

Table A.2. Basic water quality for sampling locations in Oak Creek, adjacent springs and tributary washes Summer 2011.

strm_mi	Site_ID	Date	Descript	turbid	PO4-P	NO2-	NO3-N	NH4+	Air_T_C	H2O_T_C	DO_mg/L**	DO_%sat	Cond***	TDS	pH	pH_T_C
0.5	M13	7/5/2011	West Fork						32.0	26	n/a	n/a	326	228	8.73	26
49.0	M08	7/5/2011	Pine Flats						24.0	14.5	n/a	n/a	270	195	8.1	14.5
46.0	M09A	7/5/2011	1/4 mi ds of Forest Houses						28.5	21.1	n/a	n/a	303	212	8.66	21.1
37.4	M45	7/5/2011	Lomacasi						28.0	22.1	6.14	94.4	276	192	9.41	
22.7	M32	7/5/2011	Dry Creek Confluence						32.0	28.4	5.62	96.6	314	214	9.05	
17.0	M36	7/5/2011	Page Springs Bridge						25.0	22.5	6.17	94.9	374	266	8.41	22.8
8.9	M40	7/5/2011	Cornville Bridge						34.0	27.8	9.16	133.1	451	314	7.86	27.8
2.2	M41	7/5/2011	Cornville Estates						34.0	27	7.54	115.3	462	320	8.3	27
46.3	M09	7/11/2011	Hoel's Wash/Forest Houses						32.0	19.1	10	118	286	203	8.54	19.1
43.7	M44	7/11/2011	Slide Rock						29.0	20.7	8.8	119.1	298	210	8.3	20.7
40.5	M17	7/11/2011	Indian Gardens						25.5	18.8	9.65	124	272	186	8.33	18.8
40.0	M18	7/11/2011	Living Springs						23.0	17.7	9.2	120	269	188	8.06	17.7
34.0	M25	7/11/2011	Chavez Crossing Campground						27.0	22.3	n/a	n/a	n/a	n/a	8.37	22.3
17.2	M36	7/11/2011	Page Springs Bridge						28.1	24.4	n/a	n/a	n/a	n/a	7.98	24.4
12.6	M39A	7/11/2011	below Spring Creek Confluence						30.5	26.3	6.22	103.38	394	270	9.32	26.2
8.9	M40	7/11/2011	Cornville Bridge						24.0	23.9	6.23	98.7	458	319	8.22	23.9
0.4	M43	7/11/2011	above Verde Confluence						29.0	27.2	6.47	110	456	320	9.23	27.2
0.1	M39	7/11/2011	Spring Creek													
49.0	M08	7/14/2011	Pine Flats						24.0	15.3	9.25	109.2	266	185	7.97	15.3
37.4	M45	7/14/2011	Lomacasi						28.9	17.9	9.12	116.6	283	193	8.47	17.9
22.7	M32	7/14/2011	Dry Creek Confluence						30.0	22.3	8.01	111.7	308	212	7.96	22.3
2.2	M41	7/14/2011	Cornville Estates						27.5	21.3	7.21	99.8	453	324	7.84	21.3
40.5	M17	7/19/2011	Indian Gardens						25.4	18.9	n/a	n/a	279	196	8.3	18.9
22.7	M32	7/19/2011	Dry Creek Confluence						33.0	24.7	n/a	n/a	310	216	8.21	24.7
8.9	M40	7/19/2011	Cornville Bridge						23.5	23	n/a	n/a	468	325	7.7	23
0.5	M13	7/28/2011	West Fork						26.0	23.6	n/a	n/a	315	219	8.68	23.6
43.7	M44	7/28/2011	Slide Rock						30.0	18.7	n/a	n/a	297	205	8.52	18.7
40.0	M18	7/28/2011	Living Springs						25.0	18.2	n/a	n/a	276	186	8.22	18.2
34.0	M25	7/28/2011	Chavez Crossing Campground						29.0	21.1	n/a	n/a	282	189	8.54	21.1
17.2	M36	7/28/2011	Page Springs Bridge						30.1	25.6	n/a	n/a	408	293	7.92	25.6
12.6	M39A	7/28/2011	below Spring Creek Confluence						32.0	23.3	n/a	n/a	476	333	7.88	23.3
0.4	M43	7/28/2011	above Verde Confluence						29.0	24.6	n/a	n/a	467	324	8.16	24.6
0.1	M39	7/28/2011	Spring Creek						28.0	21.9	n/a	n/a	653	455	7.62	21.9
	M49	8/1/2011	Jordan Pump													
	M48	8/1/2011	Arroyo Roble													
	M47	8/1/2011	Tlaquepaque													
	M46	8/1/2011	Soldier's Wash													
2.6	M26	8/1/2011	Carroll Canyon 3, trail (@Shelby)													
0.6	M27	8/1/2011	Carroll Canyon 2, bridge													
0.0	M51	8/1/2011	Carroll Canyon 1, mouth													
8.9	M40	8/1/2011	Cornville Bridge													
0.5	M13	8/2/2011	West Fork	0.83	0.04	0.002	0.05	0.01	28.0	24.5	7.24	116.6	337	235	9.64	24.5
49.0	M08	8/2/2011	Pine Flats	0.24	0.04	0.002	0.02	0.01	23.0	15.3	11.73	160.2	290	202	8.56	14.7
46.3	M09	8/2/2011	Hoel's Wash/Forest Houses	0.70	0.04	0.002	0.03	0.01	24.5	18.3	7.46	105.9	311	221	8.05	18.3

strm_mi	Site_ID	Date	Descript	turbid	PO4-P	NO2-	NO3-N	NH4+	Air_T_C	H2O_T_C	DO_mg/L**	DO_%sat	Cond***	TDS	pH	pH_T_C
43.7	M44	8/2/2011	Slide Rock	0.79	0.04	0.002	0.03	0.01	21.0	17.5	7.77	104.7	317	219	8.01	17.5
40.5	M17	8/2/2011	Indian Gardens	0.78	0.07	0.002	0.02	0.01	29.0	18.7	n/a	n/a	293	206	6.52?	18.7
40.0	M18	8/2/2011	Living Springs	1.05	0.04	0.002	0.03	0.01	30.0	19.3	n/a	n/a	279	193	8.38	19.3
37.4	M45	8/2/2011	Lomacasi	1.33	0.05	0.002	0.03	0.01	33.0	19.5	n/a	n/a	278	195	8.11	19.5
34.0	M25	8/2/2011	Chavez Crossing Campground	43.43	0.18	0.012	0.14	0.03	31.0	20.2	n/a	n/a	291	203	7.95	20.2
27.9	M29	8/2/2011	below Red Rock State Park	1537.00	0.04	0.002	0.02	0.17	34.0	24.4	n/a	n/a	200	140	7.64	24.4
22.7	M32	8/2/2011	Dry Creek Confluence						35.0	25.5	n/a	n/a	210	147	7.64	25.5
17.2	M36	8/2/2011	Page Springs Bridge	788.70	0.04	0.002	0.02	0.06	34.0	28	n/a	n/a	306	213	7.91	28
2.2	M41	8/2/2011	Cornville Estates	31.50	0.10	0.006	0.09	0.03	33.0	24.2	n/a	n/a	487	315	8.1	24.2
	S41	8/10/2011	Spring 41, upstream of SRSP	8.43	0.06	0.003	0.06	0.03	27.0	14.6	n/a	n/a	373	264	6.5	14.6
	S52	8/10/2011	Spring 52, Indian Gardens	0.74	0.12	0.002	0.07	0.06	23.6	15.7	n/a	n/a	n/a	n/a	n/a	n/a
	S49	8/10/2011	Spring 49 near source	0.62	0.07	0.002	0.05	0.01	25.0	13.3	n/a	n/a	255	188	7.4	13.3
	S48	8/10/2011	Spring 48, Indian Gardens	0.51	0.05	0.002	0.06	0.01	24.0	14.9	n/a	n/a	131	186	7.1	14.9
	S45	8/10/2011	Spring 45 waterfall	0.20	0.04	0.002	0.04	0.01	23.8	13.1	n/a	n/a	129	175	7.54	13.1
	S42	8/10/2011	Spring 42, Munds Creek	0.68	0.20	0.002	0.03	0.02	25.2	15.2	n/a	n/a	246	178	7.63	15.2
	S2	8/10/2011	Spring 2, South of IG bridge	0.27	0.04	0.002	0.10	0.03	28.0	13.8	n/a	n/a	259	191	7.95	13.8
	S16	8/10/2011	Spring 16, Zane Grey's cabin	2.58	0.04	0.002	0.04	0.04	29.0	12.7	n/a	n/a	432	301	7.34	12.7
	S16	8/24/2011	Spring 16, Zane Grey's cabin	2.09	0.10	0.002	0.02	0.03	23.8	13.2	n/a	n/a	422	294	8.06	13.2
	S41	8/24/2011	Spring 41, upstream of SRSP	2.81	0.07	0.002	0.06	0.02	23.0	17.6	n/a	n/a	346	247	7.41	17.6
	S52	8/24/2011	Spring 52, Indian Gardens	0.31	0.05	0.002	0.02	0.01	28.0	18.6	n/a	n/a	477	331	7.37	19
	S49	8/24/2011	Spring 49 near source	0.67	0.06	0.002	0.02	0.01	30.0	16	n/a	n/a	252	177	7.72	16.1
	S100	8/24/2011	Page Springs Source	0.21	0.04	0.002	0.02	0.02		20.3	n/a	n/a	333	228	7.37	20.3
	F3	8/24/2011	Spring Creek above WWT pond	n/a	n/a	n/a	n/a	n/a	33.0	22.4	n/a	n/a	525	362	8.45	22.4
	M39	8/24/2011	Spring Creek	10.45	0.14	0.006	0.09	0.05	33.5	23.3	n/a	n/a	626	429	7.77	23.3
	S98	8/24/2011	Bubbling Ponds Spring	0.24	0.04	0.002	0.06	0.02	33.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	F4	8/24/2011	Bubbling Ponds outfall	5.69	0.10	0.006	0.11	0.05	33.0	26.3	n/a	n/a	435	303	7.87	26.3
	S35	9/1/2011	Spring 35, West Fork	0.50	0.04	n/a	0.02	0.01		n/a	n/a	n/a	n/a	n/a	n/a	n/a
	S36	9/1/2011	Spring 36, West Fork	0.46	0.04	n/a	0.02	0.02		15.7	n/a	n/a	330	227	8.01	15.7
	S39	9/1/2011	Walnut Spring, West Fork	1.76	0.07	n/a	0.02	0.02	28.0	14.5	n/a	n/a	305	208	7.88	14.5
	S1	9/1/2011	Spring 1, Indian Gardens	2.97	0.06	n/a	0.02	0.02	29.0	15.3	n/a	n/a	298	206	6.94	15.3
	S3	9/1/2011	Spring 3, Indian Gardens	1.06	0.05	n/a	0.02	0.01	29.0	15.8	n/a	n/a	287	196	7.48	15.8
	F5	9/1/2011	Creek from Spring 59, Indian Gardens	1.01	0.05	n/a	0.02	0.02	28.5	16.7	n/a	n/a	260	182	7.81	16.7
	S58	9/1/2011	Spring 58 Pool, Indian Gardens	1.88	0.05	n/a	0.02	0.01	29.0	16.4	n/a	n/a	294	208	7.05	16.4
	S67	9/1/2011	Spring 67, Indian Gardens	59.30	0.09	n/a	0.03	0.01	29.0	16.7	n/a	n/a	260	183	7.38	16.7
	S75	9/1/2011	Spring 75 Pool, Indian Gardens	21.37	0.05	n/a	0.02	0.01	28.5	15.2	n/a	n/a	268	185	7.11	15.2
	S77	9/1/2011	Spring 77 Pool, Indian Gardens	0.84	0.04	n/a	0.02	0.01		14.9	n/a	n/a	274	182	6.33	14.9
	S78	9/1/2011	Spring 78, Indian Gardens	0.18	0.05	n/a	0.02	0.01		15.4	n/a	n/a	266	188	7.65	15.4
	M49	9/6/2011	Jordan Pump	597.00	>1.70	n/a	n/a	n/a								
	M48	9/6/2011	Arroyo Roble	51.60	0.84	n/a	n/a	n/a								
	M46	9/6/2011	Soldier's Wash	345.00	>1.70	n/a	n/a	n/a								
	F1	9/6/2011	Chavez Ranch Day Use Area	34.30	0.27	n/a	n/a	n/a								
	M26	9/6/2011	Carroll Canyon 3, trail (@Shelby)	22.30	0.35	n/a	n/a	n/a								
	M27	9/6/2011	Carroll Canyon 2, bridge	358.00	1.55	n/a	n/a	n/a								
37.4	M45	9/7/2011	Lomacasi						20.9	26.6	n/a	n/a	271	186	8.49	20.9
34.0	M25	9/7/2011	Chavez Crossing Campground						35.1	23.7	n/a	n/a	283	198	8.41	23.7
27.9	M29	9/7/2011	below Red Rock State Park						31.9	24.8	n/a	n/a	293	201	8.19	25.8

strm_mi	Site_ID	Date	Descript	turbid	PO4-P	NO2-	NO3-N	NH4+	Air_T_C	H2O_T_C	DO_mg/L**	DO_%sat	Cond***	TDS	pH	pH_T_C
17.2	M36	9/7/2011	Page Springs Bridge						n/a	24.3	n/a	n/a	424	277	8.06	24.3
8.9	M40	9/7/2011	Cornville Bridge						n/a	24.9	n/a	n/a	455	314	8.16	24.6
	M49	9/11/2011	Jordan Pump													
	M48	9/11/2011	Arroyo Roble													
	M46	9/11/2011	Soldier's Wash													
	M26	9/11/2011	Carroll Canyon 3, trail (@Shelby)													
	M27	9/11/2011	Carroll Canyon 2, bridge													
49.0	M08	9/11/2011	Pine Flats	0.30	0.07	0.002	0.02	0.01								
40.5	M17	9/11/2011	Indian Gardens	5.06	0.08	0.004	0.02	0.03								
37.4	M45	9/11/2011	Lomacasi	7.69	0.11	0.004	0.02	0.02								
34.0	M25	9/11/2011	Chavez Crossing Campground	40.07	0.04	0.002	0.02	0.02								
27.9	M29	9/11/2011	below Red Rock State Park	221.00	0.11	0.022	0.18	0.01								
22.7	M32	9/11/2011	Dry Creek Confluence	38.70	0.04	0.002	0.02	0.01								
17.2	M36	9/11/2011	Page Springs Bridge	10.80	0.09	0.006	0.04	0.01								
2.2	M41	9/11/2011	Cornville Estates	14.83	0.15	0.008	0.12	0.04								
	F4	9/11/2011	Bubbling Ponds outfall													
49.0	M08	9/15/2011	Pine Flats													
40.5	M17	9/15/2011	Indian Gardens													
37.4	M45	9/15/2011	Lomacasi													
34.0	M25	9/15/2011	Chavez Crossing Campground													
27.9	M29	9/15/2011	below Red Rock State Park													
22.7	M32	9/15/2011	Dry Creek Confluence													
17.2	M36	9/15/2011	Page Springs Bridge													
8.9	M40	9/15/2011	Cornville Bridge													
	S52	9/16/2011	Spring 52, Indian Gardens						22.0	16.1	n/a	n/a	254	177	7.39	16.1
	S49A	9/16/2011	Spring 49 source						24.0	15.8	n/a	n/a	260	179	7.69	15.8
	F6	9/16/2011	Spring ditch, AGFD						24.0	19.9	n/a	n/a	536	368	7.61	19.9
	S107	9/16/2011	Spring ditch						23.0	19.5	n/a	n/a	495	343	7.84	20.4
	S98	9/16/2011	Bubbling Ponds Spring						25.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	F4	9/16/2011	Bubbling Ponds outfall						26.0	21.0	n/a	n/a	452	308	7.8	21
	S100	9/16/2011	Page Springs source						23.0	20.1	n/a	n/a	349	240	7.42	20.1
	F3	9/16/2011	Spring Creek above WWT pond						22.5	19.1	n/a	n/a	585	406	8.27	19.1
	M39	9/16/2011	Spring Creek						20.0	18.9	n/a	n/a	677	470	7.8	18.9
	S9	9/20/2011	Pine Flat spring @ road						n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	S41	9/20/2011	Spring 41, upstream of SRSP	5.46	0.04	0.002	0.02	0.04	21.0	16.6	n/a	n/a	326	234	7.76	16.6
	S49A	9/20/2011	Spring 49 source	0.25	0.05	0.002	0.02	0.01	22.0	15.6	n/a	n/a	256	176	7.62	15.6
	S49	9/20/2011	Spring 49 near source	0.46	0.05	0.002	0.02	0.03	23.0	15.5	n/a	n/a	256	179	7.76	15.5
	F7	9/20/2011	Lower Indian Gardens spring, upper end						24.0	16.5	n/a	n/a	239	172	7.99	16.5
	S71	9/20/2011	Lower Indian Gardens spring, midway	5.12	0.05	0.003	0.02	0.05	28.5	17.1	n/a	n/a	253	175	8	17.1
	S70	9/20/2011	Lower Indian Gardens spring, near fish runs	0.69	0.08	0.010	0.08	0.15	27.0	17.5	n/a	n/a	248	159	7.91	17.5
	F6	9/20/2011	Spring ditch, AGFD	1.37	0.10	0.002	0.03	0.03	28.0	21.1	n/a	n/a	518	361	7.73	21.1
	S107	9/20/2011	Spring ditch	1.34	0.04	0.003	0.03	0.05	25.5	20.7	n/a	n/a	485	343	7.95	20.7
	S109	9/21/2011	Lower Indian Gardens spring, down channel	0.61	0.07	0.009	0.07	0.07	n/a	17.1	n/a	n/a	170	245	8.22	17.1
	S45A	9/22/2011	Spring 45 source	0.22	0.04	0.002	0.07	0.01								
	S45B	9/22/2011	Spring 45 water fountain on side of house													
	S71	9/22/2011	Lower Indian Gardens spring, midway	2.15	0.06	0.002	0.05	0.01	n/a	17.4	n/a	n/a	237	172	8.03	17.4

strm_mi	Site_ID	Date	Descript	turbid	PO4-P	NO2-	NO3-N	NH4+	Air_T_C	H2O_T_C	DO_mg/L**	DO_%sat	Cond***	TDS	pH	pH_T_C
	S70	9/22/2011	Lower Indian Gardens spring, near fish runs	1.17	0.05	0.008	0.13	0.08	n/a	17.4	n/a	n/a	253	175	7.83	17.4
	S109	9/22/2011	Lower Indian Gardens spring, down channel	0.58	0.08	0.009	0.15	0.08	24.7	17.2	n/a	n/a	244	164	8	17.2

gray highlight denotes samples from tributary streams

green highlight denotes samples from springs

no highlighting denotes Oak Creek samples

bold numbers mean "greater than"

italic numbers mean "less than"

red font means "out of hold time" or other attention

** The instrument used for measuring dissolved oxygen and temperature was the Extik DO600. Measurements of DO were discontinued after no noticeable trend was seen and two out three meters ceased to function properly.

*** The instrument used for measuring pH, conductivity, total dissolved solids and temperature was the Extik EC500.