POND 1

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 1			
				1-A	1-A -Dup	1-B	Average
Geneal Chemistry							
pH	9045C		0.1	7.6		7.7	***7.7***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	99		150	***124.5***
Chloride (mg/Kg)	SMEWW 4500 CL C			22,800		19,800	***21,300***
Organic N	SMEWW 4500N-A	5.0	5.0	d 2,180		d 1,530	***1,855***
% Total Solids	SMEWW 2540G			43.6		43.2	***43.4***
Total Metals (mg/Kg) dry wt							
Arsenic	3050/6020		2.0	11.3		13.8	***12.55***
Cadmium	3050/6020		0.3	0.20		0.20	***0.2***
Chromium	3050/6020		5.0	112.0		106.0	***109***
Copper	3050/6020		5.0	64.2		56.3	***60.25***
Lead	3050/6020		5.0	32.5		30.9	***31.7***
Nickel	3050/6020		5.0	112.0		102.0	***107***
Selenium	3050/6020		0.1	1.7 J		1.4 J	***1.4***
Silver	3050/6020		0.2	0.50		0.50	***0.5***
Zinc	3050/6020		1.0	134.0		118.0	***126***
Mercury	7471/7471 M		0.02	0.38		0.29	***0.335***
Sodium	3050/6020	1.0	1.0	17,900		17,300	***17,600***
Potassium	6010	1.0	1.0	6,180		5,750	***5,965***
Semi-Volatile Organics (µg/Kg)							
Pyridine	3540C/3640A		100	< 229		< 231	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 57		< 58	ND
2-Chlorophenol	3540C/3640A		20	< 46		< 46	ND
Phenol	3540C/3640A		30	< 69		< 69	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 46		< 46	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 46		< 46	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 46		< 46	ND
Benzyl alcohol	3540C/3640A		75	< 172		< 174	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 57		< 58	ND
2-Methylphenol	3540C/3640A		20	< 46		< 46	ND
Hexachloroethane	3540C/3640A		20	< 46		< 46	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 69		< 69	ND
4/3-Methylphenol	3540C/3640A		40	< 92		< 93	ND
Nitrobenzene	3540C/3640A		20	< 46		< 46	ND
Isophorone	3540C/3640A		20	< 46		< 46	ND
2-Nitrophenol	3540C/3640A		20	< 46		< 46	ND
2,4-Dimethylphenol	3540C/3640A		80	< 183		< 185	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 46		< 46	ND
2,4-Dichorophenol	3540C/3640A		20	< 46		< 46	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 46		< 46	ND
Napthalene	3540C/3640A		20	< 46		< 46	ND
4-Chloroaniline	3540C/3640A		100	< 229		< 231	ND
Hexachlorobutadiene	3540C/3640A		20	< 46		< 46	ND
2-Methylnapthalene	3540C/3640A		20	< 46		< 46	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 46		< 46	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 115		< 116	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 69		< 69	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 69		< 69	ND
2-Chloronapthalene	3540C/3640A		20	< 46		< 46	ND
2-Nitroaniline	3540C/3640A		50	< 115		< 116	ND
Acenaphthylene	3540C/3640A		20	< 46		< 46	ND
Dimethylphthalate	3540C/3640A		20	< 46		< 46	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 46		< 46	ND
Acenaphthene	3540C/3640A		20	< 46		< 46	ND
3-Nitroaniline	3540C/3640A		100	< 229		< 231	ND
2,4-Dintrophenol	3540C/3640A		100	< 229		< 231	ND
Dibenzofuran	3540C/3640A		20	< 46		< 46	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 46		< 46	ND
4-Nitrophenol	3540C/3640A		70	< 161		< 162	ND
Fluorene	3540C/3640A		20	< 46		< 46	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 46		< 46	ND
Diethylphthalate	3540C/3640A		20	< 46		< 46	ND
4-Nitroalinine	3540C/3640A		70	< 161		< 162	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 80		< 81	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 115		< 116	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 46		< 46	ND
Hexachlorobenzene	3540C/3640A		20	< 46		< 46	ND
Pentachlorophenol	3540C/3640A		40	< 92		< 93	ND
Phenanthrene	3540C/3640A		20	< 46		< 46	ND
Anthracene	3540C/3640A		20	< 46		< 46	ND
Carbazole	3540C/3640A		60	< 138		< 139	ND
Di-n-butylphthalate	3540C/3640A		40	< 92		< 93	ND
Fluoranthene	3540C/3640A		20	< 46		76	***51***
Pyrene	3540C/3640A		20	< 46		67	***45***
Benzidine	3540C/3640A		150	< 344		< 347	ND
Butylbenzylphthalate	3540C/3640A		40	< 92		< 93	ND
Benzo(a)anthracene	3540C/3640A		20	< 46		< 46	ND
Chrysene	3540C/3640A		20	< 46		< 46	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 344		< 347	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 103		< 104	ND
Di-n-octylphthalate	3540C/3640A		40	< 92		< 93	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 46		< 46	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 46		< 46	ND
Benzo(a)pyrene	3540C/3640A		20	< 46		< 46	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 69		< 69	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 92		< 93	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 92		< 93	ND
Pesticides (µg/Kg)		**PQL(µg/L)**					
Azinphosmethyl (Guthion)	8141A	100		< 100		< 100	ND
Bolstar	8141A	50		< 50		< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50		< 50	ND
Coumaphos	8141A	100		< 100		< 100	ND
Def/Morphos	8141A	50		< 50		< 50	ND
Demeton (total)	8141A	100		< 100		< 100	ND
Diazinon	8141A	50		< 50		< 50	ND
Dichlorvos	8141A	100		< 100		< 100	ND
Dimethoate	8141A	100		< 100		< 100	ND
Disulfoton	8141A	50		< 50		< 50	ND
EPN	8141A	50		< 50		< 50	ND
Ethion	8141A	50		< 50		< 50	ND
Ethoprop	8141A	50		< 50		< 50	ND
Fensulfothion	8141A	250		< 250		< 250	ND
Fenthion	8141A	50		< 50		< 50	ND
Malathion	8141A	50		< 50		< 50	ND
Mevinphos	8141A	350		< 350		< 350	ND
Naled	8141A	250		< 250		< 250	ND
Parathion, ethyl	8141A	50		< 50		< 50	ND
Parathion, methyl	8141A	50		< 50		< 50	ND
Phorate	8141A	50		< 50		< 50	ND
Prowl (pendimethalin)	8141A	50		< 50		< 50	ND
Ronnel	8141A	50		< 50		< 50	ND
Stirophos	8141A	50		< 50		< 50	ND
Sulfotep	8141A	50		< 50		< 50	ND
Tokuthion	8141A	50		< 50		< 50	ND
Trichloronate	8141A	50		< 50		< 50	ND
Trifuralin	8141A	50		< 50		< 50	ND
Organochlorine Pesticides (µg/Kg)							
Aldrin	3540C/3640A			< 1.22	< 1.22	< 1.23	ND
alpha-BHC	3540C/3640A			< 2.29	< 2.29	< 2.31	ND
beta-BHC	3540C/3640A			< 1.41	< 1.41	< 1.42	ND
gamma-BHC	3540C/3640A			< 1.44	< 1.44	< 1.46	ND
delta-BHC	3540C/3640A			< 1.47	< 1.47	< 1.48	ND
Chlordane	3540C/3640A			< 5.42	< 5.42	< 5.47	ND
2,4-DDD	3540C/3640A			< 1.41	< 1.41	< 1.42	ND
4,4-DDD	3540C/3640A			2.06 J	2.41	< 2.36	***1.883***
2,4-DDE	3540C/3640A			< 1.23	< 1.23	< 1.24	ND
4,4-DDE	3540C/3640A			< 1.23	< 1.23	< 1.24	ND
2,4-DDT	3540C/3640A			< 2.29	< 2.29	< 2.31	ND
4,4-DDT	3540C/3640A			< 2.29	< 2.29	2.36	***1.55***
Total DDT	3540C/3640A			2.06 J	2.41	< 2.31	***1.875***
Dieldrin	3540C/3640A			< 1.49	< 1.49	< 1.50	ND
Endosulfan I	3540C/3640A			< 1.87	< 1.87	< 1.89	ND
Endosulfan II	3540C/3640A			< 1.95	< 1.95	< 1.97	ND
Endosulfan Sulfate	3540C/3640A			< 1.65	< 1.65	< 1.67	ND
Endrin	3540C/3640A			< 1.72	< 1.72	< 1.74	ND
Endrin Aldehyde	3540C/3640A			< 1.86	< 1.86	< 1.88	ND
Heptachlor	3540C/3640A			< 1.92	< 1.92	< 1.93	ND
Heptachlor Epoxide	3540C/3640A			< 1.90	< 1.90	< 1.92	ND
Toxaphene	3540C/3640A			< 10.10	< 10.10	< 10.20	ND
PCB's (µg/Kg)							
Arochlor 1016	3540C/3640A			< 5.3	< 5.3	< 5.3	ND
Arochlor 1221	3540C/3640A			< 5.3	< 5.3	< 5.3	ND
Arochlor 1232	3540C/3640A			< 5.3	< 5.3	< 5.3	ND
Arochlor 1242	3540C/3640A			< 5.3	< 5.3	< 5.3	ND
Arochlor 1248	3540C/3640A			< 5.3	< 5.3	< 5.3	ND
Arochlor 1254	3540C/3640A			< 5.3	< 5.3	< 5.3	ND
Arochlor 1260	3540C/3640A			< 5.3	< 5.3	< 5.3	ND
Total Aroclors	3540C/3640A			< 5.3	< 5.3	< 5.3	ND

POND 1A

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	POND 1A		
				1A-A	1A-B	Average
Geneal Chemistry						
pH	9045C		0.1	8.0	8.5	***8.25***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	69	160	***114.5***
Chloride (mg/Kg)	SMEWW 4500 CL C			57,100	49,500	***53,300***
Organic N	SMEWW 4500N-A	5.0	5.0	d 3,650	d 2,630	***3,140***
% Total Solids	SMEWW 2540G			34.5	37.2	***35.85***
Total Metals (mg/Kg) dry wt						
Arsenic	3050/6020		2.0	15.0	12.9	***13.95***
Cadmium	3050/6020		0.3	1.70	< 0.27	***0.918***
Chromium	3050/6020		5.0	92.6	81.4	***87***
Copper	3050/6020		5.0	48.1	42.0	***45.05***
Lead	3050/6020		5.0	34.3	24.8	***29.55***
Nickel	3050/6020		5.0	82.2	73.0	***77.6***
Selenium	3050/6020		0.1	1.8 J	3.3	***1.4***
Silver	3050/6020		0.2	0.40	< 0.27	***0.268***
Zinc	3050/6020		1.0	84.0	80.5	***82.25***
Mercury	7471/7471 M		0.02	0.18	0.18	***0.18***
Sodium	3050/6020	1.0	1.0	38,900	30,700	***34,800***
Potassium	6010	1.0	1.0	6,600	6,960	***6,780***
Semi-Volatile Organics (µg/Kg)						
Pyridine	3540C/3640A		100	< 290	< 269	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 72	< 67	ND
2-Chlorophenol	3540C/3640A		20	< 58	< 54	ND
Phenol	3540C/3640A		30	< 87	< 81	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 58	< 54	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 58	< 54	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 58	< 54	ND
Benzyl alcohol	3540C/3640A		75	< 217	< 202	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 72	< 67	ND
2-Methylphenol	3540C/3640A		20	< 58	< 54	ND
Hexachloroethane	3540C/3640A		20	< 58	< 54	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 87	< 81	ND
4/3-Methylphenol	3540C/3640A		40	< 116	< 108	ND
Nitrobenzene	3540C/3640A		20	< 58	< 54	ND
Isophorone	3540C/3640A		20	< 58	< 54	ND
2-Nitrophenol	3540C/3640A		20	< 58	< 54	ND
2,4-Dimethylphenol	3540C/3640A		80	< 232	< 215	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 58	< 54	ND
2,4-Dichorophenol	3540C/3640A		20	< 58	< 54	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 58	< 54	ND
Napthalene	3540C/3640A		20	< 58	< 54	ND
4-Chloroaniline	3540C/3640A		100	< 290	< 269	ND
Hexachlorobutadiene	3540C/3640A		20	< 58	< 54	ND
2-Methylnapthalene	3540C/3640A		20	< 58	< 54	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 58	< 54	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 145	< 134	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 87	< 81	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 87	< 81	ND
2-Chloronapthalene	3540C/3640A		20	< 58	< 54	ND
2-Nitroaniline	3540C/3640A		50	< 145	< 134	ND
Acenaphthylene	3540C/3640A		20	< 58	< 54	ND
Dimethylphthalate	3540C/3640A		20	< 58	< 54	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 58	< 54	ND
Acenaphthene	3540C/3640A		20	< 58	< 54	ND
3-Nitroaniline	3540C/3640A		100	< 290	< 269	ND
2,4-Dintrophenol	3540C/3640A		100	< 290	< 269	ND
Dibenzofuran	3540C/3640A		20	< 58	< 54	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 58	< 54	ND
4-Nitrophenol	3540C/3640A		70	< 203	< 188	ND
Fluorene	3540C/3640A		20	< 58	< 54	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 58	< 54	ND
Diethylphthalate	3540C/3640A		20	< 58	< 54	ND
4-Nitroalinine	3540C/3640A		70	< 203	< 188	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 101	< 94	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 145	< 134	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 58	< 54	ND
Hexachlorobenzene	3540C/3640A		20	< 58	< 54	ND
Pentachlorophenol	3540C/3640A		40	< 116	< 108	ND
Phenanthrene	3540C/3640A		20	< 58	< 54	ND
Anthracene	3540C/3640A		20	< 58	< 54	ND
Carbazole	3540C/3640A		60	< 174	< 161	ND
Di-n-butylphthalate	3540C/3640A		40	< 116	< 108	ND
Fluoranthene	3540C/3640A		20	< 58	< 54	ND
Pyrene	3540C/3640A		20	< 58	< 54	ND
Benzidine	3540C/3640A		150	< 435	< 403	ND
Butylbenzylphthalate	3540C/3640A		40	< <116	< 108	ND
Benzo(a)anthracene	3540C/3640A		20	< 58	< 54	ND
Chrysene	3540C/3640A		20	< 58	< 54	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 435	< 403	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 130	< 121	ND
Di-n-octylphthalate	3540C/3640A		40	< 116	< 108	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 58	< 54	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 58	< 54	ND
Benzo(a)pyrene	3540C/3640A		20	< 58	< 54	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 87	< 81	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 116	< 108	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 116	< 108	ND
Pesticides (µg/Kg)	**PQL(µg/L)**					
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100	ND
Bolstar	8141A	50		< 50	< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50	ND
Coumaphos	8141A	100		< 100	< 100	ND
Def/Morphos	8141A	50		< 50	< 50	ND
Demeton (total)	8141A	100		< 100	< 100	ND
Diazinon	8141A	50		< 50	< 50	ND
Dichlorvos	8141A	100		< 100	< 100	ND
Dimethoate	8141A	100		< 100	< 100	ND
Disulfoton	8141A	50		< 50	< 50	ND
EPN	8141A	50		< 50	< 50	ND
Ethion	8141A	50		< 50	< 50	ND
Ethoprop	8141A	50		< 50	< 50	ND
Fensulfothion	8141A	250		< 250	< 250	ND
Fenthion	8141A	50		< 50	< 50	ND
Malathion	8141A	50		< 50	< 50	ND
Mevinphos	8141A	350		< 350	< 350	ND
Naled	8141A	250		< 250	< 250	ND
Parathion, ethyl	8141A	50		< 50	< 50	ND
Parathion, methyl	8141A	50		< 50	< 50	ND
Phorate	8141A	50		< 50	< 50	ND
Prowl (pendimethalin)	8141A	50		< 50	< 50	ND
Ronnel	8141A	50		< 50	< 50	ND
Stirophos	8141A	50		< 50	< 50	ND
Sulfotep	8141A	50		< 50	< 50	ND
Tokuthion	8141A	50		< 50	< 50	ND
Trichloronate	8141A	50		< 50	< 50	ND
Trifuralin	8141A	50		< 50	< 50	ND
Organochlorine Pesticides (µg/Kg)						
Aldrin	3540C/3640A			< 1.54	< 1.42	ND
alpha-BHC	3540C/3640A			< 2.90	< 2.69	ND
beta-BHC	3540C/3640A			< 1.78	< 1.65	ND
gamma-BHC	3540C/3640A			< 1.83	< 1.69	ND
delta-BHC	3540C/3640A			< 1.86	< 1.72	ND
Chlordane	3540C/3640A			< 6.86	< 6.36	ND
2,4-DDD	3540C/3640A			< 1.78	< 1.65	ND
4,4-DDD	3540C/3640A			< 1.78	< 1.65	ND
2,4-DDE	3540C/3640A			< 1.55	< 1.44	ND
4,4-DDE	3540C/3640A			< 1.55	< 1.44	ND
2,4-DDT	3540C/3640A			< 2.90	< 2.69	ND
4,4-DDT	3540C/3640A			< 2.90	< 2.69	ND
Total DDT	3540C/3640A			< 2.90	< 2.69	ND
Dieldrin	3540C/3640A			< 1.88	< 1.75	ND
Endosulfan I	3540C/3640A			< 2.36	< 2.19	ND
Endosulfan II	3540C/3640A			< 2.46	< 2.28	ND
Endosulfan Sulfate	3540C/3640A			< 2.09	< 1.94	ND
Endrin	3540C/3640A			< 2.17	< 2.02	ND
Endrin Aldehyde	3540C/3640A			< 2.35	< 2.18	ND
Heptachlor	3540C/3640A			< 2.42	< 2.24	ND
Heptachlor Epoxide	3540C/3640A			< 2.41	< 2.23	ND
Toxaphene	3540C/3640A			< 12.80	< 11.80	ND
PCB's (µg/Kg)						
Arochlor 1016	3540C/3640A			< 6.7	< 6.2	ND
Arochlor 1221	3540C/3640A			< 6.7	< 6.2	ND
Arochlor 1232	3540C/3640A			< 6.7	< 6.2	ND
Arochlor 1242	3540C/3640A			< 6.7	< 6.2	ND
Arochlor 1248	3540C/3640A			< 6.7	< 6.2	ND
Arochlor 1254	3540C/3640A			< 6.7	< 6.2	ND
Arochlor 1260	3540C/3640A			< 6.7	< 6.2	ND
Total Aroclors	3540C/3640A			< 6.7	< 6.2	ND

POND 2

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 2					
				2-A	2-B	2-B-Dup	2-C	2-D	Average
Geneal Chemistry									
pH	9045C		0.1	7.6	7.8		7.8	7.7	***7.7***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	100	99		57	95	***87.75***
Chloride (mg/Kg)	SMEWW 4500 CL C			20,200	12,700		24,100	31,400	***22,100***
Organic N	SMEWW 4500N-A	5.0	5.0	d 2,280	d 1,190		168	d 4,410	***2,012***
% Total Solids	SMEWW 2540G			45.7	59.4		44.0	36.3	***46.4***
Total Metals (mg/Kg) dry wt									
Arsenic	3050/6020		2.0	15.4	11.4		17.1	17.4	***15.325***
Cadmium	3050/6020		0.3	0.30	< 0.20		0.30	< 0.30	***0.213***
Chromium	3050/6020		5.0	89.6	98.2		85.1	108	***95.225***
Copper	3050/6020		5.0	38.8	31.0		35.3	45.6	***37.675***
Lead	3050/6020		5.0	25.8	11.8		20.7	21.1	***19.85***
Nickel	3050/6020		5.0	80.8	81.1		78.0	99.8	***84.925***
Selenium	3050/6020		0.1	1.1 J	0.7 J		0.9 J	1.2 J	***0.975***
Silver	3050/6020		0.2	0.30	0.20		0.30	0.30	***0.275***
Zinc	3050/6020		1.0	87.0	79.0		75.0	95.0	***84***
Mercury	7471/7471 M		0.02	0.15	0.14		0.09	0.08	***0.115***
Sodium	3050/6020	1.0	1.0	16,700	12,600		18,500	23,400	***17,800***
Potassium	6010	1.0	1.0	5,960	6,040		5,520	6,720	***6,060***
Semi-Volatile Organics (µg/Kg)									
Pyridine	3540C/3640A		100	< 290	< 168	< 168	< 227	< 275	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 72	< 42	< 42	< 57	< 69	ND
2-Chlorophenol	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Phenol	3540C/3640A		30	< 87	< 51	< 51	< 68	< 83	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Benzyl alcohol	3540C/3640A		75	< 217	< 126	< 126	< 170	< 207	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 72	< 42	< 42	< 57	< 69	ND
2-Methylphenol	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Hexachloroethane	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 87	< 51	< 51	< 68	< 83	ND
4/3-Methylphenol	3540C/3640A		40	< 116	< 67	< 67	< 91	< 110	ND
Nitrobenzene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Isophorone	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
2-Nitrophenol	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
2,4-Dimethylphenol	3540C/3640A		80	< 232	< 135	< 135	< 182	< 220	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
2,4-Dichorophenol	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Napthalene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
4-Chloroaniline	3540C/3640A		100	< 290	< 168	< 168	< 227	< 275	ND
Hexachlorobutadiene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
2-Methylnapthalene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 145	< 84	< 84	< 114	< 138	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 87	< 51	< 51	< 68	< 83	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 87	< 51	< 51	< 68	< 83	ND
2-Chloronapthalene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
2-Nitroaniline	3540C/3640A		50	< 145	< 84	< 84	< 114	< 138	ND
Acenaphthylene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Dimethylphthalate	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Acenaphthene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
3-Nitroaniline	3540C/3640A		100	< 290	< 168	< 168	< 227	< 275	ND
2,4-Dintrophenol	3540C/3640A		100	< 290	< 168	< 168	< 227	< 275	ND
Dibenzofuran	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
4-Nitrophenol	3540C/3640A		70	< 203	< 118	< 118	< 159	< 193	ND
Fluorene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Diethylphthalate	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
4-Nitroalinine	3540C/3640A		70	< 203	< 118	< 118	< 159	< 193	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 101	< 59	< 59	< 80	< 96	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 145	< 84	< 84	< 114	< 138	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Hexachlorobenzene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Pentachlorophenol	3540C/3640A		40	< 116	< 67	< 67	< 91	< 110	ND
Phenanthrene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Anthracene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Carbazole	3540C/3640A		60	< 174	< 101	< 101	< 136	< 165	ND
Di-n-butylphthalate	3540C/3640A		40	< 116	< 67	< 67	< 91	< 110	ND
Fluoranthene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Pyrene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Benzidine	3540C/3640A		150	< 435	< 253	< 253	< 341	< 413	ND
Butylbenzylphthalate	3540C/3640A		40	< 116	< 67	< 67	< 91	< 110	ND
Benzo(a)anthracene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Chrysene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 435	< 253	< 253	< 341	< 413	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 130	< 76	< 76	< 102	< 124	ND
Di-n-octylphthalate	3540C/3640A		40	< 116	< 67	< 67	< 91	< 110	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Benzo(a)pyrene	3540C/3640A		20	< 58	< 34	< 34	< 45	< 55	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 87	< 51	< 51	< 68	< 83	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 116	< 67	< 67	< 91	< 110	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 116	< 67	< 67	< 91	< 110	ND
Pesticides (µg/Kg)		PQL(µg/L)							
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100		< 100	< 100	ND
Bolstar	8141A	50		< 50	< 50		< 50	< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50		< 50	< 50	ND
Coumaphos	8141A	100		< 100	< 100		< 100	< 100	ND
Def/Morphos	8141A	50		< 50	< 50		< 50	< 50	ND
Demeton (total)	8141A	100		< 100	< 100		< 100	< 100	ND
Diazinon	8141A	50		< 50	< 50		< 50	< 50	ND
Dichlorvos	8141A	100		< 100	< 100		< 100	< 100	ND
Dimethoate	8141A	100		< 100	< 100		< 100	< 100	ND
Disulfoton	8141A	50		< 50	< 50		< 50	< 50	ND
EPN	8141A	50		< 50	< 50		< 50	< 50	ND
Ethion	8141A	50		< 50	< 50		< 50	< 50	ND
Ethoprop	8141A	50		< 50	< 50		< 50	< 50	ND
Fensulfothion	8141A	250		< 250	< 250		< 250	< 250	ND
Fenthion	8141A	50		< 50	< 50		< 50	< 50	ND
Malathion	8141A	50		< 50	< 50		< 50	< 50	ND
Mevinphos	8141A	350		< 350	< 350		< 350	< 350	ND
Naled	8141A	250		< 250	< 250		< 250	< 250	ND
Parathion, ethyl	8141A	50		< 50	< 50		< 50	< 50	ND
Parathion, methyl	8141A	50		< 50	< 50		< 50	< 50	ND
Phorate	8141A	50		< 50	< 50		< 50	< 50	ND
Prowl (pendimethalin)	8141A	50		< 50	< 50		< 50	< 50	ND
Ronnel	8141A	50		< 50	< 50		< 50	< 50	ND
Stirophos	8141A	50		< 50	< 50		< 50	< 50	ND
Sulfotep	8141A	50		< 50	< 50		< 50	< 50	ND
Tokuthion	8141A	50		< 50	< 50		< 50	< 50	ND
Trichloronate	8141A	50		< 50	< 50		< 50	< 50	ND
Trifuralin	8141A	50		< 50	< 50		< 50	< 50	ND
Organochlorine Pesticides (µg/Kg)									
Aldrin	3540C/3640A			< 1.16	< 0.89		< 1.20	< 1.46	ND
alpha-BHC	3540C/3640A			< 2.19	< 1.68		< 2.27	< 2.75	ND
beta-BHC	3540C/3640A			< 1.35	< 1.04		< 1.40	< 1.69	ND
gamma-BHC	3540C/3640A			< 1.38	< 1.06		< 1.43	< 1.74	ND
delta-BHC	3540C/3640A			< 1.40	< 1.08		< 1.45	< 1.76	ND
Chlordane	3540C/3640A			< 5.18	< 3.98		< 5.38	< 6.52	ND
2,4-DDD	3540C/3640A			< 1.35	< 1.04		< 1.40	< 1.69	ND
4,4-DDD	3540C/3640A			< 1.35	< 1.04		< 1.40	< 1.69	ND
2,4-DDE	3540C/3640A			< 1.17	< 0.90		< 1.22	< 1.47	ND
4,4-DDE	3540C/3640A			< 1.17	< 0.90		< 1.22	< 1.47	ND
2,4-DDT	3540C/3640A			< 2.19	< 1.68		< 2.27	< 2.75	ND
4,4-DDT	3540C/3640A			< 2.19	< 1.68		< 2.27	< 2.75	ND
Total DDT	3540C/3640A			< 2.19	< 1.68		< 2.27	< 2.75	ND
Dieldrin	3540C/3640A			< 1.42	< 1.09		< 1.48	< 1.79	ND
Endosulfan I	3540C/3640A			< 1.78	< 1.37		< 1.85	< 2.25	ND
Endosulfan II	3540C/3640A			< 1.86	< 1.43		< 1.93	< 2.34	ND
Endosulfan Sulfate	3540C/3640A			< 1.58	< 1.21		< 1.64	< 1.98	ND
Endrin	3540C/3640A			< 1.64	< 1.26		< 1.70	< 2.07	ND
Endrin Aldehyde	3540C/3640A			< 1.77	< 1.36		< 1.84	< 2.23	ND
Heptachlor	3540C/3640A			< 1.83	< 1.41		< 1.90	< 2.30	ND
Heptachlor Epoxide	3540C/3640A			< 1.82	< 1.40		< 1.89	< 2.29	ND
Toxaphene	3540C/3640A			< 9.60	< 7.40		< 10.00	< 12.10	ND
PCB's (µg/Kg)									
Arochlor 1016	3540C/3640A			< 5.0	< 3.9		< 5.2	< 6.3	ND
Arochlor 1221	3540C/3640A			< 5.0	< 3.9		< 5.2	< 6.3	ND
Arochlor 1232	3540C/3640A			< 5.0	< 3.9		< 5.2	< 6.3	ND
Arochlor 1242	3540C/3640A			< 5.0	< 3.9		< 5.2	< 6.3	ND
Arochlor 1248	3540C/3640A			< 5.0	< 3.9		< 5.2	< 6.3	ND
Arochlor 1254	3540C/3640A			< 5.0	< 3.9		< 5.2	< 6.3	ND
Arochlor 1260	3540C/3640A			< 5.0	< 3.9		< 5.2	< 6.3	ND
Total Aroclors	3540C/3640A			< 5.0	< 3.9		< 5.2	< 6.3	ND

POND 2A

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	POND 2A		
				2A-A	2A-B	Average
Geneal Chemistry						
pH	9045C		0.1	7.2	6.7	***6.95***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	390	290	***340***
Chloride (mg/Kg)	SMEWW 4500 CL C			22,400	17,800	***20,100***
Organic N	SMEWW 4500N-A	5.0	5.0	d 3,610	d 2,720	***3,165***
% Total Solids	SMEWW 2540G			33.0	41.6	***37.3***
Total Metals (mg/Kg) dry wt						
Arsenic	3050/6020		2.0	29.9	19.6	***24.75***
Cadmium	3050/6020		0.3	< 0.30	< 0.24	ND
Chromium	3050/6020		5.0	102.0	93.9	***97.95***
Copper	3050/6020		5.0	84.0	65.7	***74.85***
Lead	3050/6020		5.0	42.5	28.9	***35.7***
Nickel	3050/6020		5.0	128	103	***115.5***
Selenium	3050/6020		0.1	5.2	1.7J	***3.45***
Silver	3050/6020		0.2	< 0.30	< 0.24	ND
Zinc	3050/6020		1.0	160	125	***142.5***
Mercury	7471/7471 M		0.02	0.27	0.31	***0.29***
Sodium	3050/6020	1.0	1.0	17,000	13,200	***15,100***
Potassium	6010	1.0	1.0	5,430	5,020	***5,225***
Semi-Volatile Organics (µg/Kg)						
Pyridine	3540C/3640A		100	< 303	< 240	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 76	< 60	ND
2-Chlorophenol	3540C/3640A		20	< 61	< 48	ND
Phenol	3540C/3640A		30	< 91	< 72	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 61	< 48	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 61	< 48	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 61	< 48	ND
Benzyl alcohol	3540C/3640A		75	< 227	< 180	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 76	< 60	ND
2-Methylphenol	3540C/3640A		20	< 61	< 48	ND
Hexachloroethane	3540C/3640A		20	< 61	< 48	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 91	< 72	ND
4/3-Methylphenol	3540C/3640A		40	< 121	< 96	ND
Nitrobenzene	3540C/3640A		20	< 61	< 48	ND
Isophorone	3540C/3640A		20	< 61	< 48	ND
2-Nitrophenol	3540C/3640A		20	< 61	< 48	ND
2,4-Dimethylphenol	3540C/3640A		80	< 242	< 192	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 61	< 48	ND
2,4-Dichorophenol	3540C/3640A		20	< 61	< 48	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 61	< 48	ND
Napthalene	3540C/3640A		20	< 61	< 48	ND
4-Chloroaniline	3540C/3640A		100	< 303	< 240	ND
Hexachlorobutadiene	3540C/3640A		20	< 61	< 48	ND
2-Methylnapthalene	3540C/3640A		20	< 61	< 48	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 61	< 48	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 152	< 120	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 91	< 72	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 91	< 72	ND
2-Chloronapthalene	3540C/3640A		20	< 61	< 48	ND
2-Nitroaniline	3540C/3640A		50	< 152	< 120	ND
Acenaphthylene	3540C/3640A		20	< 61	< 48	ND
Dimethylphthalate	3540C/3640A		20	< 61	< 48	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 61	< 48	ND
Acenaphthene	3540C/3640A		20	< 61	< 48	ND
3-Nitroaniline	3540C/3640A		100	< 303	< 240	ND
2,4-Dintrophenol	3540C/3640A		100	< 303	< 240	ND
Dibenzofuran	3540C/3640A		20	< 61	< 48	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 61	< 48	ND
4-Nitrophenol	3540C/3640A		70	< 212	< 168	ND
Fluorene	3540C/3640A		20	< 61	< 48	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 61	< 48	ND
Diethylphthalate	3540C/3640A		20	< 61	< 48	ND
4-Nitroalinine	3540C/3640A		70	< 212	< 168	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 106	< 84	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 152	< 120	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 61	< 48	ND
Hexachlorobenzene	3540C/3640A		20	< 61	< 48	ND
Pentachlorophenol	3540C/3640A		40	< 121	< 96	ND
Phenanthrene	3540C/3640A		20	< 61	< 48	ND
Anthracene	3540C/3640A		20	< 61	< 48	ND
Carbazole	3540C/3640A		60	< 182	< 144	ND
Di-n-butylphthalate	3540C/3640A		40	< 121	< 96	ND
Fluoranthene	3540C/3640A		20	< 61	< 48	ND
Pyrene	3540C/3640A		20	< 61	< 48	ND
Benzidine	3540C/3640A		150	< 455	< 361	ND
Butylbenzylphthalate	3540C/3640A		40	< 121	< 96	ND
Benzo(a)anthracene	3540C/3640A		20	< 61	< 48	ND
Chrysene	3540C/3640A		20	< 61	< 48	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 455	< 361	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 136	< 108	ND
Di-n-octylphthalate	3540C/3640A		40	< 121	< 96	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 61	< 48	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 61	< 48	ND
Benzo(a)pyrene	3540C/3640A		20	< 61	< 48	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 91	< 72	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 121	< 96	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 121	< 96	ND
Pesticides (µg/Kg)	**PQL(µg/L)**					
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100	ND
Bolstar	8141A	50		< 50	< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50	ND
Coumaphos	8141A	100		< 100	< 100	ND
Def/Morphos	8141A	50		< 50	< 50	ND
Demeton (total)	8141A	100		< 100	< 100	ND
Diazinon	8141A	50		< 50	< 50	ND
Dichlorvos	8141A	100		< 100	< 100	ND
Dimethoate	8141A	100		< 100	< 100	ND
Disulfoton	8141A	50		< 50	< 50	ND
EPN	8141A	50		< 50	< 50	ND
Ethion	8141A	50		< 50	< 50	ND
Ethoprop	8141A	50		< 50	< 50	ND
Fensulfothion	8141A	250		< 250	< 250	ND
Fenthion	8141A	50		< 50	< 50	ND
Malathion	8141A	50		< 50	< 50	ND
Mevinphos	8141A	350		< 350	< 350	ND
Naled	8141A	250		< 250	< 250	ND
Parathion, ethyl	8141A	50		< 50	< 50	ND
Parathion, methyl	8141A	50		< 50	< 50	ND
Phorate	8141A	50		< 50	< 50	ND
Prowl (pendimethalin)	8141A	50		< 50	< 50	ND
Ronnel	8141A	50		< 50	< 50	ND
Stirophos	8141A	50		< 50	< 50	ND
Sulfotep	8141A	50		< 50	< 50	ND
Tokuthion	8141A	50		< 50	< 50	ND
Trichloronate	8141A	50		< 50	< 50	ND
Trifuralin	8141A	50		< 50	< 50	ND
Organochlorine Pesticides (µg/Kg)						
Aldrin	3540C/3640A			< 1.61	< 1.27	ND
alpha-BHC	3540C/3640A			< 3.03	< 2.40	ND
beta-BHC	3540C/3640A			< 1.86	< 1.48	ND
gamma-BHC	3540C/3640A			< 1.91	< 1.51	ND
delta-BHC	3540C/3640A			< 1.94	< 1.54	ND
Chlordane	3540C/3640A			< 7.17	< 5.69	ND
2,4-DDD	3540C/3640A			< 1.86	< 1.48	ND
4,4-DDD	3540C/3640A			2.0 J	7.04	***4.52***
2,4-DDE	3540C/3640A			< 1.62	< 1.29	ND
4,4-DDE	3540C/3640A			< 1.62	< 1.29	ND
2,4-DDT	3540C/3640A			< 3.03	< 2.40	ND
4,4-DDT	3540C/3640A			< 3.03	< 2.40	ND
Total DDT	3540C/3640A			< 3.03	7.04	***4.28***
Dieldrin	3540C/3640A			< 1.97	< 1.56	ND
Endosulfan I	3540C/3640A			< 2.47	< 1.96	ND
Endosulfan II	3540C/3640A			< 2.58	< 2.04	ND
Endosulfan Sulfate	3540C/3640A			< 2.18	< 1.73	ND
Endrin	3540C/3640A			< 2.27	< 1.80	ND
Endrin Aldehyde	3540C/3640A			< 2.45	< 1.95	ND
Heptachlor	3540C/3640A			< 2.53	< 2.01	ND
Heptachlor Epoxide	3540C/3640A			< 2.52	< 2.00	ND
Toxaphene	3540C/3640A			< 13.30	< 10.60	ND
PCB's (µg/Kg)						
Arochlor 1016	3540C/3640A			< 7.0	< 5.5	ND
Arochlor 1221	3540C/3640A			< 7.0	< 5.5	ND
Arochlor 1232	3540C/3640A			< 7.0	< 5.5	ND
Arochlor 1242	3540C/3640A			< 7.0	< 5.5	ND
Arochlor 1248	3540C/3640A			< 7.0	< 5.5	ND
Arochlor 1254	3540C/3640A			< 7.0	< 5.5	ND
Arochlor 1260	3540C/3640A			< 7.0	< 5.5	ND
Total Aroclors	3540C/3640A			< 7.0	< 5.5	ND

POND 3

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 3					
				3-A	3-A-Dup	3-B	3-C	3-D	Average
Geneal Chemistry									
pH	9045C		0.1	7.8		8.0	8.4	8.3	***8.13***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	170		250	230	320	***242.5***
Chloride (mg/Kg)	SMEWW 4500 CL C			50,400		41,000	45,100	36,300	***43,200***
Organic N	SMEWW 4500N-A	5.0	5.0	d 3,780		d 1,650	d 2,030	d 1,650	***2,278***
% Total Solids	SMEWW 2540G			42.1		50.3	46.3	54.0	***48.2***
Total Metals (mg/Kg) dry wt									
Arsenic	3050/6020		2.0	13.2	11.0	24.3	18.3	23.7	***18.1***
Cadmium	3050/6020		0.3	< 0.24	< 0.24	< 0.20	< 0.20	0.20	***0.128***
Chromium	3050/6020		5.0	66.0	73.4	82.2	77.9	72.2	***74.34***
Copper	3050/6020		5.0	32.1	32.7	55.4	44.0	39.7	***40.78***
Lead	3050/6020		5.0	17.2	14.0	30.7	38.1	26.2	***25.24***
Nickel	3050/6020		5.0	56.2	66.5	73.5	64.0	65.3	***65.1***
Selenium	3050/6020		0.1	2.8	3.6	1.8 J	1.1 J	1.0 J	***3.2***
Silver	3050/6020		0.2	< 0.24	< 0.24	< 0.20	< 0.20	< 0.20	ND
Zinc	3050/6020		1.0	56.7	60.6	90.9	97.0	88.0	***78.64***
Mercury	7471/7471 M		0.02	0.11	0.12	0.41	0.33	0.32	***0.258***
Sodium	3050/6020	1.0	1.0	31,800	28,400	26,800	31,400	25,600	***28,800***
Potassium	6010	1.0	1.0	6,260		6,000	5,840	5,420	***5,880***
Semi-Volatile Organics (µg/Kg)									
Pyridine	3540C/3640A		100	< 238	< 238	< 199	< 216	< 185	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 59	< 59	< 50	< 54	< 46	ND
2-Chlorophenol	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Phenol	3540C/3640A		30	< 71	< 71	< 60	< 65	< 56	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Benzyl alcohol	3540C/3640A		75	< 178	< 178	< 149	< 162	< 139	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 59	< 59	< 50	< 54	< 46	ND
2-Methylphenol	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Hexachloroethane	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 71	< 71	< 60	< 65	< 56	ND
4/3-Methylphenol	3540C/3640A		40	< 95	< 95	< 80	< 86	< 74	ND
Nitrobenzene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Isophorone	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
2-Nitrophenol	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
2,4-Dimethylphenol	3540C/3640A		80	< 190	< 190	< 159	< 173	< 148	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
2,4-Dichorophenol	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Napthalene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
4-Chloroaniline	3540C/3640A		100	< 238	< 238	< 199	< 216	< 185	ND
Hexachlorobutadiene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
2-Methylnapthalene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 119	< 119	< 99	< 108	< 93	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 71	< 71	< 60	< 65	< 56	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 71	< 71	< 60	< 65	< 56	ND
2-Chloronapthalene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
2-Nitroaniline	3540C/3640A		50	< 119	< 119	< 99	< 108	< 93	ND
Acenaphthylene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Dimethylphthalate	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Acenaphthene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
3-Nitroaniline	3540C/3640A		100	< 238	< 238	< 199	< 216	< 185	ND
2,4-Dintrophenol	3540C/3640A		100	< 238	< 238	< 199	< 216	< 185	ND
Dibenzofuran	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
4-Nitrophenol	3540C/3640A		70	< 166	< 166	< 139	< 151	< 130	ND
Fluorene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Diethylphthalate	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
4-Nitroalinine	3540C/3640A		70	< 166	< 166	< 139	< 151	< 130	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 83	< 83	< 70	< 76	< 65	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 119	< 119	< 99	< 108	< 93	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Hexachlorobenzene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Pentachlorophenol	3540C/3640A		40	< 95	< 95	< 80	< 86	< 74	ND
Phenanthrene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Anthracene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Carbazole	3540C/3640A		60	< 143	< 143	< 119	< 130	< 111	ND
Di-n-butylphthalate	3540C/3640A		40	< 95	< 95	< 80	< 86	< 74	ND
Fluoranthene	3540C/3640A		20	58.9	< 48	< 40	< 43	< 37	ND
Pyrene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Benzidine	3540C/3640A		150	< 356	< 356	< 298	< 324	< 278	ND
Butylbenzylphthalate	3540C/3640A		40	< 95	< 95	< 80	< 86	< 74	ND
Benzo(a)anthracene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Chrysene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 356	< 356	< 298	< 324	< 278	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 107	< 107	< 89	< 97	< 83	ND
Di-n-octylphthalate	3540C/3640A		40	< 95	< 95	< 80	< 86	< 74	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Benzo(a)pyrene	3540C/3640A		20	< 48	< 48	< 40	< 43	< 37	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 71	< 71	< 60	< 65	< 56	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 95	< 95	< 80	< 86	< 74	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 95	< 95	< 80	< 86	< 74	ND
Pesticides (µg/Kg)		PQL(µg/L)							
Azinphosmethyl (Guthion)	8141A	100		< 100		< 100	< 100	< 100	ND
Bolstar	8141A	50		< 50		< 50	< 50	< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50		< 50	< 50	< 50	ND
Coumaphos	8141A	100		< 100		< 100	< 100	< 100	ND
Def/Morphos	8141A	50		< 50		< 50	< 50	< 50	ND
Demeton (total)	8141A	100		< 100		< 100	< 100	< 100	ND
Diazinon	8141A	50		< 50		< 50	< 50	< 50	ND
Dichlorvos	8141A	100		< 100		< 100	< 100	< 100	ND
Dimethoate	8141A	100		< 100		< 100	< 100	< 100	ND
Disulfoton	8141A	50		< 50		< 50	< 50	< 50	ND
EPN	8141A	50		< 50		< 50	< 50	< 50	ND
Ethion	8141A	50		< 50		< 50	< 50	< 50	ND
Ethoprop	8141A	50		< 50		< 50	< 50	< 50	ND
Fensulfothion	8141A	250		< 250		< 250	< 250	< 250	ND
Fenthion	8141A	50		< 50		< 50	< 50	< 50	ND
Malathion	8141A	50		< 50		< 50	< 50	< 50	ND
Mevinphos	8141A	350		< 350		< 350	< 350	< 350	ND
Naled	8141A	250		< 250		< 250	< 250	< 250	ND
Parathion, ethyl	8141A	50		< 50		< 50	< 50	< 50	ND
Parathion, methyl	8141A	50		< 50		< 50	< 50	< 50	ND
Phorate	8141A	50		< 50		< 50	< 50	< 50	ND
Prowl (pendimethalin)	8141A	50		< 50		< 50	< 50	< 50	ND
Ronnel	8141A	50		< 50		< 50	< 50	< 50	ND
Stirophos	8141A	50		< 50		< 50	< 50	< 50	ND
Sulfotep	8141A	50		< 50		< 50	< 50	< 50	ND
Tokuthion	8141A	50		< 50		< 50	< 50	< 50	ND
Trichloronate	8141A	50		< 50		< 50	< 50	< 50	ND
Trifuralin	8141A	50		< 50		< 50	< 50	< 50	ND
Organochlorine Pesticides (µg/Kg)									
Aldrin	3540C/3640A			< 1.26		< 1.10	< 1.14	< 0.98	ND
alpha-BHC	3540C/3640A			< 2.38		< 2.00	< 2.16	< 1.85	ND
beta-BHC	3540C/3640A			< 1.46		< 1.20	< 1.33	< 1.14	ND
gamma-BHC	3540C/3640A			< 1.50		< 1.30	< 1.36	< 1.17	ND
delta-BHC	3540C/3640A			< 1.52		< 1.30	< 1.38	< 1.19	ND
Chlordane	3540C/3640A			< 5.62		< 4.70	< 5.11	< 4.38	ND
2,4-DDD	3540C/3640A			< 1.46		< 1.20	< 1.33	< 1.14	ND
4,4-DDD	3540C/3640A			< 1.46		2.02	< 1.33	< 1.14	***0.996***
2,4-DDE	3540C/3640A			< 1.27		< 1.10	< 1.16	< 0.99	ND
4,4-DDE	3540C/3640A			< 1.27		< 1.10	< 1.16	< 0.99	ND
2,4-DDT	3540C/3640A			< 2.38		< 2.00	< 2.16	< 1.85	ND
4,4-DDT	3540C/3640A			< 2.38		< 2.00	< 2.16	< 1.85	ND
Total DDT	3540C/3640A			< 2.38		2.02	< 2.16	< 1.85	***1.304***
Dieldrin	3540C/3640A			< 1.54		< 1.30	< 1.40	< 1.20	ND
Endosulfan I	3540C/3640A			< 1.94		< 1.60	< 1.76	< 1.51	ND
Endosulfan II	3540C/3640A			< 2.02		< 1.70	< 1.84	< 1.57	ND
Endosulfan Sulfate	3540C/3640A			< 1.71		< 1.40	< 1.56	< 1.33	ND
Endrin	3540C/3640A			< 1.78		< 1.50	< 1.62	< 1.39	ND
Endrin Aldehyde	3540C/3640A			< 1.92		< 1.60	< 1.75	< 1.50	ND
Heptachlor	3540C/3640A			< 1.98		< 1.70	< 1.80	< 1.55	ND
Heptachlor Epoxide	3540C/3640A			< 1.97		< 1.70	< 1.79	< 1.54	ND
Toxaphene	3540C/3640A			< 10.50		< 9.00	< 9.50	< 8.10	ND
PCB's (µg/Kg)									
Arochlor 1016	3540C/3640A			< 5.5		< 4.6	< 5.1	< 4.3	ND
Arochlor 1221	3540C/3640A			< 5.5		< 4.6	< 5.1	< 4.3	ND
Arochlor 1232	3540C/3640A			< 5.5		< 4.6	< 5.1	< 4.3	ND
Arochlor 1242	3540C/3640A			< 5.5		< 4.6	< 5.1	< 4.3	ND
Arochlor 1248	3540C/3640A			< 5.5		< 4.6	< 5.1	< 4.3	ND
Arochlor 1254	3540C/3640A			< 5.5		< 4.6	< 5.1	< 4.3	ND
Arochlor 1260	3540C/3640A			< 5.5		< 4.6	< 5.1	< 4.3	ND
Total Aroclors	3540C/3640A			< 5.5		< 4.6	< 5.1	< 4.3	ND

POND 4

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 4				
				4-A	4-B	4-C	4-D	Average
Geneal Chemistry								
pH	9045C		0.1	8.0	7.5	7.6	7.8	***7.73***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	160	200	180	190	***182.5***
Chloride (mg/Kg)	SMEWW 4500 CL C			d 234,000	d 403,000	d 397,000	d 198,000	***308,000***
Organic N	SMEWW 4500N-A	5.0	5.0	d 2,800	d 2,340	d 2,120	d 4,120	***2,845***
% Total Solids	SMEWW 2540G			47.8	52.1	52.4	41.5	***48.5***
Total Metals (mg/Kg) dry wt								
Arsenic	3050/6020		2.0	6.4	4.0	5.8	6.9	***5.775***
Cadmium	3050/6020		0.3	0.27	< 0.20	< 0.20		***0.157***
Chromium	3050/6020		5.0	24.4	13.3	21.2	27.40	***21.58***
Copper	3050/6020		5.0	12.3	6.6	7.7	13.8	***10.1***
Lead	3050/6020		5.0	16.5	4.9	5.8	14.2	***10.35***
Nickel	3050/6020		5.0	34.1	19.6	24.4	37.2	***28.83***
Selenium	3050/6020		0.1	1.0J	1.1 J	0.9 J	0.9J	***0.975***
Silver	3050/6020		0.2	< 0.21	< 0.20	< 0.20	< 0.2	ND
Zinc	3050/6020		1.0	29.6	16.0	22.0	33.10	***25.18***
Mercury	7471/7471 M		0.02	0.05	< 0.04	< 0.04	0.1	***0.0475***
Sodium	3050/6020	1.0	1.0	144,000	d 229,000	d 206,000	110,000	***172,250***
Potassium	6010	1.0	1.0	4,010	4,700	4,940	5,560	***4,803***
Semi-Volatile Organics (µg/Kg)								
Pyridine	3540C/3640A		100	< 209	< 192	< 191	< 241	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 52	< 48	< 48	< 60	ND
2-Chlorophenol	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Phenol	3540C/3640A		30	< 63	< 58	< 57	< 72	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Benzyl alcohol	3540C/3640A		75	< 157	< 144	< 143	< 181	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 52	< 48	< 48	< 60	ND
2-Methylphenol	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Hexachloroethane	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 63	< 58	< 57	< 72	ND
4/3-Methylphenol	3540C/3640A		40	< 84	950	< 76	< 96	***269.5***
Nitrobenzene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Isophorone	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
2-Nitrophenol	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
2,4-Dimethylphenol	3540C/3640A		80	< 167	< 154	< 153	< 193	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
2,4-Dichorophenol	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Napthalene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
4-Chloroaniline	3540C/3640A		100	< 209	< 192	< 191	< 241	ND
Hexachlorobutadiene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
2-Methylnapthalene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 105	< 96	< 95	< 120	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 63	< 58	< 57	< 72	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 63	< 58	< 57	< 72	ND
2-Chloronapthalene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
2-Nitroaniline	3540C/3640A		50	< 105	< 96	< 95	< 120	ND
Acenaphthylene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Dimethylphthalate	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Acenaphthene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
3-Nitroaniline	3540C/3640A		100	< 209	< 192	< 191	< 241	ND
2,4-Dintrophenol	3540C/3640A		100	< 209	< 192	< 191	< 241	ND
Dibenzofuran	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
4-Nitrophenol	3540C/3640A		70	< 146	< 134	< 134	< 169	ND
Fluorene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Diethylphthalate	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
4-Nitroalinine	3540C/3640A		70	< 146	< 134	< 134	< 169	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 73	< 67	< 67	< 84	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 105	< 96	< 95	< 120	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Hexachlorobenzene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Pentachlorophenol	3540C/3640A		40	< 84	< 77	< 76	< 96	ND
Phenanthrene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Anthracene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Carbazole	3540C/3640A		60	< 126	< 115	< 115	< 145	ND
Di-n-butylphthalate	3540C/3640A		40	< 84	< 77	< 76	< 96	ND
Fluoranthene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Pyrene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Benzidine	3540C/3640A		150	< 314	< 288	< 286	< 361	ND
Butylbenzylphthalate	3540C/3640A		40	< 84	< 77	< 76	< 96	ND
Benzo(a)anthracene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Chrysene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 314	< 288	< 286	< 361	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 94	< 86	< 86	< 108	ND
Di-n-octylphthalate	3540C/3640A		40	< 84	< 77	< 76	< 96	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Benzo(a)pyrene	3540C/3640A		20	< 42	< 38	< 38	< 48	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 63	< 58	< 57	< 72	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 84	< 77	< 76	< 96	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 84	< 77	< 76	< 96	ND
Pesticides (µg/Kg)		**PQL(µg/L)**						
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100	< 100	< 100	ND
Bolstar	8141A	50		< 50	< 50	< 50	< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50	< 50	< 50	ND
Coumaphos	8141A	100		< 100	< 100	< 100	< 100	ND
Def/Morphos	8141A	50		< 50	< 50	< 50	< 50	ND
Demeton (total)	8141A	100		< 100	< 100	< 100	< 100	ND
Diazinon	8141A	50		< 50	< 50	< 50	< 50	ND
Dichlorvos	8141A	100		< 100	< 100	< 100	< 100	ND
Dimethoate	8141A	100		< 100	< 100	< 100	< 100	ND
Disulfoton	8141A	50		< 50	< 50	< 50	< 50	ND
EPN	8141A	50		< 50	< 50	< 50	< 50	ND
Ethion	8141A	50		< 50	< 50	< 50	< 50	ND
Ethoprop	8141A	50		< 50	< 50	< 50	< 50	ND
Fensulfothion	8141A	250		< 250	< 250	< 250	< 250	ND
Fenthion	8141A	50		< 50	< 50	< 50	< 50	ND
Malathion	8141A	50		< 50	< 50	< 50	< 50	ND
Mevinphos	8141A	350		< 350	< 350	< 350	< 350	ND
Naled	8141A	250		< 250	< 250	< 250	< 250	ND
Parathion, ethyl	8141A	50		< 50	< 50	< 50	< 50	ND
Parathion, methyl	8141A	50		< 50	< 50	< 50	< 50	ND
Phorate	8141A	50		< 50	< 50	< 50	< 50	ND
Prowl (pendimethalin)	8141A	50		< 50	< 50	< 50	< 50	ND
Ronnel	8141A	50		< 50	< 50	< 50	< 50	ND
Stirophos	8141A	50		< 50	< 50	< 50	< 50	ND
Sulfotep	8141A	50		< 50	< 50	< 50	< 50	ND
Tokuthion	8141A	50		< 50	< 50	< 50	< 50	ND
Trichloronate	8141A	50		< 50	< 50	< 50	< 50	ND
Trifuralin	8141A	50		< 50	< 50	< 50	< 50	ND
Organochlorine Pesticides (µg/Kg)								
Aldrin	3540C/3640A			< 1.11	< 1.02	< 1.01	< 1.28	ND
alpha-BHC	3540C/3640A			< 2.09	< 1.92	< 1.91	< 2.41	ND
beta-BHC	3540C/3640A			< 1.29	< 1.18	< 1.17	< 1.48	ND
gamma-BHC	3540C/3640A			< 1.32	< 1.21	< 1.20	< 1.52	ND
delta-BHC	3540C/3640A			< 1.34	< 1.23	< 1.22	< 1.54	ND
Chlordane	3540C/3640A			< 4.95	< 4.54	< 4.51	< 5.70	ND
2,4-DDD	3540C/3640A			< 1.29	< 1.18	< 1.17	< 1.48	ND
4,4-DDD	3540C/3640A			4.24	< 1.18	1.83	< 1.48	***1.85***
2,4-DDE	3540C/3640A			< 1.12	< 1.03	< 1.02	< 1.29	ND
4,4-DDE	3540C/3640A			2.43	< 1.03	< 1.02	< 1.29	ND
2,4-DDT	3540C/3640A			< 2.09	< 1.92	< 1.91	< 2.41	ND
4,4-DDT	3540C/3640A			< 2.09	< 1.92	< 1.91	< 2.41	ND
Total DDT	3540C/3640A			6.67	< 1.92	< 1.91	< 2.41	***2.448***
Dieldrin	3540C/3640A			< 1.36	< 1.25	< 1.24	< 1.57	ND
Endosulfan I	3540C/3640A			< 1.71	< 1.56	< 1.56	< 1.96	ND
Endosulfan II	3540C/3640A			< 1.78	< 1.63	< 1.62	< 2.05	ND
Endosulfan Sulfate	3540C/3640A			< 1.51	< 1.38	< 1.37	< 1.73	ND
Endrin	3540C/3640A			< 1.57	< 1.44	< 1.43	< 1.81	ND
Endrin Aldehyde	3540C/3640A			< 1.69	< 1.55	< 1.55	< 1.95	ND
Heptachlor	3540C/3640A			< 1.75	< 1.60	< 1.59	< 2.01	ND
Heptachlor Epoxide	3540C/3640A			< 1.74	< 1.59	< 1.58	< 2.00	ND
Toxaphene	3540C/3640A			< 9.20	< 8.40	< 8.40	< 10.60	ND
PCB's (µg/Kg)								
Arochlor 1016	3540C/3640A			< 4.8	< 4.4	< 4.4	< 5.6	ND
Arochlor 1221	3540C/3640A			< 4.8	< 4.4	< 4.4	< 5.6	ND
Arochlor 1232	3540C/3640A			< 4.8	< 4.4	< 4.4	< 5.6	ND
Arochlor 1242	3540C/3640A			< 4.8	< 4.4	< 4.4	< 5.6	ND
Arochlor 1248	3540C/3640A			< 4.8	< 4.4	< 4.4	< 5.6	ND
Arochlor 1254	3540C/3640A			< 4.8	< 4.4	< 4.4	< 5.6	ND
Arochlor 1260	3540C/3640A			< 4.8	< 4.4	< 4.4	< 5.6	ND
Total Aroclors	3540C/3640A			< 4.8	< 4.4	< 4.4	< 5.6	ND

POND 5

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	POND 5		
				5-A	5-B	Average
Geneal Chemistry						
pH	9045C		0.1	7.9	7.8	***7.85***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	180	230	***205***
Chloride (mg/Kg)	SMEWW 4500 CL C			d 179,000	d 174,000	***176,500***
Organic N	SMEWW 4500N-A	5.0	5.0	d 6,100	d 4,760	***5,430***
% Total Solids	SMEWW 2540G			44.6	46.0	***45.3***
Total Metals (mg/Kg) dry wt						
Arsenic	3050/6020		2.0	8.1	29.3	***18.7***
Cadmium	3050/6020		0.3			
Chromium	3050/6020		5.0	34.50	90.70	***62.6***
Copper	3050/6020		5.0	15.3	63.0	***39.15***
Lead	3050/6020		5.0	17.4	39.7	***28.55***
Nickel	3050/6020		5.0	44.8	83.9	***64.35***
Selenium	3050/6020		0.1	1.8J	2.4	***2.1***
Silver	3050/6020		0.2	< 0.2	< 0.2	ND
Zinc	3050/6020		1.0	39.50	102.00	***70.75***
Mercury	7471/7471 M		0.02	0.2	0.1	***0.11***
Sodium	3050/6020	1.0	1.0	117000	29900	***73,450***
Potassium	6010	1.0	1.0	6,300	7,330	***6,815***
Semi-Volatile Organics (µg/Kg)						
Pyridine	3540C/3640A		100	< 224	< 217	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 56	< 54	ND
2-Chlorophenol	3540C/3640A		20	< 45	< 43	ND
Phenol	3540C/3640A		30	< 67	< 65	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 45	< 43	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 45	< 43	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 45	< 43	ND
Benzyl alcohol	3540C/3640A		75	< 168	< 163	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 56	< 54	ND
2-Methylphenol	3540C/3640A		20	< 45	< 43	ND
Hexachloroethane	3540C/3640A		20	< 45	< 43	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 67	< 65	ND
4/3-Methylphenol	3540C/3640A		40	< 90	< 87	ND
Nitrobenzene	3540C/3640A		20	< 45	< 43	ND
Isophorone	3540C/3640A		20	< 45	< 43	ND
2-Nitrophenol	3540C/3640A		20	< 45	< 43	ND
2,4-Dimethylphenol	3540C/3640A		80	< 179	< 174	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 45	< 43	ND
2,4-Dichorophenol	3540C/3640A		20	< 45	< 43	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 45	< 43	ND
Napthalene	3540C/3640A		20	< 45	< 43	ND
4-Chloroaniline	3540C/3640A		100	< 224	< 217	ND
Hexachlorobutadiene	3540C/3640A		20	< 45	< 43	ND
2-Methylnapthalene	3540C/3640A		20	< 45	< 43	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 45	< 43	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 112	< 109	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 67	< 65	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 67	< 65	ND
2-Chloronapthalene	3540C/3640A		20	< 45	< 43	ND
2-Nitroaniline	3540C/3640A		50	< 112	< 109	ND
Acenaphthylene	3540C/3640A		20	< 45	< 43	ND
Dimethylphthalate	3540C/3640A		20	< 45	< 43	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 45	< 43	ND
Acenaphthene	3540C/3640A		20	< 45	< 43	ND
3-Nitroaniline	3540C/3640A		100	< 224	< 217	ND
2,4-Dintrophenol	3540C/3640A		100	< 224	< 217	ND
Dibenzofuran	3540C/3640A		20	< 45	< 43	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 45	< 43	ND
4-Nitrophenol	3540C/3640A		70	< 157	< 152	ND
Fluorene	3540C/3640A		20	< 45	< 43	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 45	< 43	ND
Diethylphthalate	3540C/3640A		20	< 45	< 43	ND
4-Nitroalinine	3540C/3640A		70	< 157	< 152	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 78	< 76	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 112	< 109	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 45	< 43	ND
Hexachlorobenzene	3540C/3640A		20	< 45	< 43	ND
Pentachlorophenol	3540C/3640A		40	< 90	< 87	ND
Phenanthrene	3540C/3640A		20	< 45	< 43	ND
Anthracene	3540C/3640A		20	< 45	< 43	ND
Carbazole	3540C/3640A		60	< 135	< 130	ND
Di-n-butylphthalate	3540C/3640A		40	< 90	< 87	ND
Fluoranthene	3540C/3640A		20	< 45	< 43	ND
Pyrene	3540C/3640A		20	< 45	< 43	ND
Benzidine	3540C/3640A		150	< 336	< 326	ND
Butylbenzylphthalate	3540C/3640A		40	< 90	< 87	ND
Benzo(a)anthracene	3540C/3640A		20	< 45	< 43	ND
Chrysene	3540C/3640A		20	< 45	< 43	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 336	< 326	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 101	< 98	ND
Di-n-octylphthalate	3540C/3640A		40	< 90	< 87	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 45	< 43	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 45	< 43	ND
Benzo(a)pyrene	3540C/3640A		20	< 45	< 43	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 67	< 65	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 90	< 87	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 90	< 87	ND
Pesticides (µg/Kg)	**PQL(µg/L)**					
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100	ND
Bolstar	8141A	50		< 50	< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50	ND
Coumaphos	8141A	100		< 100	< 100	ND
Def/Morphos	8141A	50		< 50	< 50	ND
Demeton (total)	8141A	100		< 100	< 100	ND
Diazinon	8141A	50		< 50	< 50	ND
Dichlorvos	8141A	100		< 100	< 100	ND
Dimethoate	8141A	100		< 100	< 100	ND
Disulfoton	8141A	50		< 50	< 50	ND
EPN	8141A	50		< 50	< 50	ND
Ethion	8141A	50		< 50	< 50	ND
Ethoprop	8141A	50		< 50	< 50	ND
Fensulfothion	8141A	250		< 250	< 250	ND
Fenthion	8141A	50		< 50	< 50	ND
Malathion	8141A	50		< 50	< 50	ND
Mevinphos	8141A	350		< 350	< 350	ND
Naled	8141A	250		< 250	< 250	ND
Parathion, ethyl	8141A	50		< 50	< 50	ND
Parathion, methyl	8141A	50		< 50	< 50	ND
Phorate	8141A	50		< 50	< 50	ND
Prowl (pendimethalin)	8141A	50		< 50	< 50	ND
Ronnel	8141A	50		< 50	< 50	ND
Stirophos	8141A	50		< 50	< 50	ND
Sulfotep	8141A	50		< 50	< 50	ND
Tokuthion	8141A	50		< 50	< 50	ND
Trichloronate	8141A	50		< 50	< 50	ND
Trifuralin	8141A	50		< 50	< 50	ND
Organochlorine Pesticides (µg/Kg)						
Aldrin	3540C/3640A			< 1.19	< 1.15	ND
alpha-BHC	3540C/3640A			< 2.24	< 2.17	ND
beta-BHC	3540C/3640A			< 1.38	< 1.34	ND
gamma-BHC	3540C/3640A			< 1.41	< 1.37	ND
delta-BHC	3540C/3640A			< 1.43	< 1.39	ND
Chlordane	3540C/3640A			< 5.30	< 5.14	ND
2,4-DDD	3540C/3640A			4.01	< 1.34	***2.34***
4,4-DDD	3540C/3640A			6.50	< 1.34	***3.59***
2,4-DDE	3540C/3640A			< 1.20	< 1.16	ND
4,4-DDE	3540C/3640A			2.49	< 1.16	***1.54***
2,4-DDT	3540C/3640A			< 2.24	< 2.17	ND
4,4-DDT	3540C/3640A			< 2.24	< 2.17	ND
Total DDT	3540C/3640A			13.00	< 2.17	***7.04***
Dieldrin	3540C/3640A			< 1.46	< 1.41	ND
Endosulfan I	3540C/3640A			< 1.83	< 1.77	ND
Endosulfan II	3540C/3640A			< 1.91	< 1.85	ND
Endosulfan Sulfate	3540C/3640A			< 1.61	< 1.57	ND
Endrin	3540C/3640A			< 1.68	< 1.63	ND
Endrin Aldehyde	3540C/3640A			< 1.82	< 1.76	ND
Heptachlor	3540C/3640A			< 1.87	< 1.82	ND
Heptachlor Epoxide	3540C/3640A			< 1.86	< 1.80	ND
Toxaphene	3540C/3640A			< 9.90	< 9.60	ND
PCB's (µg/Kg)						
Arochlor 1016	3540C/3640A			< 5.2	< 5.0	ND
Arochlor 1221	3540C/3640A			< 5.2	< 5.0	ND
Arochlor 1232	3540C/3640A			< 5.2	< 5.0	ND
Arochlor 1242	3540C/3640A			< 5.2	< 5.0	ND
Arochlor 1248	3540C/3640A			< 5.2	< 5.0	ND
Arochlor 1254	3540C/3640A			< 5.2	< 5.0	ND
Arochlor 1260	3540C/3640A			< 5.2	< 5.0	ND
Total Aroclors	3540C/3640A			< 5.2	< 5.0	ND

POND 6

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 6				
				6-A	6-A-Dup	6-B	6-C	Average
Geneal Chemistry								
pH	9045C		0.1	7.5		8.0	8.1	***7.87***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	210		110	130	***150***
Chloride (mg/Kg)	SMEWW 4500 CL C			d 101,000		d 174,000	d 113,000	***129,333***
Organic N	SMEWW 4500N-A	5.0	5.0	d 2,060		d 4,830	d 2,920	***3,270***
% Total Solids	SMEWW 2540G			53.4		28.8	37.3	***39.8***
Total Metals (mg/Kg) dry wt								
Arsenic	3050/6020		2.0	9.5	10.7	13.6	5.6	***9.85***
Cadmium	3050/6020		0.3					
Chromium	3050/6020		5.0	55.00	62.10	37.10	30.00	***46.05***
Copper	3050/6020		5.0	18.6	20.8	18.9	14.5	***18.2***
Lead	3050/6020		5.0	9.6	10.9	19.1	23.4	***15.75***
Nickel	3050/6020		5.0	56.9	63.6	47.8	37.3	***51.4***
Selenium	3050/6020		0.1	1.3 J	1.1 J	0.9 J	1.2 J	***1.13***
Silver	3050/6020		0.2	< 0.2	< 0.2	< 0.4	< 0.3	ND
Zinc	3050/6020		1.0	55.0	59.0	46.6	34.2	***48.7***
Mercury	7471/7471 M		0.02	0.05	0.06	0.07	0.07	***0.0625***
Sodium	3050/6020	1.0	1.0	60,400	63,300	95,700	64,000	***70,850***
Potassium	6010	1.0	1.0	5,940	6,130	5,980	4,540	***5,648***
Semi-Volatile Organics (µg/Kg)								
Pyridine	3540C/3640A		100	< 187		< 347	< 268	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 47		< 87	< 67	ND
2-Chlorophenol	3540C/3640A		20	< 37		< 69	< 54	ND
Phenol	3540C/3640A		30	< 56		< 104	< 80	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 37		< 69	< 54	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 37		< 69	< 54	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 37		< 69	< 54	ND
Benzyl alcohol	3540C/3640A		75	< 140		< 260	< 201	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 47		< 87	< 67	ND
2-Methylphenol	3540C/3640A		20	< 37		< 69	< 54	ND
Hexachloroethane	3540C/3640A		20	< 37		< 69	< 54	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 56		< 104	< 80	ND
4/3-Methylphenol	3540C/3640A		40	< 75		< 139	< 107	***269.5***
Nitrobenzene	3540C/3640A		20	< 37		< 69	< 54	ND
Isophorone	3540C/3640A		20	< 37		< 69	< 54	ND
2-Nitrophenol	3540C/3640A		20	< 37		< 69	< 54	ND
2,4-Dimethylphenol	3540C/3640A		80	< 150		< 278	< 214	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 37		< 69	< 54	ND
2,4-Dichorophenol	3540C/3640A		20	< 37		< 69	< 54	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 37		< 69	< 54	ND
Napthalene	3540C/3640A		20	< 37		< 69	< 54	ND
4-Chloroaniline	3540C/3640A		100	< 187		< 347	< 268	ND
Hexachlorobutadiene	3540C/3640A		20	< 37		< 69	< 54	ND
2-Methylnapthalene	3540C/3640A		20	< 37		< 69	< 54	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 37		< 69	< 54	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 94		< 174	< 134	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 56		< 104	< 80	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 56		< 104	< 80	ND
2-Chloronapthalene	3540C/3640A		20	< 37		< 69	< 54	ND
2-Nitroaniline	3540C/3640A		50	< 94		< 174	< 134	ND
Acenaphthylene	3540C/3640A		20	< 37		< 69	< 54	ND
Dimethylphthalate	3540C/3640A		20	< 37		< 69	< 54	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 37		< 69	< 54	ND
Acenaphthene	3540C/3640A		20	< 37		< 69	< 54	ND
3-Nitroaniline	3540C/3640A		100	< 187		< 347	< 268	ND
2,4-Dintrophenol	3540C/3640A		100	< 187		< 347	< 268	ND
Dibenzofuran	3540C/3640A		20	< 37		< 69	< 54	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 37		< 69	< 54	ND
4-Nitrophenol	3540C/3640A		70	< 131		< 243	< 188	ND
Fluorene	3540C/3640A		20	< 37		< 69	< 54	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 37		< 69	< 54	ND
Diethylphthalate	3540C/3640A		20	< 37		< 69	< 54	ND
4-Nitroalinine	3540C/3640A		70	< 131		< 243	< 188	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 66		< 122	< 94	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 94		< 174	< 134	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 37		< 69	< 54	ND
Hexachlorobenzene	3540C/3640A		20	< 37		< 69	< 54	ND
Pentachlorophenol	3540C/3640A		40	< 75		< 139	< 107	ND
Phenanthrene	3540C/3640A		20	< 37		< 69	< 54	ND
Anthracene	3540C/3640A		20	< 37		< 69	< 54	ND
Carbazole	3540C/3640A		60	< 112		< 208	< 161	ND
Di-n-butylphthalate	3540C/3640A		40	< 75		< 139	< 107	ND
Fluoranthene	3540C/3640A		20	< 37		< 69	< 54	ND
Pyrene	3540C/3640A		20	< 37		< 69	< 54	ND
Benzidine	3540C/3640A		150	< 281		< 521	< 402	ND
Butylbenzylphthalate	3540C/3640A		40	< 75		< 139	< 107	ND
Benzo(a)anthracene	3540C/3640A		20	< 37		< 69	< 54	ND
Chrysene	3540C/3640A		20	< 37		< 69	< 54	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 281		< 521	< 402	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	316		< 156	< 121	***151.5***
Di-n-octylphthalate	3540C/3640A		40	< 75		< 139	< 107	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 37		< 69	< 54	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 37		< 69	< 54	ND
Benzo(a)pyrene	3540C/3640A		20	< 37		< 69	< 54	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 56		< 104	< 80	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 75		< 139	< 107	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 75		< 139	< 107	ND
Pesticides (µg/Kg)		**PQL(µg/L)**						
Azinphosmethyl (Guthion)	8141A	100		< 100		< 100	< 100	ND
Bolstar	8141A	50		< 50		< 50	< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50		< 50	< 50	ND
Coumaphos	8141A	100		< 100		< 100	< 100	ND
Def/Morphos	8141A	50		< 50		< 50	< 50	ND
Demeton (total)	8141A	100		< 100		< 100	< 100	ND
Diazinon	8141A	50		< 50		< 50	< 50	ND
Dichlorvos	8141A	100		< 100		< 100	< 100	ND
Dimethoate	8141A	100		< 100		< 100	< 100	ND
Disulfoton	8141A	50		< 50		< 50	< 50	ND
EPN	8141A	50		< 50		< 50	< 50	ND
Ethion	8141A	50		< 50		< 50	< 50	ND
Ethoprop	8141A	50		< 50		< 50	< 50	ND
Fensulfothion	8141A	250		< 250		< 250	< 250	ND
Fenthion	8141A	50		< 50		< 50	< 50	ND
Malathion	8141A	50		< 50		< 50	< 50	ND
Mevinphos	8141A	350		< 350		< 350	< 350	ND
Naled	8141A	250		< 250		< 250	< 250	ND
Parathion, ethyl	8141A	50		< 50		< 50	< 50	ND
Parathion, methyl	8141A	50		< 50		< 50	< 50	ND
Phorate	8141A	50		< 50		< 50	< 50	ND
Prowl (pendimethalin)	8141A	50		< 50		< 50	< 50	ND
Ronnel	8141A	50		< 50		< 50	< 50	ND
Stirophos	8141A	50		< 50		< 50	< 50	ND
Sulfotep	8141A	50		< 50		< 50	< 50	ND
Tokuthion	8141A	50		< 50		< 50	< 50	ND
Trichloronate	8141A	50		< 50		< 50	< 50	ND
Trifuralin	8141A	50		< 50		< 50	< 50	ND
Organochlorine Pesticides (µg/Kg)								
Aldrin	3540C/3640A			< 0.99	< 0.99	< 1.84	< 1.41	ND
alpha-BHC	3540C/3640A			< 1.87	< 1.87	< 3.47	< 2.66	ND
beta-BHC	3540C/3640A			< 1.15	< 1.15	< 2.14	< 1.64	ND
gamma-BHC	3540C/3640A			< 1.18	< 1.18	< 2.19	< 1.68	ND
delta-BHC	3540C/3640A			< 1.20	< 1.20	< 2.22	< 1.70	ND
Chlordane	3540C/3640A			< 4.43	< 4.43	< 8.21	< 6.29	ND
2,4-DDD	3540C/3640A			< 1.15	< 1.15	< 2.14	< 1.64	ND
4,4-DDD	3540C/3640A			< 1.15	< 1.15	< 2.14	< 1.64	ND
2,4-DDE	3540C/3640A			2.57	2.72	< 1.86	< 1.42	***1.73***
4,4-DDE	3540C/3640A			< 1.00	< 1.00	< 1.86	< 1.42	ND
2,4-DDT	3540C/3640A			< 1.87	< 1.87	< 3.47	< 2.66	ND
4,4-DDT	3540C/3640A			< 1.87	< 1.87	< 3.47	< 2.66	ND
Total DDT	3540C/3640A			2.57	2.72	< 3.47	< 2.66	***2.09***
Dieldrin	3540C/3640A			< 1.22	< 1.22	< 2.26	< 1.73	ND
Endosulfan I	3540C/3640A			< 1.53	< 1.53	< 2.83	< 2.17	ND
Endosulfan II	3540C/3640A			< 1.59	< 1.59	< 2.95	< 2.26	ND
Endosulfan Sulfate	3540C/3640A			< 1.35	< 1.35	< 2.50	< 1.91	ND
Endrin	3540C/3640A			< 1.40	< 1.40	< 2.60	< 1.99	ND
Endrin Aldehyde	3540C/3640A			< 1.52	< 1.52	< 2.81	< 2.15	ND
Heptachlor	3540C/3640A			< 1.56	< 1.56	< 2.90	< 2.22	ND
Heptachlor Epoxide	3540C/3640A			< 1.55	< 1.55	< 2.88	< 2.21	ND
Toxaphene	3540C/3640A			< 8.20	< 8.20	< 15.30	< 11.70	ND
PCB's (µg/Kg)								
Arochlor 1016	3540C/3640A			< 4.3	< 4.3	< 8.0	< 6.2	ND
Arochlor 1221	3540C/3640A			< 4.3	< 4.3	< 8.0	< 6.2	ND
Arochlor 1232	3540C/3640A			< 4.3	< 4.3	< 8.0	< 6.2	ND
Arochlor 1242	3540C/3640A			< 4.3	< 4.3	< 8.0	< 6.2	ND
Arochlor 1248	3540C/3640A			< 4.3	< 4.3	< 8.0	< 6.2	ND
Arochlor 1254	3540C/3640A			< 4.3	< 4.3	< 8.0	< 6.2	ND
Arochlor 1260	3540C/3640A			< 4.3	< 4.3	< 8.0	< 6.2	ND
Total Aroclors	3540C/3640A			< 4.3	< 4.3	< 8.0	< 6.2	ND

POND 6A

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 6A			
				6A-A	6A-B	6A-C	Average
Geneal Chemistry							
pH	9045C		0.1	7.1	7.8	7.5	***7.47***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	260	200	310	***256.7***
Chloride (mg/Kg)	SMEWW 4500 CL C			59,400	69,200	36,000	***54,867***
Organic N	SMEWW 4500N-A	5.0	5.0	d 7,300	d 6,990	105	***4,798***
% Total Solids	SMEWW 2540G			39.2	27.6	58.1	***41.6***
Total Metals (mg/Kg) dry wt							
Arsenic	3050/6020		2.0	10.1	6.9	17.4	***11.47***
Cadmium	3050/6020		0.3				
Chromium	3050/6020		5.0	55.90	38.40	81.00	***58.43***
Copper	3050/6020		5.0	24.9	18.6	43.6	***29.03***
Lead	3050/6020		5.0	19.1	13.6	32.4	***21.7***
Nickel	3050/6020		5.0	78.6	53.9	68.6	***67.03***
Selenium	3050/6020		0.1	1.1 J	2.0 J	1.3 J	***1.47***
Silver	3050/6020		0.2	< 0.3	< 0.4	< 0.2	ND
Zinc	3050/6020		1.0	67.40	47.90	68.00	***61.1***
Mercury	7471/7471 M		0.02	0.1	0.1	0.3	***0.17***
Sodium	3050/6020	1.0	1.0	35,700	41,500	24,000	***33,733***
Potassium	6010	1.0	1.0	6,110	4,900	4,870	***5,293***
Semi-Volatile Organics (µg/Kg)							
Pyridine	3540C/3640A		100	< 255	< 362	< 362	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 64	< 91	< 91	ND
2-Chlorophenol	3540C/3640A		20	< 51	< 72	< 72	ND
Phenol	3540C/3640A		30	< 77	< 109	< 109	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 51	< 72	< 72	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 51	< 72	< 72	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 51	< 72	< 72	ND
Benzyl alcohol	3540C/3640A		75	< 191	< 272	< 272	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 64	< 91	< 91	ND
2-Methylphenol	3540C/3640A		20	< 51	< 72	< 72	ND
Hexachloroethane	3540C/3640A		20	< 51	< 72	< 72	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 77	< 109	< 109	ND
4/3-Methylphenol	3540C/3640A		40	< 102	< 145	< 145	ND
Nitrobenzene	3540C/3640A		20	< 51	< 72	< 72	ND
Isophorone	3540C/3640A		20	< 51	< 72	< 72	ND
2-Nitrophenol	3540C/3640A		20	< 51	< 72	< 72	ND
2,4-Dimethylphenol	3540C/3640A		80	< 204	< 290	< 290	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 51	< 72	< 72	ND
2,4-Dichorophenol	3540C/3640A		20	< 51	< 72	< 72	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 51	< 72	< 72	ND
Napthalene	3540C/3640A		20	< 51	< 72	< 72	ND
4-Chloroaniline	3540C/3640A		100	< 255	< 362	< 362	ND
Hexachlorobutadiene	3540C/3640A		20	< 51	< 72	< 72	ND
2-Methylnapthalene	3540C/3640A		20	< 51	< 72	< 72	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 51	< 72	< 72	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 128	< 181	< 181	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 77	< 109	< 109	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 77	< 109	< 109	ND
2-Chloronapthalene	3540C/3640A		20	< 51	< 72	< 72	ND
2-Nitroaniline	3540C/3640A		50	< 128	< 181	< 181	ND
Acenaphthylene	3540C/3640A		20	< 51	< 72	< 72	ND
Dimethylphthalate	3540C/3640A		20	< 51	< 72	< 72	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 51	< 72	< 72	ND
Acenaphthene	3540C/3640A		20	< 51	< 72	< 72	ND
3-Nitroaniline	3540C/3640A		100	< 255	< 362	< 362	ND
2,4-Dintrophenol	3540C/3640A		100	< 255	< 362	< 362	ND
Dibenzofuran	3540C/3640A		20	< 51	< 72	< 72	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 51	< 72	< 72	ND
4-Nitrophenol	3540C/3640A		70	< 179	< 254	< 254	ND
Fluorene	3540C/3640A		20	< 51	< 72	< 72	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 51	< 72	< 72	ND
Diethylphthalate	3540C/3640A		20	< 51	< 72	< 72	ND
4-Nitroalinine	3540C/3640A		70	< 179	< 254	< 254	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 89	< 127	< 127	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 128	< 181	< 181	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 51	< 72	< 72	ND
Hexachlorobenzene	3540C/3640A		20	< 51	< 72	< 72	ND
Pentachlorophenol	3540C/3640A		40	< 102	< 145	< 145	ND
Phenanthrene	3540C/3640A		20	< 51	< 72	< 72	ND
Anthracene	3540C/3640A		20	< 51	< 72	< 72	ND
Carbazole	3540C/3640A		60	< 153	< 217	< 217	ND
Di-n-butylphthalate	3540C/3640A		40	< 102	< 145	< 145	ND
Fluoranthene	3540C/3640A		20	< 51	< 72	< 72	ND
Pyrene	3540C/3640A		20	< 51	< 72	< 72	ND
Benzidine	3540C/3640A		150	< 383	< 543	< 543	ND
Butylbenzylphthalate	3540C/3640A		40	< 102	< 145	< 145	ND
Benzo(a)anthracene	3540C/3640A		20	< 51	< 72	< 72	ND
Chrysene	3540C/3640A		20	< 51	< 72	< 72	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 383	< 543	< 543	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 115	< 163	< 163	ND
Di-n-octylphthalate	3540C/3640A		40	< 102	< 145	< 145	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 51	< 72	< 72	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 51	< 72	< 72	ND
Benzo(a)pyrene	3540C/3640A		20	< 51	< 72	< 72	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 77	< 109	< 109	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 102	< 145	< 145	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 102	< 145	< 145	ND
Pesticides (µg/Kg)		**PQL(µg/L)**					
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100	< 100	ND
Bolstar	8141A	50		< 50	< 50	< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50	< 50	ND
Coumaphos	8141A	100		< 100	< 100	< 100	ND
Def/Morphos	8141A	50		< 50	< 50	< 50	ND
Demeton (total)	8141A	100		< 100	< 100	< 100	ND
Diazinon	8141A	50		< 50	< 50	< 50	ND
Dichlorvos	8141A	100		< 100	< 100	< 100	ND
Dimethoate	8141A	100		< 100	< 100	< 100	ND
Disulfoton	8141A	50		< 50	< 50	< 50	ND
EPN	8141A	50		< 50	< 50	< 50	ND
Ethion	8141A	50		< 50	< 50	< 50	ND
Ethoprop	8141A	50		< 50	< 50	< 50	ND
Fensulfothion	8141A	250		< 250	< 250	< 250	ND
Fenthion	8141A	50		< 50	< 50	< 50	ND
Malathion	8141A	50		< 50	< 50	< 50	ND
Mevinphos	8141A	350		< 350	< 350	< 350	ND
Naled	8141A	250		< 250	< 250	< 250	ND
Parathion, ethyl	8141A	50		< 50	< 50	< 50	ND
Parathion, methyl	8141A	50		< 50	< 50	< 50	ND
Phorate	8141A	50		< 50	< 50	< 50	ND
Prowl (pendimethalin)	8141A	50		< 50	< 50	< 50	ND
Ronnel	8141A	50		< 50	< 50	< 50	ND
Stirophos	8141A	50		< 50	< 50	< 50	ND
Sulfotep	8141A	50		< 50	< 50	< 50	ND
Tokuthion	8141A	50		< 50	< 50	< 50	ND
Trichloronate	8141A	50		< 50	< 50	< 50	ND
Trifuralin	8141A	50		< 50	< 50	< 50	ND
Organochlorine Pesticides (µg/Kg)							
Aldrin	3540C/3640A			< 1.35	< 1.92	< 0.91	ND
alpha-BHC	3540C/3640A			< 2.55	< 3.62	< 1.72	ND
beta-BHC	3540C/3640A			< 1.57	< 2.23	< 1.06	ND
gamma-BHC	3540C/3640A			< 1.61	< 2.28	< 1.08	ND
delta-BHC	3540C/3640A			< 1.63	< 2.32	< 1.10	ND
Chlordane	3540C/3640A			< 6.03	< 8.57	< 4.10	ND
2,4-DDD	3540C/3640A			< 1.57	< 2.23	< 1.06	ND
4,4-DDD	3540C/3640A			< 1.57	< 2.23	< 1.06	ND
2,4-DDE	3540C/3640A			< 1.36	< 1.94	< 0.92	ND
4,4-DDE	3540C/3640A			< 1.36	< 1.94	< 0.92	ND
2,4-DDT	3540C/3640A			< 2.55	< 3.62	< 1.72	ND
4,4-DDT	3540C/3640A			< 2.55	< 3.62	< 1.72	ND
Total DDT	3540C/3640A			< 2.55	< 3.62	< 1.72	ND
Dieldrin	3540C/3640A			< 1.66	< 2.36	< 1.12	ND
Endosulfan I	3540C/3640A			< 2.08	< 2.95	< 1.40	ND
Endosulfan II	3540C/3640A			< 2.17	< 3.08	< 1.46	ND
Endosulfan Sulfate	3540C/3640A			< 1.84	< 2.61	< 1.24	ND
Endrin	3540C/3640A			< 1.91	< 2.72	< 1.29	ND
Endrin Aldehyde	3540C/3640A			< 2.07	< 2.93	< 1.39	ND
Heptachlor	3540C/3640A			< 2.13	< 3.03	< 1.44	ND
Heptachlor Epoxide	3540C/3640A			< 2.12	< 3.01	< 1.43	ND
Toxaphene	3540C/3640A			< 11.20	< 15.90	< 7.60	ND
PCB's (µg/Kg)							
Arochlor 1016	3540C/3640A			< 5.9	< 8.4	< 4.0	ND
Arochlor 1221	3540C/3640A			< 5.9	< 8.4	< 4.0	ND
Arochlor 1232	3540C/3640A			< 5.9	< 8.4	< 4.0	ND
Arochlor 1242	3540C/3640A			< 5.9	< 8.4	< 4.0	ND
Arochlor 1248	3540C/3640A			< 5.9	< 8.4	< 4.0	ND
Arochlor 1254	3540C/3640A			< 5.9	< 8.4	< 4.0	ND
Arochlor 1260	3540C/3640A			< 5.9	< 8.4	< 4.0	ND
Total Aroclors	3540C/3640A			< 5.9	< 8.4	< 4.0	ND

POND 7

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 7				
				7-A	7-B	7-B-Dup	7-C	Average
Geneal Chemistry								
pH	9045C		0.1	6.7	7.2		6.7	***6.87***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	52	75		65	***64***
Chloride (mg/Kg)	SMEWW 4500 CL C			276,000	170,000		212,000	***219,333***
Organic N	SMEWW 4500N-A	5.0	5.0	d 1,530	d 1,560		d 2,920	***2,003***
% Total Solids	SMEWW 2540G			57.9	61.1		57.6	***58.9***
Total Metals (mg/Kg) dry wt								
Arsenic	3050/6020		2.0	5.0	14.0		12.2	***10.4***
Cadmium	3050/6020		0.3					
Chromium	3050/6020		5.0	33.70	32.80		46.20	***37.57***
Copper	3050/6020		5.0	11.8	10.0		16.8	***12.87***
Lead	3050/6020		5.0	5.3	9.7		10.5	***8.5***
Nickel	3050/6020		5.0	26.0	28.8		34.0	***29.6***
Selenium	3050/6020		0.1	0.7 J	1.6 J		1.3 J	***1.2***
Silver	3050/6020		0.2	< 0.2	0.2		< 0.2	***0.133***
Zinc	3050/6020		1.0	25.0	35.5		40	***33.5***
Mercury	7471/7471 M		0.02	< 0.03	< 0.03		0.05	***0.0267***
Sodium	3050/6020	1.0	1.0	92,400	71,400		55,800	***73,200***
Potassium	6010	1.0	1.0	9,960	8,010		11,300	***9,757***
Semi-Volatile Organics (µg/Kg)								
Pyridine	3540C/3640A		100	< 173	< 164	< 164	< 174	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 43	< 41	< 41	< 43	ND
2-Chlorophenol	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Phenol	3540C/3640A		30	< 52	< 49	< 49	< 52	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Benzyl alcohol	3540C/3640A		75	< 130	< 123	< 123	< 130	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 43	< 41	< 41	< 43	ND
2-Methylphenol	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Hexachloroethane	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 52	< 49	< 49	< 52	ND
4/3-Methylphenol	3540C/3640A		40	87	< 65	< 65	424	***144***
Nitrobenzene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Isophorone	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
2-Nitrophenol	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
2,4-Dimethylphenol	3540C/3640A		80	< 138	< 131	< 131	< 139	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
2,4-Dichorophenol	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Napthalene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
4-Chloroaniline	3540C/3640A		100	< 173	< 164	< 164	< 174	ND
Hexachlorobutadiene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
2-Methylnapthalene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 86	< 82	< 82	< 87	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 52	< 49	< 49	< 52	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 52	< 49	< 49	< 52	ND
2-Chloronapthalene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
2-Nitroaniline	3540C/3640A		50	< 86	< 82	< 82	< 87	ND
Acenaphthylene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Dimethylphthalate	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Acenaphthene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
3-Nitroaniline	3540C/3640A		100	< 173	< 164	< 164	< 174	ND
2,4-Dintrophenol	3540C/3640A		100	< 173	< 164	< 164	< 174	ND
Dibenzofuran	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
4-Nitrophenol	3540C/3640A		70	< 121	< 115	< 115	< 122	ND
Fluorene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Diethylphthalate	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
4-Nitroalinine	3540C/3640A		70	< 121	< 115	< 115	< 122	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 60	< 57	< 57	< 61	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 86	< 82	< 82	< 87	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Hexachlorobenzene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Pentachlorophenol	3540C/3640A		40	< 69	< 65	< 65	< 69	ND
Phenanthrene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Anthracene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Carbazole	3540C/3640A		60	< 104	< 98	< 98	< 104	ND
Di-n-butylphthalate	3540C/3640A		40	< 69	< 65	< 65	< 69	ND
Fluoranthene	3540C/3640A		20	< 35	35.4	< 33	< 35	***21.73***
Pyrene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Benzidine	3540C/3640A		150	< 259	< 245	< 245	< 260	ND
Butylbenzylphthalate	3540C/3640A		40	< 69	< 65	< 65	< 69	ND
Benzo(a)anthracene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Chrysene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 259	< 245	< 245	< 260	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 78	< 74	< 74	< 78	ND
Di-n-octylphthalate	3540C/3640A		40	< 69	< 65	< 65	< 69	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Benzo(a)pyrene	3540C/3640A		20	< 35	< 33	< 33	< 35	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 52	< 49	< 49	< 52	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 69	< 65	< 65	< 69	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 69	< 65	< 65	< 69	ND
Pesticides (µg/Kg)		**PQL(µg/L)**						
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100		< 100	ND
Bolstar	8141A	50		< 50	< 50		< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50		< 50	ND
Coumaphos	8141A	100		< 100	< 100		< 100	ND
Def/Morphos	8141A	50		< 50	< 50		< 50	ND
Demeton (total)	8141A	100		< 100	< 100		< 100	ND
Diazinon	8141A	50		< 50	< 50		< 50	ND
Dichlorvos	8141A	100		< 100	< 100		< 100	ND
Dimethoate	8141A	100		< 100	< 100		< 100	ND
Disulfoton	8141A	50		< 50	< 50		< 50	ND
EPN	8141A	50		< 50	< 50		< 50	ND
Ethion	8141A	50		< 50	< 50		< 50	ND
Ethoprop	8141A	50		< 50	< 50		< 50	ND
Fensulfothion	8141A	250		< 250	< 250		< 250	ND
Fenthion	8141A	50		< 50	< 50		< 50	ND
Malathion	8141A	50		< 50	< 50		< 50	ND
Mevinphos	8141A	350		< 350	< 350		< 350	ND
Naled	8141A	250		< 250	< 250		< 250	ND
Parathion, ethyl	8141A	50		< 50	< 50		< 50	ND
Parathion, methyl	8141A	50		< 50	< 50		< 50	ND
Phorate	8141A	50		< 50	< 50		< 50	ND
Prowl (pendimethalin)	8141A	50		< 50	< 50		< 50	ND
Ronnel	8141A	50		< 50	< 50		< 50	ND
Stirophos	8141A	50		< 50	< 50		< 50	ND
Sulfotep	8141A	50		< 50	< 50		< 50	ND
Tokuthion	8141A	50		< 50	< 50		< 50	ND
Trichloronate	8141A	50		< 50	< 50		< 50	ND
Trifuralin	8141A	50		< 50	< 50		< 50	ND
Organochlorine Pesticides (µg/Kg)								
Aldrin	3540C/3640A			< 0.92	< 0.87		d< 4.60	ND
alpha-BHC	3540C/3640A			< 1.73	< 1.64		d< 8.68	ND
beta-BHC	3540C/3640A			< 1.06	< 1.01		d< 5.34	ND
gamma-BHC	3540C/3640A			< 1.09	< 1.03		d< 5.47	ND
delta-BHC	3540C/3640A			< 1.11	< 1.05		d< 5.56	ND
Chlordane	3540C/3640A			< 4.08	< 3.87		d< 20.50	ND
2,4-DDD	3540C/3640A			< 1.06	< 1.01		d< 5.34	ND
4,4-DDD	3540C/3640A			< 1.06	< 1.01		d< 5.34	ND
2,4-DDE	3540C/3640A			< 0.92	< 0.88		d< 4.64	ND
4,4-DDE	3540C/3640A			< 0.92	< 0.88		d< 4.64	ND
2,4-DDT	3540C/3640A			< 1.73	< 1.64		d< 8.68	ND
4,4-DDT	3540C/3640A			< 1.73	< 1.64		d< 8.68	ND
Total DDT	3540C/3640A			< 1.73	< 1.64		d< 8.68	ND
Dieldrin	3540C/3640A			< 1.12	< 1.06		d< 5.64	ND
Endosulfan I	3540C/3640A			< 1.41	< 1.33		d< 7.07	ND
Endosulfan II	3540C/3640A			< 1.47	< 1.39		d< 7.38	ND
Endosulfan Sulfate	3540C/3640A			< 1.24	< 1.18		d< 6.25	ND
Endrin	3540C/3640A			< 1.30	< 1.23		d< 6.51	ND
Endrin Aldehyde	3540C/3640A			< 1.40	< 1.33		d< 7.03	ND
Heptachlor	3540C/3640A			< 1.44	< 1.37		d< 7.25	ND
Heptachlor Epoxide	3540C/3640A			< 1.43	< 1.36		d< 7.20	ND
Toxaphene	3540C/3640A			< 7.60	< 7.20		d< 38.20	ND
PCB's (µg/Kg)								
Arochlor 1016	3540C/3640A			< 4.0	< 3.8		d< 20.0	ND
Arochlor 1221	3540C/3640A			< 4.0	< 3.8		d< 20.0	ND
Arochlor 1232	3540C/3640A			< 4.0	< 3.8		d< 20.0	ND
Arochlor 1242	3540C/3640A			< 4.0	< 3.8		d< 20.0	ND
Arochlor 1248	3540C/3640A			< 4.0	< 3.8		d< 20.0	ND
Arochlor 1254	3540C/3640A			< 4.0	< 3.8		d< 20.0	ND
Arochlor 1260	3540C/3640A			< 4.0	< 3.8		d< 20.0	ND
Total Aroclors	3540C/3640A			< 4.0	< 3.8		d< 20.0	ND

POND 7A

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 7A				
				7A-A	7A-B	7A-B-Dup	7A-C	Average
Geneal Chemistry								
pH	9045C		0.1	7.5	7.1		7.3	***7.30***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	230	260		58	***182.6667***
Chloride (mg/Kg)	SMEWW 4500 CL C			79,600	127,000		42,800	***83,133***
Organic N	SMEWW 4500N-A	5.0	5.0	d 4,070	d 7,890		d 2,430	***4.797***
% Total Solids	SMEWW 2540G			45.2	40.8		47.7	***44.6***
Total Metals (mg/Kg) dry wt								
Arsenic	3050/6020		2.0	8.7	15.7	16.5	19.8	***15.18***
Cadmium	3050/6020		0.3					
Chromium	3050/6020		5.0	34.4	60.4	63.1	77.3	***58.8***
Copper	3050/6020		5.0	17.4	28.7	31.3	30.6	***27.0***
Lead	3050/6020		5.0	12.7	15.6	15.8	18.4	***15.63***
Nickel	3050/6020		5.0	59.5	94.0	87.8	118.0	***89.83***
Selenium	3050/6020		0.1	< 0.4	1.5 J	1.6 J	1.2 J	***1.13***
Silver	3050/6020		0.2	< 0.2	0.3	0.3	< 0.2	***0.20***
Zinc	3050/6020		1.0	38	51	55	120	***66***
Mercury	7471/7471 M		0.02	< 0.04	< 0.05	0.06	0.17	***0.0688***
Sodium	3050/6020	1.0	1.0	54,500	57,200	57,700	28,200	***49,400***
Potassium	6010	1.0	1.0	4,130	5,870		7,090	***5,697***
Semi-Volatile Organics (µg/Kg)								
Pyridine	3540C/3640A		100	< 221	< 245		< 210	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 55	< 61		< 52	ND
2-Chlorophenol	3540C/3640A		20	< 44	< 49		< 42	ND
Phenol	3540C/3640A		30	< 66	< 74		< 63	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 44	< 49		< 42	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 44	< 49		< 42	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 44	< 49		< 42	ND
Benzyl alcohol	3540C/3640A		75	< 166	< 184		< 157	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 55	< 61		< 52	ND
2-Methylphenol	3540C/3640A		20	< 44	< 49		< 42	ND
Hexachloroethane	3540C/3640A		20	< 44	< 49		< 42	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 66	< 74		< 63	ND
4/3-Methylphenol	3540C/3640A		40	< 88	< 98		< 84	ND
Nitrobenzene	3540C/3640A		20	< 44	< 49		< 42	ND
Isophorone	3540C/3640A		20	< 44	< 49		< 42	ND
2-Nitrophenol	3540C/3640A		20	< 44	< 49		< 42	ND
2,4-Dimethylphenol	3540C/3640A		80	< 177	< 196		< 168	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 44	< 49		< 42	ND
2,4-Dichorophenol	3540C/3640A		20	< 44	< 49		< 42	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 44	< 49		< 42	ND
Napthalene	3540C/3640A		20	< 44	< 49		< 42	ND
4-Chloroaniline	3540C/3640A		100	< 221	< 245		< 210	ND
Hexachlorobutadiene	3540C/3640A		20	< 44	< 49		< 42	ND
2-Methylnapthalene	3540C/3640A		20	< 44	< 49		< 42	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 44	< 49		< 42	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 111	< 123		< 105	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 66	< 74		< 63	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 66	< 74		< 63	ND
2-Chloronapthalene	3540C/3640A		20	< 44	< 49		< 42	ND
2-Nitroaniline	3540C/3640A		50	< 111	< 123		< 105	ND
Acenaphthylene	3540C/3640A		20	< 44	< 49		< 42	ND
Dimethylphthalate	3540C/3640A		20	< 44	< 49		< 42	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 44	< 49		< 42	ND
Acenaphthene	3540C/3640A		20	< 44	< 49		< 42	ND
3-Nitroaniline	3540C/3640A		100	< 221	< 245		< 210	ND
2,4-Dintrophenol	3540C/3640A		100	< 221	< 245		< 210	ND
Dibenzofuran	3540C/3640A		20	< 44	< 49		< 42	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 44	< 49		< 42	ND
4-Nitrophenol	3540C/3640A		70	< 155	< 172		< 147	ND
Fluorene	3540C/3640A		20	< 44	< 49		< 42	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 44	< 49		< 42	ND
Diethylphthalate	3540C/3640A		20	< 44	< 49		< 42	ND
4-Nitroalinine	3540C/3640A		70	< 155	< 172		< 147	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 77	< 86		< 73	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 111	< 123		< 105	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 44	< 49		< 42	ND
Hexachlorobenzene	3540C/3640A		20	< 44	< 49		< 42	ND
Pentachlorophenol	3540C/3640A		40	< 88	< 98		< 84	ND
Phenanthrene	3540C/3640A		20	< 44	< 49		< 42	ND
Anthracene	3540C/3640A		20	< 44	< 49		< 42	ND
Carbazole	3540C/3640A		60	< 133	< 147		< 126	ND
Di-n-butylphthalate	3540C/3640A		40	< 88	< 98		< 84	ND
Fluoranthene	3540C/3640A		20	< 44	< 49		< 42	ND
Pyrene	3540C/3640A		20	< 44	< 49		< 42	ND
Benzidine	3540C/3640A		150	< 332	< 368		< 314	ND
Butylbenzylphthalate	3540C/3640A		40	< 88	< 98		< 84	ND
Benzo(a)anthracene	3540C/3640A		20	< 44	< 49		< 42	ND
Chrysene	3540C/3640A		20	< 44	< 49		< 42	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 332	< 368		< 314	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 100	< 110		127	***77.3***
Di-n-octylphthalate	3540C/3640A		40	< 88	< 98		< 84	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 44	< 49		< 42	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 44	< 49		< 42	ND
Benzo(a)pyrene	3540C/3640A		20	< 44	< 49		< 42	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 66	< 74		< 63	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 88	< 98		< 84	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 88	< 98		< 84	ND
Pesticides (µg/Kg)		**PQL(µg/L)**						
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100		< 100	ND
Bolstar	8141A	50		< 50	< 50		< 50	ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50		< 50	ND
Coumaphos	8141A	100		< 100	< 100		< 100	ND
Def/Morphos	8141A	50		< 50	< 50		< 50	ND
Demeton (total)	8141A	100		< 100	< 100		< 100	ND
Diazinon	8141A	50		< 50	< 50		< 50	ND
Dichlorvos	8141A	100		< 100	< 100		< 100	ND
Dimethoate	8141A	100		< 100	< 100		< 100	ND
Disulfoton	8141A	50		< 50	< 50		< 50	ND
EPN	8141A	50		< 50	< 50		< 50	ND
Ethion	8141A	50		< 50	< 50		< 50	ND
Ethoprop	8141A	50		< 50	< 50		< 50	ND
Fensulfothion	8141A	250		< 250	< 250		< 250	ND
Fenthion	8141A	50		< 50	< 50		< 50	ND
Malathion	8141A	50		< 50	< 50		< 50	ND
Mevinphos	8141A	350		< 350	< 350		< 350	ND
Naled	8141A	250		< 250	< 250		< 250	ND
Parathion, ethyl	8141A	50		< 50	< 50		< 50	ND
Parathion, methyl	8141A	50		< 50	< 50		< 50	ND
Phorate	8141A	50		< 50	< 50		< 50	ND
Prowl (pendimethalin)	8141A	50		< 50	< 50		< 50	ND
Ronnel	8141A	50		< 50	< 50		< 50	ND
Stirophos	8141A	50		< 50	< 50		< 50	ND
Sulfotep	8141A	50		< 50	< 50		< 50	ND
Tokuthion	8141A	50		< 50	< 50		< 50	ND
Trichloronate	8141A	50		< 50	< 50		< 50	ND
Trifuralin	8141A	50		< 50	< 50		< 50	ND
Organochlorine Pesticides (µg/Kg)								
Aldrin	3540C/3640A			< 1.17	d< 13.00		< 1.11	ND
alpha-BHC	3540C/3640A			< 2.21	d< 24.50		< 2.10	ND
beta-BHC	3540C/3640A			< 1.36	d< 15.10		< 1.29	ND
gamma-BHC	3540C/3640A			< 1.39	d< 15.40		< 1.32	ND
delta-BHC	3540C/3640A			< 1.42	d< 15.70		< 1.34	ND
Chlordane	3540C/3640A			< 5.23	d< 58.00		< 4.96	ND
2,4-DDD	3540C/3640A			1.88 J	d< 15.10		< 1.29	***3.56***
4,4-DDD	3540C/3640A			3.47	d< 15.10		< 1.29	***3.89***
2,4-DDE	3540C/3640A			< 1.18	d< 13.10		< 1.12	ND
4,4-DDE	3540C/3640A			< 1.18	d< 13.10		< 1.12	ND
2,4-DDT	3540C/3640A			< 2.21	d< 24.50		< 2.10	ND
4,4-DDT	3540C/3640A			< 2.21	d< 24.50		< 2.10	ND
Total DDT	3540C/3640A			5.35	d< 24.50		< 2.10	***6.22***
Dieldrin	3540C/3640A			< 1.44	d< 15.90		< 1.36	ND
Endosulfan I	3540C/3640A			< 1.80	d< 20.00		< 1.71	ND
Endosulfan II	3540C/3640A			< 1.88	d< 20.80		< 1.78	ND
Endosulfan Sulfate	3540C/3640A			< 1.59	d< 17.60		< 1.51	ND
Endrin	3540C/3640A			< 1.66	d< 18.40		< 1.57	ND
Endrin Aldehyde	3540C/3640A			< 1.79	d< 19.90		< 1.70	ND
Heptachlor	3540C/3640A			< 1.85	d< 20.50		< 1.75	ND
Heptachlor Epoxide	3540C/3640A			< 1.84	d< 20.30		< 1.74	ND
Toxaphene	3540C/3640A			< 9.70	d< 108.00		< 9.20	ND
PCB's (µg/Kg)								
Arochlor 1016	3540C/3640A			< 5.1	d< 56.0		< 4.8	ND
Arochlor 1221	3540C/3640A			< 5.1	d< 56.0		< 4.8	ND
Arochlor 1232	3540C/3640A			< 5.1	d< 56.0		< 4.8	ND
Arochlor 1242	3540C/3640A			< 5.1	d< 56.0		< 4.8	ND
Arochlor 1248	3540C/3640A			< 5.1	d< 56.0		< 4.8	ND
Arochlor 1254	3540C/3640A			< 5.1	d< 56.0		< 4.8	ND
Arochlor 1260	3540C/3640A			< 5.1	d< 56.0		< 4.8	ND
Total Aroclors	3540C/3640A			< 5.1	d< 56.0		< 4.8	ND

POND 8

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

ANALYTE	EPA Method	MDL	Reporting Limits (as noted)	Pond 8				
				8-A	8-B	8-C	8-C-Dup	Average
Geneal Chemistry								
pH	9045C		0.1	5.9	5.8	6.2		***5.97***
Total Phosphorous (mg/kg)	65.3 MOD11L1457		12	32	100	40		***57.33***
Chloride (mg/Kg)	SMEWW 4500 CL C			106,000	d 135,000	270,000		***170.333***
Organic N	SMEWW 4500N-A	5.0	5.0	d 1,330	d 1,660	d 1,190		***1.393***
% Total Solids	SMEWW 2540G			56.4	60.8	55.5		***57.6***
Total Metals (mg/Kg) dry wt								
Arsenic	3050/6020		2.0	8.4	6.6	9.9		***8.30***
Cadmium	3050/6020		0.3					
Chromium	3050/6020		5.0	35.8	52.3	47.3		***45.13***
Copper	3050/6020		5.0	15.8	23.8	15.3		***18.3***
Lead	3050/6020		5.0	6.2	3.8	8.9		***6.30***
Nickel	3050/6020		5.0	24.1	40.2	28.3		***30.87***
Selenium	3050/6020		0.1	1.1 J	1.0 J	0.8 J		***1.3***
Silver	3050/6020		0.2	< 0.2	< 0.2	< 0.2		ND
Zinc	3050/6020		1.0	25.0	37.7	33.3		***32***
Mercury	7471/7471 M		0.02	0.07	0.06	0.07		***0.0667***
Sodium	3050/6020	1.0	1.0	50600	39500	74000		***54,700***
Potassium	6010	1.0	1.0	11,600	14,000	10,400		***12,000***
Semi-Volatile Organics (µg/Kg)								
Pyridine	3540C/3640A		100	< 177	<164	< 180	< 180	ND
Bis(2-Chlorothyl) ether	3540C/3640A		25	< 44	<41	< 45	< 45	ND
2-Chlorophenol	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Phenol	3540C/3640A		30	< 53	<49	< 54	< 54	ND
1,3 Dichlorobenzene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
1,4 Dichlorobenzene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
1,2 Dichlorobenzene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Benzyl alcohol	3540C/3640A		75	< 133	<123	< 135	< 135	ND
Bis(2-chloroisopropyl)ether	3540C/3640A		25	< 44	<41	< 45	< 45	ND
2-Methylphenol	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Hexachloroethane	3540C/3640A		20	< 35	<33	< 36	< 36	ND
N-Nitroso-di-n-propylamine	3540C/3640A		30	< 53	<49	< 54	< 54	ND
4/3-Methylphenol	3540C/3640A		40	< 71	<66	< 72	< 72	ND
Nitrobenzene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Isophorone	3540C/3640A		20	< 35	<33	< 36	< 36	ND
2-Nitrophenol	3540C/3640A		20	< 35	<33	< 36	< 36	ND
2,4-Dimethylphenol	3540C/3640A		80	< 142	<132	< 144	< 144	ND
Bis(2-Chloroethoxy)methane	3540C/3640A		20	< 35	<33	< 36	< 36	ND
2,4-Dichorophenol	3540C/3640A		20	< 35	<33	< 36	< 36	ND
1,2,4-Trichlorobenzene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Napthalene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
4-Chloroaniline	3540C/3640A		100	< 177	<164	< 180	< 180	ND
Hexachlorobutadiene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
2-Methylnapthalene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
4-Chloro-3-methylphenol	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Hexachlorocyclopentadiene	3540C/3640A		50	< 89	<82	< 90	< 90	ND
2,4,6-Trichlorophenol	3540C/3640A		30	< 53	<49	< 54	< 54	ND
2,4,5-Trichlorophenol	3540C/3640A		30	< 53	<49	< 54	< 54	ND
2-Chloronapthalene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
2-Nitroaniline	3540C/3640A		50	< 89	<82	< 90	< 90	ND
Acenaphthylene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Dimethylphthalate	3540C/3640A		20	< 35	<33	< 36	< 36	ND
2,6-Dinitrotoluene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Acenaphthene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
3-Nitroaniline	3540C/3640A		100	< 177	<164	< 180	< 180	ND
2,4-Dintrophenol	3540C/3640A		100	< 177	<164	< 180	< 180	ND
Dibenzofuran	3540C/3640A		20	< 35	<33	< 36	< 36	ND
2,4-Dinitrotoluene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
4-Nitrophenol	3540C/3640A		70	< 124	<115	< 126	< 126	ND
Fluorene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
4-Chlorophenyl-phenylether	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Diethylphthalate	3540C/3640A		20	< 35	<33	< 36	< 36	ND
4-Nitroalinine	3540C/3640A		70	< 124	<115	< 126	< 126	ND
N-Nitrosodiphenylamine	3540C/3640A		35	< 62	<58	< 63	< 63	ND
4,6-Dintro-2-methylphenol	3540C/3640A		50	< 89	<82	< 90	< 90	ND
4-Bromophenyl-phenylether	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Hexachlorobenzene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Pentachlorophenol	3540C/3640A		40	< 71	<66	< 72	< 72	ND
Phenanthrene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Anthracene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Carbazole	3540C/3640A		60	< 106	<99	< 108	< 108	ND
Di-n-butylphthalate	3540C/3640A		40	< 71	<66	< 72	< 72	ND
Fluoranthene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Pyrene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Benzidine	3540C/3640A		150	< 266	<247	< 270	< 270	ND
Butylbenzylphthalate	3540C/3640A		40	< 71	<66	< 72	< 72	ND
Benzo(a)anthracene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Chrysene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
3,3-Dichlorobenzidine	3540C/3640A		150	< 266	<247	< 270	< 270	ND
Bis(2-Ethylhexyl)phthalate	3540C/3640A		45	< 80	359	< 81	< 81	***120***
Di-n-octylphthalate	3540C/3640A		40	< 71	<66	< 72	< 72	ND
Benzo(b)fluoranthene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Benzo(k)fluoranthene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Benzo(a)pyrene	3540C/3640A		20	< 35	<33	< 36	< 36	ND
Indeno[1,2,3-cd]pyrene	3540C/3640A		30	< 53	<49	< 54	< 54	ND
Dibenz[a,h]anthracene	3540C/3640A		40	< 71	<66	< 72	< 72	ND
Benzo[g,h,i]perylene	3540C/3640A		40	< 71	<66	< 72	< 72	ND
Pesticides (µg/Kg)		**PQL(µg/L)**						
Azinphosmethyl (Guthion)	8141A	100		< 100	< 100	< 100		ND
Bolstar	8141A	50		< 50	< 50	< 50		ND
Chlorpyrifos (Dursban)	8141A	50		< 50	< 50	< 50		ND
Coumaphos	8141A	100		< 100	< 100	< 100		ND
Def/Morphos	8141A	50		< 50	< 50	< 50		ND
Demeton (total)	8141A	100		< 100	< 100	< 100		ND
Diazinon	8141A	50		< 50	< 50	< 50		ND
Dichlorvos	8141A	100		< 100	< 100	< 100		ND
Dimethoate	8141A	100		< 100	< 100	< 100		ND
Disulfoton	8141A	50		< 50	< 50	< 50		ND
EPN	8141A	50		< 50	< 50	< 50		ND
Ethion	8141A	50		< 50	< 50	< 50		ND
Ethoprop	8141A	50		< 50	< 50	< 50		ND
Fensulfothion	8141A	250		< 250	< 250	< 250		ND
Fenthion	8141A	50		< 50	< 50	< 50		ND
Malathion	8141A	50		< 50	< 50	< 50		ND
Mevinphos	8141A	350		< 350	< 350	< 350		ND
Naled	8141A	250		< 250	< 250	< 250		ND
Parathion, ethyl	8141A	50		< 50	< 50	< 50		ND
Parathion, methyl	8141A	50		< 50	< 50	< 50		ND
Phorate	8141A	50		< 50	< 50	< 50		ND
Prowl (pendimethalin)	8141A	50		< 50	< 50	< 50		ND
Ronnel	8141A	50		< 50	< 50	< 50		ND
Stirophos	8141A	50		< 50	< 50	< 50		ND
Sulfotep	8141A	50		< 50	< 50	< 50		ND
Tokuthion	8141A	50		< 50	< 50	< 50		ND
Trichloronate	8141A	50		< 50	< 50	< 50		ND
Trifuralin	8141A	50		< 50	< 50	< 50		ND
Organochlorine Pesticides (µg/Kg)								
Aldrin	3540C/3640A			d< 4.70	d< 8.70	d< 4.77		ND
alpha-BHC	3540C/3640A			d< 8.87	d< 16.40	d< 9.01		ND
beta-BHC	3540C/3640A			d< 5.45	d< 10.10	d< 5.54		ND
gamma-BHC	3540C/3640A			d< 5.59	d< 10.40	d< 5.68		ND
delta-BHC	3540C/3640A			d< 5.67	d< 10.50	d< 5.77		ND
Chlordane	3540C/3640A			d< 21.00	d< 38.90	d< 21.30		ND
2,4-DDD	3540C/3640A			d< 5.45	d< 10.10	d< 5.54		ND
4,4-DDD	3540C/3640A			d< 5.45	d< 10.10	d< 5.54		ND
2,4-DDE	3540C/3640A			d< 4.74	d< 8.80	d< 4.82		ND
4,4-DDE	3540C/3640A			d< 4.74	d< 8.80	d< 4.82		ND
2,4-DDT	3540C/3640A			d< 8.87	d< 16.40	d< 9.01		ND
4,4-DDT	3540C/3640A			d< 8.87	d< 16.40	d< 9.01		ND
Total DDT	3540C/3640A			d< 8.87	d< 16.40	d< 9.01		ND
Dieldrin	3540C/3640A			d< 5.76	d< 10.70	d< 5.86		ND
Endosulfan I	3540C/3640A			d< 7.23	d< 13.40	d< 7.34		ND
Endosulfan II	3540C/3640A			d< 7.54	d< 14.00	d< 7.66		ND
Endosulfan Sulfate	3540C/3640A			d< 6.38	d< 11.80	d< 6.49		ND
Endrin	3540C/3640A			d< 6.65	d< 12.30	d< 6.76		ND
Endrin Aldehyde	3540C/3640A			d< 7.18	d< 13.30	d< 7.30		ND
Heptachlor	3540C/3640A			d< 7.40	d< 13.70	d< 7.52		ND
Heptachlor Epoxide	3540C/3640A			d< 7.36	d< 13.70	d< 7.48		ND
Toxaphene	3540C/3640A			d< 39.00	d< 72.40	d< 39.60		ND
PCB's (µg/Kg)								
Arochlor 1016	3540C/3640A			d< 20.4	d< 38.0	d< 20.7		ND
Arochlor 1221	3540C/3640A			d< 20.4	d< 38.0	d< 20.7		ND
Arochlor 1232	3540C/3640A			d< 20.4	d< 38.0	d< 20.7		ND
Arochlor 1242	3540C/3640A			d< 20.4	d< 38.0	d< 20.7		ND
Arochlor 1248	3540C/3640A			d< 20.4	d< 38.0	d< 20.7		ND
Arochlor 1254	3540C/3640A			d< 20.4	d< 38.0	d< 20.7		ND
Arochlor 1260	3540C/3640A			d< 20.4	d< 38.0	d< 20.7		ND
Total Aroclors	3540C/3640A			d< 20.4	d< 38.0	d< 20.7		ND

DIOXINS

Soil Chemistry Results

Napa-Sonoma Marsh Restoration Project

DRAFT - Incomplete as of 01/08/02

Dioxins (ng/Kg)		MDL (ng/Kg)	NRA	NSA	1A-A	1AB	1A/B Comp	2 Comp	2AA/2AB Comp	3 Comp	3D	4 Comp	5 Comp	6 Comp	6A comp	7 Comp	7A-A/B	7AC	8 Comp
2378-TCDD		1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
12378-PeCDD	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
123478-HxCCD	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
123678-HxCDD	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
123789-HxCDD	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
1234678-HpCDD	EPA 1613	5	*8*	*8*	< 5	< 3	*7*	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
OCDD	EPA 1613	11	*61*	*64*	< 10	*11*	*61*	< 10	*43*	*11*	< 9	*23*	< 10	< 10	*13*	*20*	< 10	< 8	*15*
2378-TCDF	EPA 1613	1	< 1	< 1	< 1	< 1	< 1	*2*	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	*5*	< 1	< 1
12378-PeCDF	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
23478-PeCDF	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
123478-HxCDF	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
123678-HxCDF	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
123789-HxCDF	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
234678-HxCDF	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
1234678-HpCDF	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
1234789-HpCDF	EPA 1613	5	< 5	< 5	< 5	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 4	< 5
OCDF	EPA 1613	11	< 10	< 10	< 10	< 6	< 10	< 10	< 11	< 10	< 9	< 10	< 10	< 10	< 10	< 10	< 10	< 8	< 10