

## Water Quality Data from the Intake Channel of the TFCF, Byron, California

### Summary of October 1997 Surface Grab Samples for Inorganic Compounds

Samples collected from the Old River and Grant Line Canal near the Tracy Fish Collection Facility. Ultra-clean sampling protocols followed for Hg. Analyses of ng/L Hg and other trace elements by ICP-MS by Frontier Geosciences, Seattle, Washington

Negative values represent results below the detection limit. Absolute value of negative numbers represents the reported detection limit. Data should be re-coded before statistical summary.

Bureau of Reclamation Validated Water Quality Data <> Contact: Doug Craft dcraft@do.usbr.gov 303-445-2182 <> TRACY FISH FACILITY IMPROVEMENT PROGRAM <>

Station: Site 4  
Station ID: Confluence of Grant Line Canal and Old River  
Sample Media: Water  
Latitude: 37.820278  
Longitude: 121.551944  
Sampling Date: 29-Oct-97  
Sampling Time: 13:18  
First Line: Filtered  
Second Line: Unfiltered

Lab pH, su	Car-bonate, mg/L	Bicar-bonate, mg/L	Total Al-kalinity, mg/L as CaCO3	Sul-fate, mg/L	Chlo-ride, mg/L	Cal-cium, mg/L	Magne-sium, mg/L	So-dium, mg/L	Potas-ium, mg/L	Total Dis-solved Solids, mg/L	Total Sus-pended Solids, mg/L	Con-ductivity, µS/cm	Total Phos-phorus, mg/L as P	Ortho Phos-phorus, mg/L as P	Nitrate + Nitrite, mg/L as N	Ammo-nia, mg/L as N	Total Kjeldahl Nitro-gen, mg/L as N	Organic Carbon, mg/L as C	Silver, µg/L	Aluminum, µg/L	Arsenic, µg/L	Barium, µg/L	Beryllium, µg/L	Calcium by IC-MPS, mg/L	Cad-mium, µg/L	Cobalt, µg/L	Chro-mium, µg/L	Copper, µg/L	Iron, µg/L	Total Mercury, µg/L	Methyl-mercury, µg/L	Potas-ium by ICPMS, mg/L	Magne-sium by ICPMS, mg/L	Manga-nese, mg/L	Molyb-denum, µg/L	Nickel, µg/L	Lead, µg/L	Anti-mony, µg/L	Sele-nium, µg/L	Strontium, µg/L	Thal-ium, µg/L	Uranium, µg/L	Vana-dium, µg/L	Zinc, µg/L
7.3	0	104	85.56	81.3	52.1	26.8	14.2	67.8	2.81	321	-	604	-	-	-	-	-	3.2	0.0333	15.9118	1.7979	44.6945	-0.0043	25.8	0.0117	0.0986	1.7492	1.3475	11.5095	0.00105	0.000012	2.71	16.8	2.7733	2.5369	-0.04	0.0605	0.087	0.4862	308.9718	0.0006	7.3449	3.4747	0.5619
-	-	-	-	-	-	-	-	-	-	-	16.4	-	1.5	0.128	1.283	0.082	0.39	3.5	0.0654	343.1144	2.0951	52.2441	0.0289	28	0.0137	0.3253	2.1442	2.0743	388.4731	0.00393	0.000047	2.99	18.2	56.2037	2.5293	0.4309	0.3424	0.0948	0.5404	330.6292	0.0046	7.9843	4.5382	1.8059

Station: Site 2  
Station ID: Old River 50 m downstream of temporary barrier  
Sample Media: Water  
Latitude: 37.805833  
Longitude: 121.533611  
Sampling Date: 29-Oct-97  
Sampling Time: 11:00  
First Line: Filtered  
Second Line: Unfiltered

Lab pH, su	Car-bonate, mg/L	Bicar-bonate, mg/L	Total Al-kalinity, mg/L as CaCO3	Sul-fate, mg/L	Chlo-ride, mg/L	Cal-cium, mg/L	Magne-sium, mg/L	So-dium, mg/L	Potas-ium, mg/L	Total Dis-solved Solids, mg/L	Total Sus-pended Solids, mg/L	Con-ductivity, µS/cm	Total Phos-phorus, mg/L as P	Ortho Phos-phorus, mg/L as P	Nitrate + Nitrite, mg/L as N	Ammo-nia, mg/L as N	Total Kjeldahl Nitro-gen, mg/L as N	Organic Carbon, mg/L as C	Silver, µg/L	Aluminum, µg/L	Arsenic, µg/L	Barium, µg/L	Beryllium, µg/L	Calcium by IC-MPS, mg/L	Cad-mium, µg/L	Cobalt, µg/L	Chro-mium, µg/L	Copper, µg/L	Iron, µg/L	Total Mercury, µg/L	Methyl-mercury, µg/L	Potas-ium by ICPMS, mg/L	Magne-sium by ICPMS, mg/L	Manga-nese, mg/L	Molyb-denum, µg/L	Nickel, µg/L	Lead, µg/L	Anti-mony, µg/L	Sele-nium, µg/L	Strontium, µg/L	Thal-ium, µg/L	Uranium, µg/L	Vana-dium, µg/L	Zinc, µg/L
7.33	0	119	97.54	81.1	80.8	33.4	16.8	74.6	2.89	346	-	685	-	-	-	-	-	3.6	0.0679	15.7793	2.1353	47.5048	-0.0024	31.1	0.0134	0.171	1.9318	1.3661	12.2627	0.00107	0.000027	2.91	19.6	58.6062	3.002	-0.04	0.0195	0.1065	0.5548	424.5402	0.0019	9.4438	4.5769	0.6657
-	-	-	-	-	-	-	-	-	-	-	5.33	-	0.2	0.186	1.237	0.214	0.59	3.8	0.0699	140.7935	2.1561	49.5641	0.0089	31.2	0.0123	0.2194	1.9251	1.5622	118.0864	0.00233	0.000033	2.89	19.5	66.9479	2.9521	-0.04	0.1134	0.1065	0.5111	424.2805	0.0022	9.4724	4.7453	0.9884

Station: Site 1  
 Station ID: Old River 50 m upstream of temporary barrier  
 Sample Media: Water  
 Latitude: 37.804167  
 Longitude: 121.531111  
 Sampling Date: 29-Oct-97  
 Sampling Time: 10:40  
 First Line: Filtered  
 Second Line: Unfiltered

Lab pH, su	Car-bonate, mg/L	Bicar-bonate, mg/L	Total Al-kalinity, mg/L as CaCO3	Sul-fate, mg/L	Chlo-ride, mg/L	Cal-cium, mg/L	Magne-sium, mg/L	So-dium, mg/L	Potas-ium, mg/L	Total Dis-solved Solids, mg/L	Total Sus-pended Solids, mg/L	Con-ductivity μS/cm	Total Phos-phorus, mg/L as P	Ortho Phos-phorus, mg/L as P	Nitrate + Nitrite, mg/L as N	Ammo-nia, mg/L as N	Total Kjeldahl Nitro-gen, mg/L as N	Organic Carbon, mg/L as C	Silver, μg/L	Aluminum, μg/L	Arsenic, μg/L	Barium, μg/L	Beryllium, μg/L	Calcium by IC-MPS, mg/L	Cad-mium, μg/L	Cobalt, μg/L	Chro-mium, μg/L	Copper, μg/L	Iron, μg/L	Total Mercury, μg/L	Methyl-mercury, μg/L	Potas-ium by ICPMS, mg/L	Magne-sium by ICPMS, mg/L	Manga-nese, mg/L	Molyb-denum, μg/L	Nickel, μg/L	Lead, μg/L	Anti-mony, μg/L	Sele-nium, μg/L	Strontium, μg/L	Thal-ium, μg/L	Uranium, μg/L	Vana-dium, μg/L	Zinc, μg/L
7.31	0	122	100.24	80.3	80.9	33.2	16.6	74.7	2.38	357	-	677	-	-	-	-	-	3.6	0.0241	16.0202	2.1055	49.3464	-0.0024	32.3	0.0102	0.1837	1.5746	1.4307	15.7965	0.00071	0.000022	3.03	20	59.4743	3.0819	-0.04	0.0173	0.1041	0.567	439.2943	0.002	9.6585	4.6171	0.6797
-	-	-	-	-	-	-	-	-	-	-	5.76	-	0.2	0.184	1.254	0.223	0.65	3.8	0.0241	16.0202	2.1055	49.3464	0.0024	32.2	0.0102	0.1897	1.5746	1.4307	15.7965	0.00198	0.00004	3.03	20	59.4743	3.0819	0.0684	0.0173	0.1041	0.567	439.2943	0.002	9.4865	4.6171	0.6797

Station: Site 5  
 Station ID: Old River at TFCF Intake outside debris boom  
 Sample Media: Water  
 Latitude: 37.816944  
 Longitude: 121.558889  
 Sampling Date: 29-Oct-97  
 Sampling Time: 14:00  
 First Line: Filtered  
 Second Line: Unfiltered

Lab pH, su	Car-bonate, mg/L	Bicar-bonate, mg/L	Total Al-kalinity, mg/L as CaCO3	Sul-fate, mg/L	Chlo-ride, mg/L	Cal-cium, mg/L	Magne-sium, mg/L	So-dium, mg/L	Potas-ium, mg/L	Total Dis-solved Solids, mg/L	Total Sus-pended Solids, mg/L	Con-ductivity μS/cm	Total Phos-phorus, mg/L as P	Ortho Phos-phorus, mg/L as P	Nitrate + Nitrite, mg/L as N	Ammo-nia, mg/L as N	Total Kjeldahl Nitro-gen, mg/L as N	Organic Carbon, mg/L as C	Silver, μg/L	Aluminum, μg/L	Arsenic, μg/L	Barium, μg/L	Beryllium, μg/L	Calcium by IC-MPS, mg/L	Cad-mium, μg/L	Cobalt, μg/L	Chro-mium, μg/L	Copper, μg/L	Iron, μg/L	Total Mercury, μg/L	Methyl-mercury, μg/L	Potas-ium by ICPMS, mg/L	Magne-sium by ICPMS, mg/L	Manga-nese, mg/L	Molyb-denum, μg/L	Nickel, μg/L	Lead, μg/L	Anti-mony, μg/L	Sele-nium, μg/L	Strontium, μg/L	Thal-ium, μg/L	Uranium, μg/L	Vana-dium, μg/L	Zinc, μg/L
7.27	0	107	88.13	77.4	57.5	28.4	14.1	66.8	2.4	325	-	609	-	-	-	-	-	3.2	0.0221	13.2916	1.8949	47.2771	-0.0012	28	0.0119	0.1058	1.7606	1.3614	11.3573	0.00078	0.000009	2.68	17.4	2.3334	2.7993	-0.04	0.0124	0.0857	0.6514	341.0329	0.0012	8.4858	3.5322	0.5404
-	-	-	-	-	-	-	-	-	-	-	39.1	-	0.38	0.146	1.414	0.089	0.05	3.6	0.0373	256.1286	1.9993	52.2259	0.0225	27.9	0.0163	0.3002	2.0996	1.946	310.326	0.00374	0.000025	2.69	17.5	55.7248	2.6594	0.2811	0.3282	0.0859	0.7434	339.2268	0.0027	8.4727	4.2483	1.551

Station: Site 3  
 Station ID: Upstream of Grant Line Bridge at temporary barrier  
 Sample Media: Water  
 Latitude: 37.820000  
 Longitude: 121.445000  
 Sampling Date: 29-Oct-97  
 Sampling Time: 12:43  
 First Line: Filtered  
 Second Line: Unfiltered

Lab pH, su	Car-bonate, mg/L	Bicar-bonate, mg/L	Total Al-kalinity, mg/L as CaCO3	Sul-fate, mg/L	Chlo-ride, mg/L	Cal-cium, mg/L	Magne-sium, mg/L	So-dium, mg/L	Potas-ium, mg/L	Total Dis-solved Solids, mg/L	Total Sus-pended Solids, mg/L	Con-ductivity μS/cm	Total Phos-phorus, mg/L as P	Ortho Phos-phorus, mg/L as P	Nitrate + Nitrite, mg/L as N	Ammo-nia, mg/L as N	Total Kjeldahl Nitro-gen, mg/L as N	Organic Carbon, mg/L as C	Silver, μg/L	Aluminum, μg/L	Arsenic, μg/L	Barium, μg/L	Beryllium, μg/L	Calcium by IC-MPS, mg/L	Cad-mium, μg/L	Cobalt, μg/L	Chro-mium, μg/L	Copper, μg/L	Iron, μg/L	Total Mercury, μg/L	Methyl-mercury, μg/L	Potas-ium by ICPMS, mg/L	Magne-sium by ICPMS, mg/L	Manga-nese, mg/L	Molyb-denum, μg/L	Nickel, μg/L	Lead, μg/L	Anti-mony, μg/L	Sele-nium, μg/L	Strontium, μg/L	Thal-ium, μg/L	Uranium, μg/L	Vana-dium, μg/L	Zinc, μg/L
7.44	0	123	100.78	72.7	64.6	32.2	14.9	69	2.24	335	-	631	-	-	-	-	-	3.2	0.0662	8.1353	1.8109	49.1794	0.0006	30.6	0.0098	0.114	1.7122	1.2396	9.9664	0.00092	0.000014	2.56	17.6	2.0165	3.0292	-0.04	0.0107	0.0805	0.7458	375.3798	0.0015	10.1937	3.2561	0.5651
-	-	-	-	-	-	-	-	-	-	-	24.8	-	0.2	0.158	1.711	0.114	0.61	3.6	0.0625	209.7116	2.0713	54.9755	0.0154	30.6	0.0156	0.2738	2.2355	1.7598	281.0878	0.00404	0.000068	2.57	17.9	59.8297	2.8699	0.0369	0.2935	0.0848	0.6383	376.0543	0.0026	10.2683	3.9482	1.4333