RECLAMATIC Managing Water in the West

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	Bio Bio Bon - mg	car-k nate, n g/L	Fotal Al- kalinity, mg/L as CaC03	Sul- fate, mg/L	Chlo- ride, mg/L	Cal- cium, mg/L	Magne- sium, mg/L	So- dium, mg/L	Potas sium, mg/L	Total Dis- solved , Solids , mg/L	Tot Su d pend s, Solid mg		n- P itiv- ph y mg cm	Fotal Phos- norus, g/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		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	lron, μg/L	Total Mercury, μg/L	Methyl- mercury, µg/L	Potas- sium by ICPMS, mg/L	Magne- sium by ICPMS, mg/L	Manga- nese, mg/L	Molyb- denum, µg/L	Nickel, µg/L	Lead, µg/L		Sele- nium, S µg/L	Strontium, µg/L	Thal- lium, U μg/L	Van Iranium, diun μg/L μg/l	na- m, /L Zinc,	, μg/L
7.3	0	1(04	85.56	81.3	52.1	26.8	14.2	67.8	2.81	321	-	60	14	-	-	-	-	-	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 3.474	47 0.56	ð19
-	-		-	-	-	-	-	-	-	-	-	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).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 4.53	82 1.80	J59

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

Lat	o Car-	Bicar-	Total Al-	- , Sul-	Chlo- 0	Cal- Ma	agne-	So- P		Total Dis- solved	Sus-	Con- ductitiv-	Phos-	Ortho Phos- phorus	Nitrate +	Ammo-	Total Kjeldahl Nitro- gen,	Organic Carbon,			ĺ		c	Calcium by IC-	Cad-	Chro			Total	Methyl-	Potas- sium by		Manga-	Molyb-			Anti- S	ele-	,	Thal-	Vana-	_
pH su	bonate, mg/L	bonate mg/L	e, mg/L as CaC03	fate, mg/L	ride, ci mg/L m	ium, s ng/L n	sium, d mg/L n	lium, s mg/L r	sium, s mg/L	Solids, mg/L	Solids, mg/L	ity µS/cm	mg/L as P	mg/L as P	mg/L as N	mg/L as N	mg/L as N	mg/L as C	Silver, Al µg/L	luminum, A µg/L	rsenic, µg/L	Barium, I µg/L	Beryllium, µg/L	MPS, mg/L	Cad- mium, Col μg/L μg	palt, miun g/L μg/L	, Coppe μg/L		Mercury,	mercury, µg/L	ICPMS, mg/L	ICPMS, mg/L	nese, mg/L	denum, µg/L	Nickel, µg/L	Lead, µg/L	mony, n µg/L µ	ium, Sti ig/L	rontium, li µg/L l	lium, Ur µg/L	ranium, dium, μg/L μg/L	, Zinc, μg/l
7.3	3 0	119	97.54	81.1	80.8 3	33.4 1	16.8 7	74.6	2.89	346	-	685	-	-	-	-	-	3.6	0.0679 1	15.7793 2	2.1353	47.5048	-0.0024	31.1	0.0134 0.1	171 1.931	8 1.366	1 12.2627	0.00107	0.000027	2.91	19.6	58.6062	3.002	-0.04	0.0195	0.1065 0.	5548 42	24.5402 0.	.0019 9	0.4438 4.5769	9 0.6657
-	-	-	-	-	-	-	-	-	-	-	5.33	-	0.2	0.186	1.237	0.214	0.59	3.8	0.0699 1	40.7935 2	2.1561	49.5641	0.0089	31.2	0.0123 0.2	194 1.925	1 1.562	2 118.0864	0.00233	0.000033	2.89	19.5	66.9479	2.9521	-0.04	0.1134	0.1065 0.	5111 42	24.2805 0.	.0022 9	.4724 4.7453	3 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

La pH su	b Car , bona	r- Bica ate, bona /L mg/	Total A Ir- kalinity Ite, mg/L a L CaC03	Al- y, Sul as fate 3 mg/	l- Chlo- e, ride, /L mg/L	Cal- M cium, s mg/L	lagne- sium, mg/L	So- Po dium, s mg/L n	otas- ium, ng/L	Total Dis- solved Solids, mg/L		Con- ductitiv- ity µS/cm	Phos-	Ortho Phos- phorus mg/L as P	Nitrate + Nitrite, mg/L as N	Ammo- nia, 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, n μg/L	Chro- nium, Co µg/L	opper, µg/L	Iron, µg/L	Total Mercury, μg/L	Methyl- mercury, µg/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- lium, l µg/L	Van Jranium, diu µg/L µg	ına- um, g/L Zinc,	, μg/L
7.3	1 0	12	2 100.24	4 80.	.3 80.9	33.2	16.6	74.7 2	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 4.6	6171 0.67	797
-	-	-	-	-	-	-	-	-	-	-	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 4.6	6171 0.67	797

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 CaC03	I- /, Sul- s fate, 3 mg/L	Chlo- , ride, _ mg/L	Cal- cium, mg/L	Magne- sium, mg/L	So- dium, mg/L	Potas- sium, mg/L	Total Dis- solved Solids, mg/L	Total Sus- pended Solids, mg/L	Con- ductitiv- ity µS/cm	Phos- phorus,	phorus	Nitrate + Nitrite, mg/L as N	Ammo- nia,	gen,	Organic Carbon, mg/L as S C I	iilver, Alı µg/L	uminum, µg/L	Arsenic, µg/L	Barium, μg/L	Beryllium, μg/L	Calcium by IC- MPS, mg/L		Cobalt, μg/L	Chro- mium, µg/L	Copper, µg/L	lron, μg/L	Total Mercury, μg/L	Methyl- mercury, µg/L	Potas- sium by s ICPMS, mg/L	Magne- sium by CPMS, mg/L	Manga- nese, mg/L	Molyb- denum, μg/L	Nickel, µg/L			Sele- iium, S ug/L		Thal- lium, Ura µg/L J	Va anium, diu µg/L µg		nc, 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 1	3.2916	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 3	341.0329	0.0012 8.	.4858 3.5	5322 (.5404
-	-	-	-	-	-	-	-	-	-	-	39.1	-	0.38	0.146	1.414	0.089	0.05	3.6 0.	.0373 25	56.1286	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 3	339.2268	0.0027 8.	.4727 4.2	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

		Dises	Total Al		0.1.1.	6 -1		0-	Datas	Total Dis-						Ammo-								Calcium	0-1		Ohaa			Tatal	Mathud	Potas-	Magne-		Makak			Anti-	0.1		Thal-	Va		
DH.	bonate.	bonate	mg/L as	, Sul-	ride.	cium.	sium.	dium.	Potas- sium.	Solids.	Solids.	itv	mg/L as	mg/L as	mg/L as	nia, mg/L as	gen, mg/Las	mg/L as	Silver.	Aluminum.	Arsenic.	Barium.	Bervllium.	by IC- MPS.		Cobalt, n	Chro- nium. C	Copper.		Nercury.	Methyl- mercury.	ICPMS.	ICPMS.	manga- nese.	denum.	Nickel.						ranium, diur	um,	
su	mg/L	mg/L	CaC03	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	P	P	N	N	N	C	µg/L	µg/L	µg/L	µg/L	Beryllium, µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	Iron, µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L µg/		nc, 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	1.2396	9.9664	0.00092	0.000014	2.56	17.6	2.0165	3.0292	-0.04	0.0107	0.0805 ().7458	375.3798	0.0015 10	0.1937 3.25	.561 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	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	0.2683 3.94	482 1.	.4333