27	50
STA_5	97	120	82	62	39	50
STA_6	61	76	51	38	24	50
<b>Total</b>	<b>61</b>	<b>74</b>	<b>53</b>	<b>41</b>	<b>27</b>	<b>50</b>

**Treatment Areas (acres) to Achieve**

				<b>30</b>	<b>ppb</b>	
STA_1E	6751	8758	5685	4501	3341	5350
STA_1W	9955	12907	8386	6643	4934	6670
STA_2	13785	17870	11614	9200	6833	6430
STA_3+4	29602	38520	24889	19671	14578	16480
STA_5	9212	11922	7768	6160	4580	4118
STA_6	1431	1821	1218	976	733	870
<b>Total</b>	<b>70736</b>	<b>91798</b>	<b>59561</b>	<b>47150</b>	<b>34999</b>	<b>39918</b>

**Treatment Areas (acres) to Achieve**

				<b>20</b>	<b>ppb</b>	
STA_1E	8519	11169	7135	5617	4147	5350
STA_1W	12354	16163	10360	8167	6038	6670
STA_2	17375	22644	14599	11531	8541	6430
STA_3+4	38868	50862	32588	25678	18975	16480
STA_5	11103	14441	9339	7385	5476	4118
STA_6	1769	2259	1503	1202	901	870
<b>Total</b>	<b>89987</b>	<b>117539</b>	<b>75524</b>	<b>59579</b>	<b>44079</b>	<b>39918</b>

**Treatment Areas (acres) to Achieve**

				<b>10</b>	<b>ppb</b>	
STA_1E	12241	16701	10070	7785	5656	5350
STA_1W	17375	23607	14330	11110	8096	6670
STA_2	24451	32641	20321	15876	11646	6430
STA_3+4	57060	76560	47300	36849	26957	16480
STA_5	14822	19694	12346	9667	7106	4118
STA_6	2441	3188	2053	1625	1208	870
<b>Total</b>	<b>128390</b>	<b>172391</b>	<b>106420</b>	<b>82912</b>	<b>60669</b>	<b>39918</b>

