APPENDIX B - HYDROMODIFICATION SITE DATA

List of Tables in Appendix B

Table B.1 – Location and watershed metrics

Unique ID	Sub-site Description	County	Latitude	Longitude	Total Drainage Area	Watershed Area-Average Annual Precipation USGS (1900 - 1960)	Watershed Area-Average Annual Precipitation NRCS (1961 - 1990)	8-digit HUC = 18100200	Total Stream Length	%Channelized or Artificial	Drainage Density (stream length/ drainage area)	Strahler Stream Order at Site	NOAA 2-yr, 24-hr Volume
					Drn_Area_km	*Prcp_USGS_mm*	*Prcp_NRCS_mm*	*HUCdry*	*Stream_km*	*frcn_Chnlzd*	*Drain_Density*	*Order*	*Prcp2y24h_V*
			(decimal °)	(decimal °)	(km^2)	(mm)	(mm)	(binary)	(km)	(fraction)	(km/km^2)	(Strahler)	(mm)
Santiago_A	DS-braided	OR	33.7153	-117.6468	35.09	594	524	0	42.92	0%	1.223	3.0	93
Santiago_B	US-pool-riffle	OR	33.7127	-117.6447	33.67	596	526	0	42.39	0%	1.259	3.0	93
Hasley_1_A	DS-incised, CEM2	LA	34.4672	-118.6648	3.98	368	432	0	4.87	0%	1.224	2.0	81
Hasley_1_B	US-wide, CEM3	LA	34.4672	-118.6655	3.98	369	432	0	4.81	0%	1.208	2.0	81
Hasley_1_TRIB	TRIB-stable	LA	34.4668	-118.6653	0.42	356	432	0	0.07	0%	0.169	1.0	81
Hasley_2_A	DS-braided	LA	34.4631	-118.6588	11.69	383	432	0	20.89	0%	1.787	3.0	81
Hasley_2_B	US-incised	LA	34.4647	-118.6606	6.41	379	432	0	9.94	0%	1.551	3.0	81
Hasley_2_TRIB	TRIB-braided	LA	34.4641	-118.6594	5.05	391	432	0	10.63	0%	2.105	2.0	81
Hicks_A_08	stable @ road	OR	33.7206	-117.7304	3.87	422	372	0	5.73	0%	1.480	2.0	69
Hicks_B_08	incised	OR	33.7213	-117.7296	3.87	422	372	0	5.72	0%	1.478	2.0	69
Hicks_C_08	wide	OR	33.7216	-117.7296	3.87	422	372	0	5.71	0%	1.476	2.0	69
Hicks_D_08	wide_LVL	OR	33.7223	-117.7291	3.73	425	374	0	5.49	0%	1.473	2.0	69
Hicks_D_07	wide_SRVY	OR	33.7223	-117.7291	3.73	425	374	0	5.49	0%	1.473	2.0	69
Hicks_E_08	wide_LVL	OR	33.7237	-117.7276	3.58	429	376	0	5.27	0%	1.472	2.0	69
Hicks_E_07	wide_SRVY	OR	33.7237	-117.7276	3.58	429	376	0	5.27	0%	1.472	2.0	69
Hicks_F_08	incise_LVL	OR	33.7246	-117.7270	3.51	429	376	0	5.12	0%	1.458	2.0	69
Hicks_F_07	incise_SRVY	OR	33.7246	-117.7270	3.51	429	376	0	5.12	0%	1.458	2.0	69
Agua_Hedi_A	DS, CEM 2, almost beginning to widen	SD	33.1543	-117.2412	27.12	341	330	0	32.08	3%	1.183	3.0	62
Agua_Hedi_B	mid, CEM 3	SD	33.1540	-117.2397	26.97	341	330	0	31.93	3%	1.184	3.0	62
Agua_Hedi_C	US, CEM 2-3	SD	33.1547	-117.2377	26.84	341	330	0	31.72	3%	1.182	3.0	62
Dry_A	DS, CEM 2-3	VT	34.2928	-118.7468	3.16	384	432	0	5.60	0%	1.775	2.0	87
Dry_B	mid, CEM 3-4?	VT	34.2938	-118.7474	3.09	384	432	0	5.48	0%	1.775	2.0	87
Dry_C	US, CEM 3	VT	34.2946	-118.7479	2.98	384	432	0	5.37	0%	1.802	2.0	87
Hovnanian_A	DS-stable	LA	34.2909	-118.5343	3.76	560	509	0	4.09	1%	1.089	1.0	100

Unique ID	Sub-site Description	County	Latitude	Longitude	Total Drainage Area	Watershed Area-Average Annual Precipation USGS (1900 - 1960)	Watershed Area-Average Annual Precipitation NRCS (1961 - 1990)	8-digit HUC = 18100200	Total Stream Length	%Channelized or Artificial	Drainage Density (stream length/ drainage area)	Strahler Stream Order at Site	NOAA 2-yr, 24-hr Volume
					Dm_Area_km	*Prcp_USGS_mm*	*Prcp_NRCS_mm*	*HUCdry*	*Stream_km*	*frcn_Chnlzd*	*Drain_Density*	*Order*	*Prcp2j24h_V*
			(decimal °)	(decimal °)	(km^2)	(mm)	(mm)	(binary)	(km)	(fraction)	(km/km^2)	(Strahler)	(mm)
Hovnanian_B	US-stable	LA	34.2919	-118.5348	3.74	560	509	0	3.97	1%	1.062	1.0	100
Santimeta_A	DS, CEM 3	SB	34.0073	-117.1197	1.45	356	381	0	0.77	0%	0.532	0.0	64
Santimeta_B	mid, CEM 3, 4-B? (starting)	SB	34.0085	-117.1197	1.45	356	381	0	0.62	0%	0.431	0.0	64
Santimeta_C	US, CEM 3	SB	34.0100	-117.1199	1.45	356	381	0	0.42	0%	0.290	0.0	64
Ltl_Cedar_A	DS, forced single	SD	32.6437	-116.8708	7.21	413	392	0	14.67	0%	2.034	3.0	60
Ltl_Cedar_B	US, braided	SD	32.6431	-116.8692	7.21	413	392	0	14.67	0%	2.034	3.0	60
Proctor_A	DS	SD	32.6945	-116.9096	11.23	345	381	0	18.39	2%	1.638	3.0	56
Proctor_B	US	SD	32.6954	-116.9092	5.81	346	381	0	8.47	0%	1.457	3.0	56
Proctor_TRIB	TRIB	SD	32.6946	-116.9089	3.48	351	381	0	5.56	7%	1.599	2.0	55
Perris_1_A	DS, CEM 2, responded?	RS	33.8744	-117.1714	0.45	356	330	0	0.52	0%	1.158	0.0	55
Perris_1_B	mid, CEM2, 3?, responding	RS	33.8749	-117.1719	0.45	356	330	0	0.44	0%	0.977	0.0	55
Perris_1_C	US, CEM2, US of conc. Outfall, responded?	RS	33.8757	-117.1720	0.43	356	330	0	0.33	0%	0.769	0.0	55
Perris_2_A	DS, CEM1	RS	33.8760	-117.1696	0.14	356	330	0	0.24	0%	1.656	0.0	55
Perris_2_B	US, CEM1	RS	33.8776	-117.1707	0.11	356	330	0	0.03	0%	0.283	0.0	55
Perris_3_A	DS, braided, stable	RS	33.8775	-117.1685	1.46	356	330	0	1.64	0%	1.123	1.0	55
Perris_3_B	US, braided, stable	RS	33.8799	-117.1695	1.39	356	330	0	1.33	0%	0.956	1.0	55
AltPerris_A	DS-braided	RS	33.8752	-117.1478	1.64	356	330	0	1.36	0%	0.826	1.0	55
AltPerris_B	mid-reach single-thread	RS	33.8759	-117.1473	1.25	356	330	0	1.26	0%	1.006	1.0	55
AltPerris_C	US-possibly slight incision	RS	33.8767	-117.1469	1.24	356	330	0	1.16	0%	0.933	1.0	55
Dulzura_A	DS-incised or stable?	SD	32.6683	-116.8267	70.24	490	413	0	108.83	2%	1.550	4.0	65
Dulzura_B	US-incised or stable?	SD	32.6685	-116.8254	70.24	490	413	0	108.83	2%	1.550	4.0	65
Acton_A	DS braided	LA	34.4923	-118.1662	2.02	229	279	0	1.10	0%	0.544	1.0	51
Acton_B	transition	LA	34.4948	-118.1660	1.95	229	279	0	0.78	0%	0.401	1.0	51
Acton_C	widening	LA	34.4978	-118.1662	1.87	229	279	0	0.46	0%	0.248	1.0	51
Acton_D	incised/wide	LA	34.4983	-118.1659	1.42	229	279	0	0.37	0%	0.258	1.0	51

Unique ID	Sub-site Description	County	Latitude	Longitude	Total Drainage Area	Watershed Area-Average Annual Precipation USGS (1900 - 1960)	Watershed Area-Average Annual Precipitation NRCS (1961 - 1990)	8-digit HUC = 18100200	Total Stream Length	%Channelized or Artificial	Drainage Density (stream length/ drainage area)	Strahler Stream Order at Site	NOAA 2-yr, 24-hr Volume
					Dm_Area_km	*Prcp_USGS_mm*	*Prcp_NRCS_mm*	*HUCdry*	*Stream_km*	*frcn_Chnlzd*	*Drain_Density*	*Order*	*Prcp2j24h_V*
			(decimal °)	(decimal °)	(km^2)	(mm)	(mm)	(binary)	(km)	(fraction)	(km/km^2)	(Strahler)	(mm)
Acton_E	US incised	LA	34.4984	-118.1655	1.42	229	279	0	0.32	0%	0.223	1.0	51
Acton_F	US starting to incise	LA	34.4985	-118.1652	1.42	229	279	0	0.29	0%	0.204	1.0	51
Acton_G	US 'stable'	LA	34.4985	-118.1651	1.42	229	279	0	0.28	0%	0.200	1.0	51
Borrego_A	DS constrct (I-C)	OR	33.6707	-117.6934	7.06	440	368	0	11.05	0%	1.565	2.0	73
Borrego_B	braided (IV-B)	OR	33.6725	-117.6906	6.99	440	368	0	10.74	0%	1.538	2.0	73
Borrego_C	widening	OR	33.6737	-117.6873	6.84	443	369	0	10.19	0%	1.490	2.0	73
Borrego_D	incised/wide	OR	33.6781	-117.6838	5.76	454	376	0	8.09	0%	1.405	2.0	73
Borrego_E	US incised	OR	33.6794	-117.6819	5.68	454	376	0	7.86	0%	1.383	2.0	73
Topanga_A	DS incised/braided	LA	34.0474	-118.5798	49.80	561	638	0	83.61	0%	1.679	4.0	97
Topanga_B	braided	LA	34.0482	-118.5807	49.80	559	632	0	83.61	0%	1.679	4.0	97
Topanga_C	US steppool	LA	34.0504	-118.5815	48.92	559	632	0	81.11	0%	1.658	4.0	97
Challengr_A	DS-stable	VT	34.2400	-118.7754	7.43	457	487	0	12.37	0%	1.666	2.0	80
Challengr_B	mid-incised	VT	34.2397	-118.7727	7.32	457	489	0	12.09	0%	1.651	2.0	80
Challengr_C	US-stable	VT	34.2388	-118.7717	7.06	457	489	0	11.93	0%	1.691	2.0	80
Mcgonigle_A	vegetated	SD	32.9698	-117.1478	5.12	330	330	0	7.40	0%	1.445	2.0	48
Sanjuan_A	DS-braided	OR	33.5809	-117.5267	105.24	533	402	0	122.29	0%	1.162	4.0	80
Sanjuan_B	US-steppool	OR	33.5828	-117.5236	103.67	533	402	0	119.17	0%	1.149	4.0	80
Pigeon_A	DS-incised/braided	RS	33.9741	-117.2631	6.47	356	381	0	8.24	1%	1.274	2.0	61
Pigeon_B	mid-braided	RS	33.9742	-117.2632	6.47	356	381	0	8.24	1%	1.274	2.0	61
Pigeon_C	US-pool riffle	RS	33.9822	-117.2699	3.53	356	381	0	4.63	0%	1.312	2.0	60
Stewart_A	cascade	VT	34.4607	-119.2511	4.73	665	533	0	7.88	0%	1.666	2.0	122
Santiagbd_A	DS-incised	OR	33.7096	-117.6183	17.84	607	557	0	23.90	0%	1.339	3.0	95
Santiagbd_B	US-planebed	OR	33.7092	-117.6175	17.84	607	557	0	23.90	0%	1.339	3.0	95
Santiagnl_A	DS-planebed	OR	33.7084	-117.6150	17.07	610	562	0	23.55	0%	1.380	3.0	95
Santiagnl_B	US steppool	OR	33.7092	-117.6142	16.99	610	562	0	23.55	0%	1.386	3.0	95

Unique ID	Sub-site Description	County	Latitude	Longitude	Total Drainage Area	Watershed Area-Average Annual Precipation USGS (1900 - 1960)	Watershed Area-Average Annual Precipitation NRCS (1961 - 1990)	8-digit HUC = 18100200	Total Stream Length	%Channelized or Artificial	Drainage Density (stream length/ drainage area)	Strahler Stream Order at Site	NOAA 2-yr, 24-hr Volume
					Dm_Area_km	*Prcp_USGS_mm*	*Prcp_NRCS_mm*	*HUCdry*	*Stream_km*	*frcn_Chnlzd*	*Drain_Density*	*Order*	*Prcp2/24h_V*
			(decimal °)	(decimal °)	(km^2)	(mm)	(mm)	(binary)	(km)	(fraction)	(km/km^2)	(Strahler)	(mm)
Silverado_A	DS-steppool	OR	33.7458	-117.6018	21.75	686	510	0	27.07	1%	1.245	3.0	96
Silverado_B	US-steppool	OR	33.7458	-117.6009	21.75	686	510	0	27.07	1%	1.245	3.0	96
Escondido_A	DS-steppool	SD	33.0609	-117.1814	156.73	443	355	0	142.81	14%	0.911	4.0	67
Escondido_B	US-braided-veg	SD	33.0604	-117.1803	156.73	443	355	0	142.81	14%	0.911	4.0	67
Sanantoni_A	DS-braided/incised	VT	34.4496	-119.2247	31.14	711	576	0	56.66	1%	1.820	3.0	134
Sanantoni_B	US-braided, about to incise	VT	34.4496	-119.2247	31.14	711	576	0	56.66	1%	1.820	3.0	134
Alt_RC2_A	incised	RC	33.9292	-117.1173	0.16	356	361	0	0.57	0%	3.654	0.0	62
Yucaipa_A	DS-incised/widening	SB	34.0141	-117.0061	16.70	566	602	0	22.70	0%	1.359	3.0	100
Yucaipa_B	US-braided/incised	SB	34.0142	-117.0051	11.48	565	603	0	17.56	0%	1.529	3.0	101
Oakglenn_A	steppool	SB	34.0506	-116.9529	1.77	744	763	0	2.50	0%	1.413	1.0	119

General abbreviations and symbol definitions (excluding units of measure):

conc.	concrete
constrct	constructed
CEM	Channel Evolution Model
DS	downstream
HUC	Hydrologic Unit Codes
ID	identification
LA	Los Angeles
mid	middle
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service

OR	Orange
RC	Riverside County
RS	Riverside
SB	San Bernardino
SD	San Diego
TRIB	Tributary
US	upstream
USDA	U.S. Department of Agriculture
VT	Ventura

Table B.2 – USGS (1977) rural flows and Hawley-Bledsoe rural and urban flows

	USGS 1977 Regional Equations (rural flows)						Averaged Hawley-Bledsoe Flows (average of middle three flows, dropping the low and high) for Rural (_rl) and Developed (_urbn) Settings													
	Q2_USGS_m3s	*Q5_USGS_m3s*	*Q10_USGS_m3s*	*Q25_USGS_m3s*	*Q50_USGS_m3s*	*Q100_USGS_m3s*	*Q1.5_HB_rl*	*Q1.5_HB_urbn*	*Q2_HB_rl*	*Q2_HB_urbn*	*Q5_HB_rl*	*Q5_HB_urbn*	*Q10_HB_rl*	*Q10_HB_urbn*	*Q25_HB_rl*	*Q25_HB_urbn*	*Q50_HB_rl*	*Q50_HB_urbn*	*Q100_HB_rl*	*Q100_HB_urbn*
Unique ID	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)
Santiago_A	4.27	17.35	34.77	77.28	122.70	174.38	2.55	2.55	5.27	5.27	23.72	23.72	53.82	53.82	97.91	97.91	134.29	134.29	172.51	172.51
Santiago_B	4.18	16.91	33.89	75.27	119.48	169.74	2.53	2.53	5.20	5.20	23.29	23.29	53.03	53.03	96.80	96.80	132.94	132.94	170.74	170.74
Hasley_1_A	0.41	1.44	2.69	5.57	8.49	11.70	0.62	0.62	1.24	1.24	4.68	4.68	8.70	8.70	13.68	13.68	17.60	17.60	21.61	21.61
Hasley_1_B	0.41	1.45	2.71	5.61	8.55	11.77	0.62	0.62	1.24	1.24	4.65	4.65	8.59	8.59	13.63	13.63	17.54	17.54	21.54	21.54
Hasley_1_TRIB	0.08	0.24	0.43	0.85	1.26	1.70	0.06	0.06	0.12	0.12	0.29	0.30	0.49	0.72	0.74	1.25	0.95	1.68	1.16	2.13
Hasley_2_A	0.95	3.55	6.78	14.35	22.15	30.86	1.28	1.36	2.67	2.77	12.58	12.71	24.30	24.30	40.05	40.05	52.62	52.62	65.56	65.56
Hasley_2_B	0.61	2.19	4.13	8.63	13.23	18.32	0.87	0.95	1.77	1.88	7.51	7.64	14.06	14.06	22.62	22.62	29.40	29.40	36.37	36.37
Hasley_2_TRIB	0.54	1.92	3.61	7.53	11.53	15.94	0.78	0.78	1.63	1.63	7.07	7.07	13.24	13.24	21.46	21.46	27.97	27.97	34.67	34.67
Hicks_A_08	0.50	1.79	3.36	7.00	10.72	14.80	0.63	0.75	1.25	1.41	4.84	5.01	9.37	9.37	15.34	15.34	20.09	20.09	24.97	24.97
Hicks_B_08	0.50	1.79	3.36	7.00	10.72	14.80	0.64	0.76	1.27	1.43	4.87	5.04	9.42	9.42	15.40	15.40	20.16	20.16	25.06	25.06
Hicks_C_08	0.50	1.79	3.36	7.00	10.72	14.80	0.64	0.76	1.28	1.43	4.87	5.04	9.43	9.43	15.41	15.41	20.17	20.17	25.07	25.07
Hicks_D_08	0.49	1.75	3.29	6.86	10.51	14.51	0.62	0.74	1.23	1.39	4.68	4.85	9.08	9.08	14.86	14.86	19.46	19.46	24.18	24.18
Hicks_D_07	0.49	1.75	3.29	6.86	10.51	14.51	0.62	0.74	1.23	1.39	4.68	4.85	9.08	9.08	14.86	14.86	19.46	19.46	24.18	24.18
Hicks_E_08	0.49	1.73	3.24	6.76	10.35	14.28	0.60	0.72	1.20	1.35	4.50	4.67	8.75	8.75	14.34	14.34	18.79	18.79	23.36	23.36
Hicks_E_07	0.49	1.73	3.24	6.76	10.35	14.28	0.60	0.72	1.20	1.35	4.50	4.67	8.75	8.75	14.34	14.34	18.79	18.79	23.36	23.36
Hicks_F_08	0.48	1.70	3.20	6.65	10.19	14.05	0.60	0.72	1.19	1.35	4.44	4.60	8.61	8.61	14.10	14.10	18.46	18.46	22.94	22.94
Hicks_F_07	0.48	1.70	3.20	6.65	10.19	14.05	0.60	0.72	1.19	1.35	4.44	4.60	8.61	8.61	14.10	14.10	18.46	18.46	22.94	22.94
Agua_Hedi_A	1.44	5.56	10.73	22.94	35.53	49.81	1.31	15.73	3.21	19.09	18.57	35.73	36.49	54.80	57.90	65.41	74.81	74.81	92.15	92.15
Agua_Hedi_B	1.44	5.54	10.68	22.84	35.37	49.58	1.31	15.66	3.20	19.03	18.52	35.60	36.31	54.34	57.59	64.97	74.40	74.40	91.64	91.64
Agua_Hedi_C	1.43	5.52	10.64	22.75	35.24	49.39	1.30	15.61	3.19	18.98	18.46	35.47	36.13	53.90	57.29	64.55	74.00	74.00	91.13	91.13
Dry_A	0.37	1.30	2.41	4.98	7.58	10.42	0.74	0.74	1.41	1.41	5.28	5.28	9.27	9.27	14.41	14.41	18.46	18.46	22.61	22.61
Dry_B	0.37	1.28	2.38	4.90	7.46	10.26	0.74	0.74	1.40	1.40	5.21	5.21	9.10	9.10	14.12	14.12	18.08	18.08	22.14	22.14
Dry_C	0.36	1.25	2.31	4.77	7.26	9.98	0.73	0.73	1.39	1.39	5.11	5.11	8.92	8.92	13.84	13.84	17.73	17.73	21.71	21.71
Hovnanian_A	0.78	2.81	5.37	11.37	17.61	24.44	0.84	1.06	1.49	1.76	4.68	4.96	8.77	8.77	14.64	14.64	19.41	19.41	24.35	24.35
Hovnanian_B	0.77	2.80	5.34	11.32	17.53	24.33	0.84	1.07	1.50	1.77	4.62	4.93	8.67	8.67	14.49	14.49	19.20	19.20	24.07	24.07

	USGS 1977 Regional Equations (rural flows)						Averaged Hawley-Bledsoe Flows (average of middle three flows, dropping the low and high) for Rural (_rl) and Developed (_urbn) Settings													
	Q2_USGS_m3s	*Q5_USGS_m3s*	*Q10_USGS_m3s*	*Q25_USGS_m3s*	*Q50_USGS_m3s*	*Q100_USGS_m3s*	*Q1.5_HB_rl*	*Q1.5_HB_urbn*	*Q2_HB_rl*	*Q2_HB_urbn*	*Q5_HB_rl*	*Q5_HB_urbn*	*Q10_HB_rl*	*Q10_HB_urbn*	*Q25_HB_rl*	*Q25_HB_urbn*	*Q50_HB_rl*	*Q50_HB_urbn*	*Q100_HB_rl*	*Q100_HB_urbn*
Unique ID	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)
Santimeta_A	0.19	0.63	1.14	2.31	3.48	4.74	0.16	0.35	0.33	0.58	1.01	1.28	1.87	2.29	3.03	3.78	3.96	4.96	4.92	6.17
Santimeta_B	0.19	0.63	1.14	2.31	3.48	4.74	0.16	0.35	0.33	0.59	0.96	1.22	1.77	2.29	2.84	3.78	3.70	4.96	4.59	6.17
Santimeta_C	0.19	0.63	1.14	2.31	3.48	4.74	0.15	0.34	0.33	0.57	0.85	1.09	1.56	2.29	2.47	3.78	3.20	4.96	3.96	6.17
Ltl_Cedar_A	0.76	2.77	5.27	11.09	17.09	23.73	0.82	0.82	1.65	1.65	6.54	6.54	15.64	15.64	30.54	30.54	42.03	42.03	54.02	54.02
Ltl_Cedar_B	0.76	2.77	5.27	11.09	17.09	23.73	0.83	0.83	1.68	1.68	6.59	6.59	15.78	15.78	30.67	30.67	42.18	42.18	54.21	54.21
Proctor_A	0.78	2.88	5.45	11.47	17.62	24.48	0.38	0.49	0.99	1.13	6.54	6.75	13.20	13.20	21.71	21.71	28.49	28.49	35.47	35.47
Proctor_B	0.49	1.74	3.26	6.76	10.31	14.24	0.25	0.45	0.62	0.91	3.71	4.04	7.23	7.23	11.50	11.50	14.86	14.86	18.63	18.63
Proctor_TRIB	0.35	1.21	2.24	4.60	6.98	9.59	0.26	0.26	0.58	0.58	2.56	2.56	5.71	5.71	10.14	10.14	13.47	13.47	16.90	16.90
Perris_1_A	0.08	0.25	0.45	0.89	1.33	1.79	0.08	0.11	0.16	0.20	0.49	0.54	0.90	0.90	1.40	1.40	1.79	1.84	2.19	2.30
Perris_1_B	0.08	0.25	0.45	0.89	1.33	1.79	0.08	0.11	0.15	0.20	0.46	0.51	0.84	0.84	1.31	1.38	1.69	1.84	2.07	2.30
Perris_1_C	0.08	0.25	0.44	0.86	1.28	1.73	0.07	0.10	0.14	0.18	0.40	0.45	0.73	0.79	1.13	1.34	1.45	1.78	1.78	2.23
Perris_2_A	0.04	0.11	0.19	0.36	0.53	0.70	0.04	0.05	0.08	0.09	0.24	0.24	0.39	0.39	0.57	0.57	0.71	0.73	0.86	0.92
Perris_2_B	0.03	0.09	0.15	0.29	0.43	0.57	0.02	0.03	0.04	0.06	0.10	0.11	0.16	0.28	0.24	0.46	0.31	0.61	0.37	0.76
Perris_3_A	0.19	0.63	1.15	2.32	3.50	4.76	0.16	0.17	0.35	0.35	1.33	1.33	2.60	2.60	4.21	4.21	5.44	5.44	6.71	6.71
Perris_3_B	0.18	0.61	1.10	2.23	3.36	4.57	0.15	0.16	0.32	0.33	1.20	1.20	2.30	2.30	3.71	3.71	4.82	4.82	5.96	5.96
AltPerris_A	0.21	0.69	1.26	2.56	3.86	5.26	0.16	0.16	0.33	0.33	1.25	1.25	2.31	2.31	3.73	3.73	4.85	4.99	6.01	6.37
AltPerris_B	0.17	0.56	1.02	2.05	3.08	4.19	0.15	0.15	0.31	0.31	1.08	1.08	2.07	2.07	3.34	3.34	4.35	4.35	5.39	5.39
AltPerris_C	0.17	0.56	1.01	2.04	3.06	4.17	0.14	0.14	0.30	0.30	1.04	1.04	1.99	1.99	3.21	3.21	4.18	4.18	5.17	5.17
Dulzura_A	10.22	44.42	90.96	206.51	330.76	476.01	2.09	2.09	5.25	5.25	32.62	32.62	79.66	79.66	147.99	147.99	201.99	201.99	258.27	258.27
Dulzura_B	10.22	44.42	90.96	206.51	330.76	476.01	2.09	2.09	5.26	5.26	32.65	32.65	79.75	79.75	148.03	148.03	202.05	202.05	258.33	258.33
Acton_A	0.12	0.38	0.68	1.36	2.02	2.73	0.22	0.31	0.44	0.57	1.39	1.51	2.59	2.59	4.03	4.03	5.17	5.17	6.34	6.34
Acton_B	0.11	0.37	0.67	1.32	1.96	2.66	0.21	0.29	0.41	0.53	1.18	1.28	2.14	2.14	3.25	3.25	4.14	4.14	5.04	5.04
Acton_C	0.11	0.36	0.64	1.28	1.89	2.56	0.19	0.26	0.37	0.47	0.93	1.05	1.62	1.62	2.47	2.47	3.15	3.15	3.86	3.92
Acton_D	0.09	0.29	0.52	1.02	1.51	2.04	0.13	0.20	0.26	0.37	0.72	0.83	1.24	1.24	1.90	1.90	2.42	2.53	2.96	3.17
Acton_E	0.09	0.29	0.52	1.02	1.51	2.04	0.12	0.19	0.25	0.36	0.68	0.79	1.17	1.17	1.78	1.90	2.27	2.53	2.78	3.17
Acton_F	0.09	0.29	0.52	1.02	1.51	2.04	0.12	0.18	0.25	0.35	0.66	0.77	1.13	1.13	1.72	1.90	2.19	2.53	2.67	3.17
Acton_G	0.09	0.29	0.52	1.02	1.51	2.04	0.12	0.18	0.24	0.35	0.65	0.76	1.13	1.13	1.70	1.90	2.17	2.53	2.65	3.17

	USGS 1977 Regional Equations (rural flows)						Averaged Hawley-Bledsoe Flows (average of middle three flows, dropping the low and high) for Rural (_rl) and Developed (_urbn) Settings													
	Q2_USGS_m3s	Q5_USGS_m3s	Q10_USGS_m3s	Q25_USGS_m3s	Q50_USGS_m3s	Q100_USGS_m3s	Q1.5_HB_rl	Q1.5_HB_urbn	Q2_HB_rl	Q2_HB_urbn	Q5_HB_rl	Q5_HB_urbn	Q10_HB_rl	Q10_HB_urbn	Q25_HB_rl	Q25_HB_urbn	Q50_HB_rl	Q50_HB_urbn	Q100_HB_rl	Q100_HB_urbn
Unique ID	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)
Borrego_A	0.83	3.04	5.80	12.25	18.92	26.30	0.94	4.56	1.93	5.93	8.56	12.39	15.83	15.83	25.00	25.00	32.06	32.06	39.31	39.31
Borrego_B	0.82	3.02	5.75	12.15	18.75	26.07	0.98	4.78	1.98	6.15	8.54	12.51	15.77	15.77	24.54	24.54	31.45	31.45	38.54	38.54
Borrego_C	0.82	3.00	5.71	12.07	18.64	25.90	0.97	5.09	1.97	6.42	8.34	12.52	15.27	15.71	23.78	23.78	30.49	30.49	37.37	37.37
Borrego_D	0.75	2.73	5.20	10.97	16.93	23.50	0.80	4.41	1.60	5.52	6.67	10.45	12.35	14.20	19.75	20.48	25.62	25.62	31.65	31.65
Borrego_E	0.74	2.71	5.15	10.85	16.73	23.22	0.84	4.64	1.65	5.73	6.66	10.54	12.36	14.15	19.82	20.35	25.49	25.49	31.29	31.29
Topanga_A	5.02	20.64	41.53	92.64	147.27	209.79	1.85	2.21	4.32	4.92	24.63	26.14	61.24	61.24	118.31	118.31	163.96	163.96	211.89	211.89
Topanga_B	4.98	20.49	41.21	91.88	146.04	208.02	1.91	2.25	4.43	5.04	25.01	26.53	62.46	62.46	118.98	118.98	164.73	164.73	212.74	212.74
Topanga_C	4.92	20.21	40.63	90.56	143.91	204.95	1.95	2.21	4.65	5.09	26.06	27.63	62.38	62.38	115.88	115.88	160.31	160.31	206.92	206.92
Challengr_A	0.91	3.37	6.45	13.68	21.16	29.46	0.80	1.07	1.67	2.06	7.03	7.54	14.99	14.99	26.45	26.45	35.77	35.77	45.44	45.44
Challengr_B	0.91	3.34	6.38	13.53	20.92	29.12	0.81	1.19	1.65	2.12	6.92	7.41	14.79	14.79	26.15	26.15	35.41	35.41	45.02	45.02
Challengr_C	0.88	3.24	6.19	13.12	20.29	28.23	0.81	0.96	1.65	1.83	6.82	7.02	14.61	14.61	25.94	25.94	35.17	35.17	44.78	44.78
Mcgonigle_A	0.41	1.46	2.72	5.62	8.55	11.77	0.32	3.01	0.76	3.57	3.50	6.38	7.87	13.46	13.62	16.02	18.16	18.16	22.85	22.85
Sanjuan_A	7.90	33.63	68.48	154.55	247.02	354.16	5.00	5.00	11.28	11.28	62.42	62.42	133.91	133.91	233.69	233.69	315.01	315.01	399.52	399.52
Sanjuan_B	7.82	33.25	67.67	152.69	244.00	349.78	4.97	4.97	11.19	11.19	61.45	61.45	131.67	131.67	229.58	229.58	309.36	309.36	392.27	392.27
Pigeon_A	0.55	1.98	3.73	7.76	11.87	16.42	0.50	0.88	1.12	1.67	5.01	5.61	10.55	10.55	17.52	17.52	23.06	23.06	28.77	28.77
Pigeon_B	0.55	1.98	3.73	7.76	11.87	16.42	0.50	0.88	1.12	1.67	5.01	5.61	10.55	10.55	17.52	17.52	23.06	23.06	28.77	28.77
Pigeon_C	0.36	1.24	2.31	4.75	7.22	9.93	0.36	0.36	0.79	0.79	3.17	3.17	6.53	6.53	10.88	10.88	14.34	14.34	17.90	17.90
Stewart_A	1.21	4.48	8.69	18.68	29.21	40.77	2.60	2.60	3.85	3.85	10.75	10.75	20.11	20.11	34.33	34.33	45.91	45.91	57.96	57.96
Santiagbd_A	2.72	10.69	21.17	46.47	73.34	103.57	1.77	1.77	3.45	3.45	14.13	14.13	32.35	32.35	59.78	59.78	82.50	82.50	106.31	106.31
Santiagbd_B	2.72	10.69	21.17	46.47	73.34	103.57	1.77	1.77	3.45	3.45	14.13	14.13	32.34	32.34	59.76	59.76	82.47	82.47	106.26	106.26
Santiagnl_A	2.66	10.43	20.64	45.28	71.45	100.87	1.75	1.75	3.39	3.39	13.72	13.72	31.73	31.73	59.18	59.18	81.92	81.92	105.77	105.77
Santiagnl_B	2.65	10.39	20.57	45.13	71.21	100.52	1.75	1.75	3.38	3.38	13.69	13.69	31.66	31.66	59.11	59.11	81.82	81.82	105.64	105.64
Silverado_A	3.83	15.32	30.69	68.15	108.31	153.64	2.92	2.92	5.37	5.37	20.44	20.44	44.70	44.70	81.87	81.87	112.73	112.73	145.08	145.08
Silverado_B	3.83	15.32	30.69	68.15	108.31	153.64	2.91	2.91	5.37	5.37	20.44	20.44	44.75	44.75	81.94	81.94	112.82	112.82	145.19	145.19
Escondido_A	7.79	33.39	67.76	152.46	242.84	348.26	3.17	17.50	8.72	29.27	60.06	99.38	129.98	173.73	222.93	267.81	298.42	341.15	379.54	415.75
Escondido_B	7.79	33.39	67.76	152.46	242.84	348.26	3.17	17.50	8.72	29.29	60.07	99.40	130.01	173.73	222.97	267.81	298.47	341.15	379.54	415.75
Sanantoni_A	5.25	21.45	43.36	97.18	155.23	221.13	7.23	7.23	12.88	12.88	49.09	49.09	94.91	94.91	162.05	162.05	217.10	217.10	274.52	274.52

	USGS 1977 Regional Equations (rural flows)						Averaged Hawley-Bledsoe Flows (average of middle three flows, dropping the low and high) for Rural (_rl) and Developed (_urbn) Settings													
	Q2_USGS_m3s	*Q5_USGS_m3s*	*Q10_USGS_m3s*	*Q25_USGS_m3s*	*Q50_USGS_m3s*	*Q100_USGS_m3s*	*Q1.5_HB_rl*	*Q1.5_HB_urbn*	*Q2_HB_rl*	*Q2_HB_urbn*	*Q5_HB_rl*	*Q5_HB_urbn*	*Q10_HB_rl*	*Q10_HB_urbn*	*Q25_HB_rl*	*Q25_HB_urbn*	*Q50_HB_rl*	*Q50_HB_urbn*	*Q100_HB_rl*	*Q100_HB_urbn*
Unique ID	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)
Sanantoni_B	5.25	21.45	43.36	97.18	155.23	221.13	7.23	7.23	12.88	12.88	49.09	49.09	94.91	94.91	162.05	162.05	217.10	217.10	274.52	274.52
Alt_RC2_A	0.04	0.11	0.20	0.38	0.56	0.75	0.06	0.06	0.12	0.12	0.36	0.36	0.62	0.62	0.93	0.93	1.18	1.18	1.43	1.43
Yucaipa_A	2.32	9.02	17.77	38.80	61.03	86.00	1.37	1.67	2.88	3.31	12.81	13.34	28.22	28.22	51.06	51.06	69.84	69.84	89.44	89.44
Yucaipa_B	1.76	6.74	13.16	28.52	44.69	62.75	1.13	1.47	2.31	2.83	9.83	10.72	21.66	21.66	39.37	39.37	53.95	53.95	69.17	69.17
Oakglenn_A	0.72	2.54	4.87	10.33	16.06	22.25	0.69	0.72	1.07	1.08	2.50	2.50	5.72	6.08	11.14	11.14	15.67	15.67	20.37	20.37

General abbreviations and symbol definitions (excluding units of measure):

ID	identification
USGS	U. S. Geological Survey

Table B.3 – Topographic, urbanization, and soils

Unique ID	Total Basin Relief	Elevation at Outlet (at site)	Average Basin Elevation (from 10 and 85% pts)	Travel Distance to Outfall of Furthest Flow Path	Average Slope along Flow Path (from 10 and 85% pts)	Average Surface Slope in Watershed	Valley Slope (GIS) 2nd Option (valley slope dictated by configuration of watershed-confluences, consistent valley widths, etc.)	Valley Width (GIS) using 'Slope' Surface of Watershed	Total Road Length in Watershed 2000	Total Road Length in Watershed 2007	NRCS Type A Soil (sand, loamy sand, or sandy loam)	NRCS Type B Soil (silt loam or loam)	NRCS Type C Soil (sandy clay loam)	NRCS Type D Soil (clay loam, silty clay loam, sandy clay, silty clay, or clay)	Percent Impervious Area	Impervious Area Note
	Relief	*Elev_site*	*Av_Basin_Elev*	*Dist_flow_pth*	*Av_Chnl_Slope*	*Av_Surf_Slope*	*S_Valley_GIS_2*	*W_Valley_GIS*	*Roads_2000_m*	*Roads_2007_m*	*NRCS_A*	*NRCS_B*	*NRCS_C*	*NRCS_D*	*Prcnt_Imprv*	
	(m)	(m)	(m)	(m)	(m/m)	(m/m)	(m/m)	(m)	(m)	(m)	(fraction)	(fraction)	(fraction)	(fraction)	(%)	
Santiago_A	1,312	364	675	15,615	0.049	0.46	0.017	230	18,510	18,510	0.01	0.01	0.24	0.74	0.25%	
Santiago_B	1,306	370	683	15,088	0.051	0.47	0.017	190	10,488	13,057	0.01	0.00	0.24	0.75	0.16%	
Hasley_1_A	278	436	520	3,847	0.051	0.22	0.029	125	10,233	15,674	0.00	0.18	0.82	0.00	0.88%	more since 01
Hasley_1_B	276	439	520	3,752	0.052	0.22	0.024	125	10,233	15,674	0.00	0.18	0.82	0.00	0.88%	more since 01
Hasley_1_TRIB	121	436	478	1,062	0.095	0.18	0.044	125	516	1,136	0.00	0.99	0.01	0.00	0.31%	more since 01
Hasley_2_A	316	416	524	5,451	0.045	0.22	0.030	180	31,081	40,764	0.00	0.67	0.33	0.00	1.12%	more since 01
Hasley_2_B	292	422	511	4,274	0.046	0.23	0.030	180	16,601	25,467	0.00	0.40	0.60	0.00	1.19%	more since 01
Hasley_2_TRIB	312	420	528	5,285	0.047	0.21	0.031	180	11,989	13,216	0.00	1.00	0.01	0.00	0.65%	more since 01
Hicks_A_08**	409	129	259	4,420	0.072	0.27	0.026	85	6,519	6,519	0.03	0.09	0.40	0.48	1.62%	
Hicks_B_08**	406	132	261	4,311	0.074	0.27	0.026	60	6,180	6,180	0.03	0.09	0.40	0.48	1.62%	
Hicks_C_08**	405	133	261	4,286	0.074	0.27	0.026	60	6,180	6,180	0.03	0.09	0.40	0.48	1.62%	
Hicks_D_08**	403	136	263	4,189	0.075	0.27	0.026	85	6,083	6,083	0.02	0.10	0.41	0.47	1.65%	
Hicks_D_07**	403	136	263	4,189	0.075	0.27	0.026	85	6,083	6,083	0.02	0.10	0.41	0.47	1.65%	
Hicks_E_08**	398	140	268	3,967	0.079	0.27	0.026	85	5,869	5,869	0.02	0.09	0.43	0.47	1.65%	
Hicks_E_07**	398	140	268	3,967	0.079	0.27	0.026	85	5,869	5,869	0.02	0.09	0.43	0.47	1.65%	
Hicks_F_08**	395	143	269	3,851	0.081	0.28	0.026	85	5,736	5,736	0.01	0.09	0.43	0.47	1.65%	
Hicks_F_07**	395	143	269	3,851	0.081	0.28	0.026	85	5,736	5,736	0.01	0.09	0.43	0.47	1.65%	
Agua_Hedi_A	408	97	204	11,289	0.022	0.13	0.007	72	154,976	160,336	0.01	0.21	0.32	0.47	26.36%	
Agua_Hedi_B	404	101	204	11,129	0.022	0.13	0.007	95	154,004	159,364	0.01	0.21	0.32	0.47	26.27%	
Agua_Hedi_C	402	103	204	10,924	0.022	0.13	0.007	72	153,717	159,077	0.01	0.21	0.32	0.47	26.17%	
Dry_A	323	329	394	3,750	0.038	0.27	0.030	190	-	1,249	0.08	0.25	0.07	0.61	0.55%	more since 01
Dry_B	319	334	397	3,629	0.038	0.27	0.030	130	-	1,249	0.07	0.25	0.06	0.61	0.55%	more since 01
Dry_C	316	336	397	3,521	0.039	0.27	0.030	130	-	1,249	0.07	0.26	0.06	0.62	0.56%	more since 01
Hovnanian_A*	496	388	545	4,433	0.085	0.40	0.041	100	4,412	4,412	0.00	0.42	0.09	0.49	1.54%	
Hovnanian_B*	492	393	547	4,312	0.086	0.40	0.041	45	4,412	4,412	0.00	0.42	0.09	0.49	1.55%	
Santimeta_A	113	571	620	2,158	0.050	0.12	0.046	325	3,950	3,950	0.00	0.89	0.11	0.00	4.90%	

Unique ID	Total Basin Relief	Elevation at Outlet (at site)	Average Basin Elevation (from 10 and 85% pts)	Travel Distance to Outfall of Furthest Flow Path	Average Slope along Flow Path (from 10 and 85% pts)	Average Surface Slope in Watershed	Valley Slope (GIS) 2nd Option (valley slope dictated by configuration of watershed-confluences, consistent valley widths, etc.)	Valley Width (GIS) using 'Slope' Surface of Watershed	Total Road Length in Watershed 2000	Total Road Length in Watershed 2007	NRCS Type A Soil (sand, loamy sand, or sandy loam)	NRCS Type B Soil (silt loam or loam)	NRCS Type C Soil (sandy clay loam)	NRCS Type D Soil (clay loam, silty clay loam, sandy clay, silty clay, or clay)	Percent Impervious Area	Impervious Area Note
	Relief	*Elev_site*	*Av_Basin_Elev*	*Dist_flow_pth*	*Av_Chnl_Slope*	*Av_Surf_Slope*	*S_Valley_GIS_2*	*W_Valley_GIS*	*Roads_2000_m*	*Roads_2007_m*	*NRCS_A*	*NRCS_B*	*NRCS_C*	*NRCS_D*	*Pcnt_Imprv*	
	(m)	(m)	(m)	(m)	(m/m)	(m/m)	(m/m)	(m)	(m)	(m)	(fraction)	(fraction)	(fraction)	(fraction)	(%)	
Santimeta_B	110	574	624	2,018	0.054	0.12	0.046	115	3,950	3,950	0.00	0.89	0.11	0.00	4.90%	
Santimeta_C	101	583	629	1,828	0.052	0.12	0.046	100	3,950	3,950	0.00	0.89	0.11	0.00	4.90%	
Ltl_Cedar_A	865	172	465	6,198	0.119	0.36	0.030	130	68	68	0.00	0.00	0.00	1.00	0.08%	
Ltl_Cedar_B	861	176	474	6,035	0.124	0.36	0.030	120	68	68	0.00	0.00	0.00	1.00	0.08%	
Proctor_A	92	251	280	3,995	0.016	0.19	0.016	50	14,241	15,604	0.00	0.12	0.15	0.73	1.49%	
Proctor_B	92	251	280	3,921	0.016	0.14	0.016	95	13,334	13,334	0.00	0.23	0.28	0.48	2.73%	
Proctor_TRIB	252	251	323	3,889	0.042	0.20	0.031	35	907	907	0.00	0.00	0.00	1.00	0.02%	
Perris_1_A	103	497	531	1,640	0.050	0.08	0.024	250	2,021	2,021	0.08	0.20	0.72	0.00	2.21%	
Perris_1_B	102	498	535	1,559	0.058	0.08	0.02	250	2,021	2,021	0.08	0.20	0.72	0.00	2.21%	
Perris_1_C	99	500	538	1,453	0.057	0.08	0.02	250	1,872	1,872	0.08	0.20	0.72	0.00	2.26%	
Perris_2_A	50	500	520	978	0.048	0.05	0.040	180	551	551	0.00	0.14	0.30	0.55	1.41%	
Perris_2_B	42	508	525	770	0.049	0.05	0.040	180	357	357	0.00	0.14	0.30	0.55	1.80%	
Perris_3_A	262	497	560	2,798	0.047	0.09	0.043	400	2,310	2,310	0.09	0.32	0.41	0.18	0.36%	
Perris_3_B	246	512	568	2,487	0.049	0.09	0.043	400	1,903	1,903	0.09	0.32	0.41	0.18	0.35%	
AltPerris_A	237	490	525	2,280	0.039	0.11	0.007	1,450	-	-	0.00	0.99	0.01	0.00	0.03%	
AltPerris_B	237	490	530	2,187	0.046	0.10	0.007	1,450	-	-	0.00	0.99	0.01	0.00	0.03%	
AltPerris_C	236	491	531	2,088	0.048	0.10	0.007	1,450	-	-	0.00	0.99	0.01	0.00	0.03%	
Dulzura_A	774	216	485	15,277	0.045	0.24	0.0075496	455	90,954	93,390	0.00	0.18	0.35	0.47	0.28%	
Dulzura_B	774	216	485	15,148	0.045	0.24	0.0075496	385	90,954	93,390	0.00	0.18	0.35	0.47	0.28%	
Acton_A	357	926	1,019	3,273	0.065	0.18	0.044	160	4,883	6,085	0.00	0.22	0.59	0.19	2.34%	more since 01
Acton_B	344	938	1,028	2,959	0.071	0.18	0.044	160	4,603	5,781	0.00	0.20	0.60	0.20	2.37%	more since 01
Acton_C	332	950	1,040	2,638	0.072	0.19	0.058	130	4,286	5,491	0.00	0.18	0.61	0.21	2.39%	more since 01
Acton_D	332	950	1,046	2,541	0.078	0.19	0.058	50	4,160	5,311	0.00	0.20	0.69	0.11	2.90%	more since 01
Acton_E	326	956	1,047	2,491	0.078	0.19	0.058	50	4,160	5,311	0.00	0.20	0.69	0.11	2.90%	more since 01
Acton_F	324	959	1,048	2,464	0.078	0.19	0.058	90	4,160	5,311	0.00	0.20	0.69	0.11	2.90%	more since 01
Acton_G	324	959	1,048	2,458	0.078	0.19	0.058	90	4,160	5,311	0.00	0.20	0.69	0.11	2.90%	more since 01
Borrego_A*	350	169	267	7,369	0.031	0.23	0.020	270	18,073	18,316	0.07	0.12	0.54	0.28	13.83%	
Borrego_B*	345	173	272	7,050	0.031	0.23	0.023	240	18,074	18,317	0.07	0.11	0.54	0.28	13.97%	

Unique ID	Total Basin Relief	Elevation at Outlet (at site)	Average Basin Elevation (from 10 and 85% pts)	Travel Distance to Outfall of Furthest Flow Path	Average Slope along Flow Path (from 10 and 85% pts)	Average Surface Slope in Watershed	Valley Slope (GIS) 2nd Option (valley slope dictated by configuration of watershed-confluences, consistent valley widths, etc.)	Valley Width (GIS) using 'Slope' Surface of Watershed	Total Road Length in Watershed 2000	Total Road Length in Watershed 2007	NRCS Type A Soil (sand, loamy sand, or sandy loam)	NRCS Type B Soil (silt loam or loam)	NRCS Type C Soil (sandy clay loam)	NRCS Type D Soil (clay loam, silty clay loam, sandy clay, silty clay, or clay)	Percent Impervious Area	Impervious Area Note
	Relief	*Elev_site*	*Av_Basin_Elev*	*Dist_flow_pth*	*Av_Chnl_Slope*	*Av_Surf_Slope*	*S_Valley_GIS_2*	*W_Valley_GIS*	*Roads_2000_m*	*Roads_2007_m*	*NRCS_A*	*NRCS_B*	*NRCS_C*	*NRCS_D*	*Pcnt_Imprv*	
	(m)	(m)	(m)	(m)	(m/m)	(m/m)	(m/m)	(m)	(m)	(m)	(fraction)	(fraction)	(fraction)	(fraction)	(%)	
Borrego_C*	337	181	280	6,673	0.031	0.24	0.028	300	18,075	18,318	0.07	0.11	0.55	0.28	14.27%	
Borrego_D*	322	196	288	6,095	0.034	0.26	0.023	230	17,611	17,611	0.06	0.10	0.60	0.24	14.23%	
Borrego_E*	317	201	291	5,860	0.034	0.26	0.029	220	17,612	17,612	0.06	0.11	0.60	0.23	14.40%	
Topanga_A*	620	12	207	14,577	0.025	0.31	0.025	55	139,475	167,335	0.00	0.00	0.63	0.37	1.37%	
Topanga_B*	619	13	207	14,577	0.025	0.31	0.027	100	139,338	167,198	0.00	0.00	0.63	0.37	1.37%	
Topanga_C*	599	33	212	14,179	0.025	0.31	0.098	20	138,777	166,637	0.00	0.00	0.63	0.37	1.38%	
Challengr_A*	391	291	402	5,310	0.049	0.36	0.020	60	10,269	10,269	0.00	0.13	0.23	0.64	2.28%	
Challengr_B*	386	296	410	5,027	0.053	0.36	0.038	25	10,091	10,091	0.00	0.13	0.21	0.66	2.22%	
Challengr_C*	382	300	416	4,870	0.056	0.37	0.030	25	8,227	8,227	0.00	0.13	0.21	0.66	1.41%	
Mcgonigle_A	268	93	193	4,598	0.053	0.19	0.021	55	34,811	34,811	0.00	0.012	0.015	0.974	24.80%	
Sanjuan_A*	800	178	539	23,577	0.037	0.33	0.012	350	75,526	75,526	0.0150	0.0350	0.4560	0.4940	0.13%	
Sanjuan_B*	795	183	539	23,000	0.037	0.33	0.013	40	74,592	74,592	0.0150	0.0350	0.4530	0.4970	0.13%	
Pigeon_A*	313	536	652	4,501	0.066	0.18	0.016	160	18,155	18,155	0.00	0.52	0.42	0.06	4.57%	
Pigeon_B*	313	536	652	4,501	0.066	0.18	0.016	160	18,155	18,155	0.00	0.52	0.42	0.06	4.57%	
Pigeon_C*	293	556	675	3,302	0.090	0.19	0.025	100	6,378	6,378	0.00	0.51	0.39	0.10	0.75%	
Stewart_A	1,004	300	680	5,187	0.169	0.46	0.10	650	3,666	3,666	0.00	0.20	0.00	0.80	0.12%	
Santiagbd_A	1,257	419	747	12,261	0.063	0.48	0.026	50	3,549	3,549	0.01	0.00	0.12	0.87	0.03%	
Santiagbd_B	1,254	422	747	12,261	0.063	0.48	0.026	50	3,549	3,549	0.01	0.00	0.12	0.87	0.03%	
Santiagnl_A	1,243	433	761	11,916	0.067	0.48	0.029	40	2,792	2,792	0.01	0.00	0.12	0.87	0.02%	
Santiagnl_B	1,240	436	761	11,916	0.067	0.48	0.029	40	2,792	2,792	0.01	0.00	0.12	0.87	0.02%	
Silverado_A**	907	486	766	8,643	0.076	0.50	0.055	30	17,164	17,164	0.03	0.00	0.06	0.92	0.00%	
Silverado_B**	904	489	766	8,558	0.076	0.50	0.055	30	17,164	17,164	0.03	0.00	0.06	0.92	0.00%	
Escondido_A	629	75	295	33,519	0.014	0.17	0.014	40	641,329	672,276	0.0004	0.3371	0.4138	0.2487	13.81%	
Escondido_B	629	75	295	33,402	0.014	0.17	0.014	50	641,329	672,276	0.0004	0.3371	0.4138	0.2487	13.81%	
Sanantoni_A	1,388	237	653	10,913	0.098	0.44	0.017	2,500	32,570	32,570	0.00	0.29	0.02	0.69	0.19%	
Sanantoni_B	1,388	237	653	10,913	0.098	0.44	0.017	2,500	32,570	32,570	0.00	0.29	0.02	0.69	0.19%	
Alt_RC2_A**	89	512	534	659	0.067	0.17	0.063	90	-	-	0.09	0.07	0.10	0.74	0.00%	
Yucaipa_A	711	891	1,133	8,642	0.062	0.28	0.036	200	35,643	35,643	0.082	0.556	0.096	0.268	1.63%	

Unique ID	Total Basin Relief	Elevation at Outlet (at site)	Average Basin Elevation (from 10 and 85% pts)	Travel Distance to Outfall of Furthest Flow Path	Average Slope along Flow Path (from 10 and 85% pts)	Average Surface Slope in Watershed	Valley Slope (GIS) 2nd Option (valley slope dictated by configuration of watershed-confluences, consistent valley widths, etc.)	Valley Width (GIS) using 'Slope' Surface of Watershed	Total Road Length in Watershed 2000	Total Road Length in Watershed 2007	NRCS Type A Soil (sand, loamy sand, or sandy loam)	NRCS Type B Soil (silt loam or loam)	NRCS Type C Soil (sandy clay loam)	NRCS Type D Soil (clay loam, silty clay loam, sandy clay, silty clay, or clay)	Percent Impervious Area	Impervious Area Note
	Relief	*Elev_site*	*Av_Basin_Elev*	*Dist_flow_pth*	*Av_Chnl_Slope*	*Av_Surf_Slope*	*S_Valley_GIS_2*	*W_Valley_GIS*	*Roads_2000_m*	*Roads_2007_m*	*NRCS_A*	*NRCS_B*	*NRCS_C*	*NRCS_D*	*Pcnt_Imprv*	
	(m)	(m)	(m)	(m)	(m/m)	(m/m)	(m/m)	(m)	(m)	(m)	(fraction)	(fraction)	(fraction)	(fraction)	(%)	
Yucaipa_B	703	899	1,133	8,549	0.062	0.29	0.036	200	28,660	28,660	0.064	0.485	0.137	0.315	2.18%	
Oakglenn_A	1,052	1,412	1,828	3,125	0.325	0.52	0.11	240	3,254	3,833	0.00	0.18	0.29	0.53	0.53%	

Notes: * incomplete soil data over relatively small portions of watershed (NRCS soil-type values less suspect)
** incomplete soil data over large portions of watershed (NRCS soil-type values highly suspect)

General abbreviations and symbol definitions (excluding units of measure):

ID	identification
GIS	geographic information system
NRCS	Natural Resources Conservation Service
pts	points (i.e., the locations at 10% and 85% of the length of the main channel as measured from the outfall to drainage divide)

Table B.4 – Rational and NRCS CN methods, valley, reach, and cross-section metrics

Unique ID	Composite NRCS Curve Number	Undeveloped NRCS Curve Number (i.e., no impervious area)	Composite C (Rational Method)	Undeveloped C (Rational Method), No Imper-vious Area	Rational 2-yr, 24-hr Flow (Rational Method), Undeveloped-metric	Rational 2-yr, 24-hr Flow (Rational Method), Developed-metric	NRCS 2-yr, 24-hr Flow (CN Method), Undeveloped - metric	NRCS 2-yr, 24-hr Flow (CN Method), Developed-metric	Percent Burned within Last 5 yrs	Valley Slope	Valley Width	Sinuosity at Reach (stream length / valley dist)	Width of Active Floodplain	Connected to Hillslope?	Valley Wall Bedrock?	Channel Slope	Bankfull Top Width	Top Width Prior to Braiding/ Incising	Bankfull Depth Prior to Braiding/ Incising	Slope Prior to Incising/ Braiding	Maximum Depth within Banks
	NRCS_CN_comp	NRCS_CN_undvp	Ratnl_C_comp	Ratnl_C_undvp	Q2un_Rt_24m	Q2_Rtnl_24m	Q2un_NR_24m	Q2_NRCS_24m	Prcnt_Burn	Slope_Valley	Width_Valley	Sinuosity	Width_Fldpln	Hillslp_cnnct	Hillslp_Bdrck	Slope_Chnnl	Width_Top	Width_Top_pre	Depth_BF_pre	Slope_Chn_pre	Depth_BF
					(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	2007, unless noted (0-25%, 25-50%, 50-75%, 75-100%)	(m/m)	(m)	(m/m)	(m)	(1 = yes, 0 = no)	(1 = yes, 0.5 = riprap or sandbag, 0 = no)	(m/m)	(m)	(m)	(m)	(m/m)	(m)
Santiago_A	86.95	86.93	0.62	0.62	23.164	23.194	23.801	23.826	0%	0.0215	265	1.06	75.4	1	1	0.0174	75.4	75.4	2.18	0.0203	2.58
Santiago_B	87.00	86.98	0.62	0.62	22.269	22.288	22.887	22.902	0%	0.0162	250	1.02	32.9	1	0.5	0.015	32.9	32.9	2.14	0.0159	2.52
Hasley_1_A	83.70	83.58	0.54	0.53	1.979	1.993	1.937	1.948	0%	0.0354	140	1.073	13	1	0	0.0267	4.27	12.74	0.9	0.0306	1.41
Hasley_1_B	83.70	83.58	0.54	0.53	1.979	1.993	1.937	1.948	0%	0.0354	90	1.073	16	0	0	0.0343	8.3	15.71	1.12	0.0306	1.29
Hasley_1_TRIB	77.14	77.07	0.45	0.45	0.177	0.178	0.151	0.151	0%	0.0333	100	1.096	15	0	0	0.0263	11.39	NA	NA	NA	0.68
Hasley_2_A	79.88	79.67	0.49	0.48	5.281	5.338	4.757	4.803	0%	0.0271	200	1.03	68	0	0	0.0192	68.42	68.42	0.88	0.0265	0.97
Hasley_2_B	82.00	81.81	0.52	0.51	3.055	3.086	2.880	2.905	0%	0.0271	160	1.03	24	0	0	0.0149	23.74	23.74	1.15	0.0265	2.28
Hasley_2_TRIB	77.18	77.04	0.45	0.45	2.126	2.141	1.808	1.820	0%	0.0366	95	1.06	40	0	0	0.0348	24.43	28.44	0.32	NA/?	0.53
Hicks_A_08	85.32	85.12	0.59	0.58	1.797	1.816	1.561	1.577	100%	0.02	90	1.21	10	1	0	0.0132	8.15	8.15	0.71	0.0185	0.19
Hicks_B_08	85.32	85.12	0.59	0.58	1.797	1.816	1.561	1.577	100%	0.02	90	1.21	10	1	0	0.0139	3.7	3.7	0.34	0.0185	0.62
Hicks_C_08	85.32	85.12	0.59	0.58	1.797	1.816	1.561	1.577	100%	0.02	90	1.23	15	0	0	0.0214	6.4	14.9	0.3	0.0185	0.66
Hicks_D_08	85.37	85.16	0.59	0.58	1.729	1.747	1.506	1.522	100%	0.0253	80	1.23	15	0	0	0.0259	6	6.3	0.4	0.0185	1.05
Hicks_D_07	85.37	85.16	0.59	0.58	1.729	1.747	1.506	1.522	0%	0.0253	80	1.21	15	0	0	0.027	5.92	5.92	0.5	0.0185	0.96
Hicks_E_08	85.58	85.37	0.59	0.59	1.666	1.683	1.461	1.476	100%	0.0276	90	1.63	24	0	0	0.0197	3.1	14.3	0.41	0.0185	0.84
Hicks_E_07	85.58	85.37	0.59	0.59	1.666	1.683	1.461	1.476	0%	0.0276	90	1.63	24	0	0	0.0192	3.35	16.82	0.34	0.0185	0.89
Hicks_F_08	85.63	85.43	0.59	0.59	1.634	1.651	1.436	1.451	100%	0.0276	90	1.63	40	0	0	0.0163	7.3	12.5	0.56	0.0185	1.14
Hicks_F_07	85.63	85.43	0.59	0.59	1.634	1.651	1.436	1.451	0%	0.0276	90	1.63	40	0	0	0.0146	11.08	12.5	0.56	0.0185	1.09
Agua_Hedi_A	88.16	84.64	0.67	0.58	11.130	13.042	8.882	10.746	0%	0.007	40	1.1	35	0	0.5	0.0042	15.58	25.07	0.91	0.0064	2.31
Agua_Hedi_B	88.15	84.64	0.67	0.58	11.070	12.965	8.834	10.681	0%	0.007	50	1.1	12	0	0	0.0028	11.82	11.82	0.89	0.0064	2.52
Agua_Hedi_C	88.13	84.64	0.67	0.58	11.018	12.897	8.792	10.623	0%	0.007	60	1.1	20	0	0	0.0021	14.85	14.85	1.65	0.0064	3.71
Dry_A	83.25	83.17	0.57	0.57	1.796	1.802	1.673	1.678	100%	0.0254	140	1.15	40	0	0	0.0227	27.93	34.76	1	0.0221	1.28

Unique ID	Composite NRCS Curve Number	Undeveloped NRCS Curve Number (i.e., no impervious area)	Composite C (Rational Method)	Undeveloped C (Rational Method), No Impervious Area	Rational 2-yr, 24-hr Flow (Rational Method), Undeveloped-metric	Rational 2-yr, 24-hr Flow (Rational Method), Developed-metric	NRCS 2-yr, 24-hr Flow (CN Method), Undeveloped - metric	NRCS 2-yr, 24-hr Flow (CN Method), Developed-metric	Percent Burned within Last 5 yrs	Valley Slope	Valley Width	Sinuosity at Reach (stream length / valley dist)	Width of Active Floodplain	Connected to Hillslope?	Valley Wall Bedrock?	Channel Slope	Bankfull Top Width	Top Width Prior to Braiding/ Incising	Bankfull Depth Prior to Braiding/ Incising	Slope Prior to Incising/ Braiding	Maximum Depth within Banks
	NRCS_CN_comp	NRCS_CN_undvp	Ratnl_C_comp	Ratnl_C_undvp	Q2un_Rt_24m	Q2_Rtnl_24m	Q2un_NR_24m	Q2_NRCS_24m	Prcnt_Burn	Slope_Valley	Width_Valley	Sinuosity	Width_Fldpln	Hillslp_cnnct	Hillslp_Bdrck	Slope_Chnnl	Width_Top	Width_Top_pre	Depth_BF_pre	Slope_Chn_pre	Depth_BF
					(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	2007, unless noted (0-25%, 25-50%, 50-75%, 75-100%)	(m/m)	(m)	(m/m)	(m)	(1 = yes, 0 = no)	(1 = yes, 0.5 = riprap or sandbag, 0 = no)	(m/m)	(m)	(m)	(m)	(m/m)	(m)
Dry_B	83.32	83.24	0.57	0.57	1.760	1.766	1.642	1.648	100%	0.0254	160	1.15	35	0	0	0.0205	21.14	21.14	1.31	0.0221	1.72
Dry_C	83.40	83.31	0.57	0.57	1.702	1.708	1.590	1.595	100%	0.0254	120	1.15	20	0	0	0.0239	14.14	21.14	1.31	0.0221	1.93
Hovnanian_A	83.36	83.13	0.56	0.56	2.402	2.428	2.473	2.494	0%	0.0415	50	1.35	25	0	0	0.0314	16.46	NA	NA	NA	1.83
Hovnanian_B	83.36	83.13	0.56	0.56	2.389	2.415	2.460	2.481	0%	0.0415	50	1.35	20	0	0	0.0314	8.13	NA	NA	NA	1.69
Santimeta_A	78.85	77.86	0.48	0.46	0.492	0.518	0.341	0.362	0%	0.0443	200	1.14	11.17	0	0	0.0732	4.5	11.17	0.83	0.0505	1.17
Santimeta_B	78.85	77.86	0.48	0.46	0.492	0.518	0.341	0.362	0%	0.0443	100	1.14	20.82	0	0	0.0507	13.9	20.82	1.1	0.0505	2.06
Santimeta_C	78.85	77.86	0.48	0.46	0.492	0.518	0.341	0.362	0%	0.0443	86	1.14	12.8	0	0	0.0513	12.8	23.37	0.44	0.0505	1.12
Ltl_Cedar_A	87.97	87.96	0.65	0.65	3.248	3.249	2.705	2.706	0%	0.0258	100	1.03	20	0	0	0.02	12.38	45.97	0.71	0.0266	1.55
Ltl_Cedar_B	87.97	87.96	0.65	0.65	3.248	3.249	2.705	2.706	0%	0.0258	100	1.03	50	0	0	0.0259	45.97	45.97	0.64	0.0266	0.79
Proctor_A	86.42	86.25	0.62	0.61	4.424	4.461	3.388	3.423	50%	0.0142	85	1.07	18.44	0	0	0.0127	18.44	NA	NA	NA	0.88
Proctor_B	84.98	84.61	0.59	0.58	2.155	2.193	1.589	1.625	50%	0.0142	120	1.07	14.58	0	0	0.014	14.58	NA	NA	NA	0.73
Proctor_TRIB	88.00	88.00	0.65	0.65	1.420	1.420	1.115	1.115	100%	0.0232	18	1	20.65	0	0	0.021	20.65	NA	NA	NA	0.57
Perris_1_A	81.96	81.59	0.52	0.51	0.144	0.147	0.097	0.099	0%	0.0281	45	1.413	9.58	0	0	0.006	4.88	9.58	0.79	0.0165	0.62
Perris_1_B	81.96	81.59	0.52	0.51	0.144	0.147	0.097	0.099	0%	0.0281	40	1.413	11.66	0	0	0.0138	11.66	11.66	0.57	0.0171	1.03
Perris_1_C	81.96	81.59	0.52	0.51	0.139	0.142	0.093	0.095	0%	0.0281	40	1.413	6.23	0	0	0.0072	6.23	6.23	1.01	0.0141	1.5
Perris_2_A	85.70	85.53	0.60	0.59	0.054	0.054	0.040	0.041	0%	0.0388	60	1.32	5.22	0	0	0.0251	5.22	NA	NA	NA	0.34
Perris_2_B	85.75	85.53	0.60	0.59	0.042	0.043	0.031	0.032	0%	0.0388	100	1.32	10.45	0	0	0.0346	3.95	NA	NA	NA	0.3
Perris_3_A	80.94	80.88	0.52	0.52	0.477	0.479	0.305	0.307	0%	0.0254	110	1.15	57	0	0	0.0142	57.37	NA	NA	NA	0.77
Perris_3_B	80.94	80.88	0.52	0.52	0.454	0.456	0.291	0.292	0%	0.0254	100	1.15	65	0	0	0.0168	65.08	NA	NA	NA	0.93
AltPerris_A	77.09	77.08	0.45	0.45	0.469	0.469	0.264	0.264	0%	0.0099	1000	1.07	60	0	0	0.0102	48.7	NA	NA	NA	0.3
AltPerris_B	77.09	77.08	0.45	0.45	0.356	0.357	0.200	0.200	0%	0.0099	900	1	30	0	0	0.0072	16.3	NA	NA	NA	0.31
AltPerris_C	77.09	77.08	0.45	0.45	0.354	0.354	0.199	0.199	0%	0.0099	700	1	20	0	0	0.0049	13	13	0.36	0.0072	0.6
Dulzura_A	84.89	84.86	0.58	0.58	30.476	30.531	25.407	25.457	100%	0.0064	140	1.07	18.7	0	0	0.006	6.95	26.8	1	0.006	0.45

Unique ID	Composite NRCS Curve Number	Undeveloped NRCS Curve Number (i.e., no impervious area)	Composite C (Rational Method)	Undeveloped C (Rational Method), No Imper-vious Area	Rational 2-yr, 24-hr Flow (Rational Method), Undeveloped-metric	Rational 2-yr, 24-hr Flow (Rational Method), Developed-metric	NRCS 2-yr, 24-hr Flow (CN Method), Undeveloped - metric	NRCS 2-yr, 24-hr Flow (CN Method), Developed-metric	Percent Burned within Last 5 yrs	Valley Slope	Valley Width	Sinuosity at Reach (stream length / valley dist)	Width of Active Floodplain	Connected to Hillslope?	Valley Wall Bedrock?	Channel Slope	Bankfull Top Width	Top Width Prior to Braiding/ Incising	Bankfull Depth Prior to Braiding/ Incising	Slope Prior to Incising/ Braiding	Maximum Depth within Banks
	NRCS_CN_comp	NRCS_CN_undvp	RatnI_C_comp	RatnI_C_undvp	Q2un_Rt_24m	Q2_Rtnl_24m	Q2un_NR_24m	Q2_NRCS_24m	Prcnt_Burn	Slope_Valley	Width_Valley	Sinuosity	Width_Fldpln	Hillslp_cnnct	Hillslp_Bdrck	Slope_Chnnl	Width_Top	Width_Top_pre	Depth_BF_pre	Slope_Chn_pre	Depth_BF
					(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	2007, unless noted (0-25%, 25-50%, 50-75%, 75-100%)	(m/m)	(m)	(m/m)	(m)	(1 = yes, 0 = no)	(1 = yes, 0.5 = riprap or sandbag, 0 = no)	(m/m)	(m)	(m)	(m)	(m/m)	(m)
Dulzura_B	84.89	84.86	0.58	0.58	30.476	30.531	25.407	25.457	100%	0.0064	140	1.07	20	0	0	0.006	5.8	20	1.05	0.006	0.84
Acton_A	84.15	83.81	0.56	0.55	0.641	0.652	0.432	0.441	0%	0.036	90	1.07	31	0	0	0.0373	18.1	12	0.32	0.0335	0.41
Acton_B	84.36	84.03	0.56	0.55	0.624	0.635	0.424	0.434	0%	0.036	55	1.04	25	0	0	0.0377	7.1	7.1	0.28	0.0347	0.79
Acton_C	84.50	84.17	0.56	0.55	0.600	0.610	0.410	0.419	0%	0.036	22	1.07	10.65	0	0	0.0509	8.5	10.5	0.32	0.0336	1.18
Acton_D	84.14	83.73	0.55	0.54	0.446	0.456	0.302	0.311	0%	0.036	15	1.08	6.2	0	0	0.0328	6.2	6	0.25	0.0333	2.95
Acton_E	84.14	83.73	0.55	0.54	0.446	0.456	0.302	0.311	0%	0.036	25	1.08	1.11	0	0	0.1517	1.11	8	0.25	0.0333	2.3
Acton_F	84.14	83.73	0.55	0.54	0.446	0.456	0.302	0.311	0%	0.036	40	1.08	10	0	0	0.0156	8	8	0.25	0.0333	0.41
Acton_G	84.14	83.73	0.55	0.54	0.446	0.456	0.302	0.311	0%	0.036	40	1.08	10	0	0	0.0105	8	NA	NA	NA	0.25
Borrego_A	85.36	83.33	0.61	0.55	3.283	3.611	2.866	3.159	75%	0.0229	400	1.05	14	0	0.5	0.0201	14	14	3	0.0199	3
Borrego_B	85.43	83.38	0.61	0.55	3.252	3.579	2.844	3.137	75%	0.0229	395	1.05	101.7	1	1	0.0178	101.7	47	1	0.0199	1.69
Borrego_C	85.53	83.46	0.61	0.55	3.186	3.512	2.792	3.084	75%	0.0229	530	1.05	27.9	0	0	0.0144	27.9	47	1	0.0199	4.17
Borrego_D	85.56	83.50	0.61	0.55	2.674	2.949	2.357	2.602	75%	0.0229	420	1.04	29.48	1	1	0.0306	29.5	47	1	0.0199	6.73
Borrego_E	85.68	83.61	0.61	0.55	2.639	2.914	2.337	2.580	75%	0.0229	330	1.04	18.4	1	1	0.0276	18.4	18.4	2.56	0.0199	3.58
Topanga_A	86.23	86.07	0.59	0.59	32.641	32.918	35.182	35.392	0%	0.0182	60	1.03	27	1	1	0.0278	23.9	23.9	1.7	NA	1.7
Topanga_B	86.23	86.07	0.59	0.59	32.641	32.918	35.182	35.392	0%	0.0182	100	1.03	47	1	1	0.0175	42.3	32.1	1.69	0.0192	2.19
Topanga_C	86.23	86.07	0.59	0.59	32.061	32.335	34.557	34.764	0%	0.1	15	1	15	1	1	0.1	17.5	17.2	4	NA	4
Challengr_A	86.14	85.87	0.61	0.60	4.105	4.160	3.899	3.946	0%	0.0196	70	1.03	25	0	0	0.0094	3.3	6.3	0.49	0.0159	0.98
Challengr_B	86.19	85.93	0.61	0.60	4.060	4.112	3.855	3.900	0%	0.0228	40	1.32	20	0	0	0.0061	2	6	0.64	0.0159	0.89
Challengr_C	86.12	85.95	0.61	0.60	3.914	3.946	3.717	3.745	0%	0.0268	25	1.32	15	0	0	0.0244	5.2	NA	NA	NA	0.71
Mcgonigle_A	90.35	87.83	0.72	0.65	1.821	2.033	1.303	1.538	0%	0.0203	53.8	1.19	53.8	1	0	0.0103	16.2	21.6	0.34	0.017	0.51
Sanjuan_A	85.89	85.87	0.59	0.59	57.051	57.095	54.755	54.792	0%	0.0144	260	1.13	160	1	0	0.0177	41.5	NA	NA	NA	0.84
Sanjuan_B	85.90	85.88	0.59	0.59	56.231	56.274	53.962	53.998	0%	0.0150	40	1.05	31.8	1	1	0.0075	20.7	NA	NA	NA	1.6
Pigeon_A	81.78	81.01	0.52	0.50	2.267	2.359	1.641	1.719	25%	0.0104	50	1	50	1	0.5	0.0153	8.3	13.9	0.48	0.0229	0.98

Unique ID	Composite NRCS Curve Number	Undeveloped NRCS Curve Number (i.e., no impervious area)	Composite C (Rational Method)	Undeveloped C (Rational Method), No Impervious Area	Rational 2-yr, 24-hr Flow (Rational Method), Undeveloped-metric	Rational 2-yr, 24-hr Flow (Rational Method), Developed-metric	NRCS 2-yr, 24-hr Flow (CN Method), Undeveloped - metric	NRCS 2-yr, 24-hr Flow (CN Method), Developed-metric	Percent Burned within Last 5 yrs	Valley Slope	Valley Width	Sinuosity at Reach (stream length / valley dist)	Width of Active Floodplain	Connected to Hillslope?	Valley Wall Bedrock?	Channel Slope	Bankfull Top Width	Top Width Prior to Braiding/ Incising	Bankfull Depth Prior to Braiding/ Incising	Slope Prior to Incising/ Braiding	Maximum Depth within Banks
	NRCS_CN_comp	NRCS_CN_undvp	Ratnl_C_comp	Ratnl_C_undvp	Q2un_Rt_24m	Q2_Rtnl_24m	Q2un_NR_24m	Q2_NRCS_24m	Prcnt_Burn	Slope_Valley	Width_Valley	Sinuosity	Width_Fldpln	Hillslp_cnnct	Hillslp_Bdrck	Slope_Chnnl	Width_Top	Width_Top_pre	Depth_BF_pre	Slope_Chn_pre	Depth_BF
					(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	2007, unless noted (0-25%, 25-50%, 50-75%, 75-100%)	(m/m)	(m)	(m/m)	(m)	(1 = yes, 0 = no)	(1 = yes, 0.5 = riprap or sandbag, 0 = no)	(m/m)	(m)	(m)	(m)	(m/m)	(m)
Pigeon_B	81.78	81.01	0.52	0.50	2.267	2.359	1.641	1.719	25%	0.0104	50	1	50	1	0.5	0.0214	15.6	15.6	0.56	0.0229	0.65
Pigeon_C	81.35	81.23	0.51	0.51	1.239	1.247	0.892	0.898	25%	0.0272	110	1.06	25	0	0	0.0074	11.5	NA	NA	NA	2
Stewart_A	85.82	85.81	0.61	0.61	4.047	4.050	4.551	4.553	0%	0.1007	30	1	30	1	1	0.1007	6.45	NA	NA	NA	0.97
Santiagbd_A	87.47	87.47	0.64	0.64	12.380	12.381	12.818	12.820	75%	0.0266	65	1.03	30	1	1	0.0197	12.9	28.1	0.75	0.0182	1.12
Santiagbd_B	87.47	87.47	0.64	0.64	12.380	12.381	12.818	12.820	75%	0.0266	65	1.03	30	1	1	0.0182	19.6	NA	NA	NA	0.91
Santiagnl_A	87.47	87.47	0.64	0.64	11.842	11.843	12.259	12.260	75%	0.0343	20	1.07	20	1	1	0.0242	17.3	NA	NA	NA	1.47
Santiagnl_B	87.47	87.47	0.64	0.64	11.792	11.793	12.207	12.208	75%	0.0343	15	1.07	15	1	1	0.0322	6	NA	NA	NA	1.38
Silverado_A	87.20	87.20	0.64	0.64	15.222	15.222	15.635	15.635	20%	0.0543	25	1.04	15	1	1	0.0382	8.9	NA	NA	NA	1.48
Silverado_B	87.20	87.20	0.64	0.64	15.222	15.222	15.635	15.635	20%	0.0543	25	1.04	15	1	1	0.0455	7.2	NA	NA	NA	1.23
Escondido_A	85.11	83.04	0.60	0.54	65.002	71.787	53.297	59.399	25%	0.0507	35	1.07	40	1	1	0.0397	16.9	NA	NA	NA	1.47
Escondido_B	85.11	83.04	0.60	0.54	65.002	71.787	53.297	59.399	25%	0.0151	50	1.07	45	1	1	0.0111	29.2	NA	NA	NA	1.98
Sanantoni_A	84.81	84.78	0.59	0.59	28.260	28.293	32.943	32.967	0%	0.0222	1000	1.04	65	0	0	0.0249	21.25	65.4	2.92	0.0124	1.5
Sanantoni_B	84.81	84.78	0.59	0.59	28.260	28.293	32.943	32.967	0%	0.0222	1000	1.04	65	0	0	0.0124	65.4	65.4	2.1	0.0124	2.32
Alt_RC2_A	84.69	84.69	0.60	0.60	0.067	0.067	0.052	0.052	0%	0.042	65	1.08	10	0	0	0.0359	8	NA	NA	NA	1.71
Yucaipa_A	79.87	79.57	0.51	0.50	9.668	9.807	9.586	9.700	0%	0.045387	260	1.02	15	1	0.5	0.0371	15.5	?	?	?	2.1
Yucaipa_B	81.03	80.66	0.53	0.52	6.899	7.024	6.962	7.064	0%	0.045387	230	1.02	30	1	0.5	0.0371	29.6	?	?	?	2.625
Oakglenn_A	85.19	85.12	0.59	0.58	1.406	1.411	1.597	1.600	0%	0.0825	100	1.00	15	1	0	0.0734	11.6	12	3.64		3.25

General abbreviations and symbol definition (excluding units of measure):

C	constant (i.e., for Rational Method)
CN	Curve Number
ID	identification
NRCS	Natural Resources Conservation Service

Table B.5 – Hydraulic geometry forms and parameters: A, R, and W, as f(d)

Unique ID	Depth Functions (applicable to this depth)	Area Function Type {area = function (depth)}	Area Parameter #1	Area Parameter #2	Hydraulic Radius Function Type {R = function (depth)}	Hydraulic Radius Parameter #1	Hydraulic Radius Parameter #2	Top Width Function Type {Area = function (depth)}	Top Width Function Form	Top Width Parameter #1	Top Width Parameter #2	Alternative Depth Functions (applicable above this depth)	Alternative Depth Functions (applicable below this depth)	Alternative Area Function Type {area = function (depth)}	Alternative Area Parameter #1	Alternative Area Parameter #2	Alternative Hydraulic Radius Function Type {R = function (depth)}	Alternative Hydraulic Radius Parameter #1	Alternative Hydraulic Radius Parameter #2	Alternative Top Width Function Type {area = function (depth)}	Alternative Top Width Function Form	Alternative Top Width Parameter #1	Alternative Top Width Parameter #2
	Depth_App	*Area_Functn*	*a1*	*a2*	*R_Functn*	*r1*	*r2*	*TW_Functn*	*TW_Func_Frm*	*t1*	*t2*	*Alt_Depth_Min*	*Alt_Depth_Max*	*Alt_A_Functn*	*Alt_a1*	*Alt_a2*	*Alt_R_Functn*	*Alt_r1*	*Alt_r2*	*Alt_TW_Functn*	*Alt_TW_Frm*	*Alt_t1*	*Alt_t2*
	(m)	(power, linear, loglinear)			(power, linear, loglinear)			(power, linear, loglinear)				(m)	(m)	(power, linear, loglinear)			(power, linear, loglinear)			(power, linear, loglinear)			
Santiago_A	2.58	Power	10.77	1.884	Power	0.458	0.807	Power	T = t1*Depth^t2	22.99	1.07	2.58											
Santiago_B	2.51	Power	8.848	1.875	Power	0.527	0.992	Power	T = t1*Depth^t2	16.39	0.874	2.51											
Hasley_1_A	1.5	Power	2.324	1.687	Power	0.507	1.002	Power	T = t1*Depth^t2	3.606	0.595	1.5											
Hasley_1_B	1.75	Power	5.074	1.667	Power	0.537	0.97	Power	T = t1*Depth^t2	8.578	0.664	1.75											
Hasley_1_TRIB	1.29	Power	10.63	1.98	Power	0.661	1.144	Log-linear	T=t1+{ln(Depth)}*t2	12.52	4.102	1.29											
Hasley_2_A	0.97	Power	42.66	1.888	Power	0.528	0.964	Power	T = t1*Depth^t2	80.04	0.92	0.97											
Hasley_2_B	2.29	Power	13.63	1.784	Power	0.645	1.137	Power	T = t1*Depth^t2	20.35	0.632	2.29											
Hasley_2_TRIB	0.53	Power	35.71	1.627	Power	1.073	1.259	Log-linear	T=t1+{ln(Depth)}*t2	26.99	4.765	0.53											
Hicks_A_08	1.065	Power	5.421	1.341	Power	0.599	0.867	Linear	T = t1+Depth*t2	2.11	7.879	N/A											
Hicks_B_08	1.56	Power	4.057	1.534	Power	0.57	0.95	Linear	T = t1+Depth*t2	1.326	5.338	N/A											
Hicks_C_08	0.6	Power	4.851	1.687	Power	0.601	1.025	Linear	T = t1+Depth*t2	0.784	8.523	0.6	1.105	Power	9.189	2.751	Power	0.445	0.942	Linear	T = t1+Depth*t2	-5.463	24.7
Hicks_D_08	0.7	Power	3.257	1.587	Power	0.704	1.114	Log-linear	T=t1+{ln(Depth)}*t2	3.353	0.77	0.7	1.39	Power	3.401	2.26	Power	0.418	0.228	Log-linear	T=t1+{ln(Depth)}*t2	8.567	16.78
Hicks_D_07	0.7	Power	2.968	1.648	Power	0.544	0.977	Log-linear	T=t1+{ln(Depth)}*t2	3.662	1.071	0.7	1.342	Power	3.536	2.425	Power	0.394	0.502	Log-linear	T=t1+{ln(Depth)}*t2	9.277	16.43
Hicks_E_08	0.75	Power	2.71	1.394	Power	0.612	0.947	Log-linear	T=t1+{ln(Depth)}*t2	3.3	0.752	0.75	2.27	Power	3.71	2.691	Power	0.431	0.872	Log-linear	T=t1+{ln(Depth)}*t2	10.57	23.71
Hicks_E_07	0.75	Power	2.729	1.302	Power	0.625	0.904	Log-linear	T=t1+{ln(Depth)}*t2	3.431	0.732	0.75	2.25	Power	3.873	2.654	Power	0.433	0.872	Log-linear	T=t1+{ln(Depth)}*t2	11.09	23.41
Hicks_F_08	0.65	Power	2.878	1.511	Power	0.661	1.039	Power	T = t1*Depth^t2	3.799	0.421	0.65	1.135	Power	3.252	2.033	Power	0.378	-0.02	Exponential	T=t1*e ^ (Depth * t2)	0.597	2.572
Hicks_F_07	0.65	Power	3.155	1.455	Power	0.691	1.039	Power	T = t1*Depth^t2	3.599	0.798	0.65	1.08	Power	3.6	1.988	Power	0.368	-0.21	Log-linear	T=t1+{ln(Depth)}*t2	9.683	16.47
Agua_Hedi_A	1.75	Power	5.718	1.528	Power	0.696	1.114	Log-linear	T=t1+{ln(Depth)}*t2	7.236	1.733	1.75											
Agua_Hedi_B	2.5	Power	4.285	1.656	Power	0.566	0.983	Power	T = t1*Depth^t2	6.929	0.639	2.5											
Agua_Hedi_C	3.7	Power	2.203	1.839	Power	0.454	0.985	Power	T = t1*Depth^t2	4.005	0.795	3.7											
Dry_A	1.27	Power	14.77	1.507	Power	0.718	1.052	Linear	T = t1+Depth*t2	7.084	12.71	1.27											
Dry_B	1.71	Power	10.12	1.492	Power	0.646	0.991	Linear	T = t1+Depth*t2	4.634	10.14	1.71											

Unique ID	Depth Functions (applicable to this depth)	Area Function Type {area = function (depth)}	Area Parameter #1	Area Parameter #2	Hydraulic Radius Function Type {R = function (depth)}	Hydraulic Radius Parameter #1	Hydraulic Radius Parameter #2	Top Width Function Type {Area = function (depth)}	Top Width Function Form	Top Width Parameter #1	Top Width Parameter #2	Alternative Depth Functions (applicable above this depth)	Alternative Depth Functions (applicable below this depth)	Alternative Area Function Type {area = function (depth)}	Alternative Area Parameter #1	Alternative Area Parameter #2	Alternative Hydraulic Radius Function Type {R = function (depth)}	Alternative Hydraulic Radius Parameter #1	Alternative Hydraulic Radius Parameter #2	Alternative Top Width Function Type {area = function (depth)}	Alternative Top Width Function Form	Alternative Top Width Parameter #1	Alternative Top Width Parameter #2
	Depth_App	*Area_Functn*	*a1*	*a2*	*R_Functn*	*r1*	*r2*	*TW_Functn*	*TW_Func_Frm*	*t1*	*t2*	*Alt_Depth_Min*	*Alt_Depth_Max*	*Alt_A_Functn*	*Alt_a1*	*Alt_a2*	*Alt_R_Functn*	*Alt_r1*	*Alt_r2*	*Alt_TW_Functn*	*Alt_TW_Frm*	*Alt_t1*	*Alt_t2*
	(m)	(power, linear, loglinear)			(power, linear, loglinear)			(power, linear, loglinear)				(m)	(m)	(power, linear, loglinear)			(power, linear, loglinear)			(power, linear, loglinear)			
Dry_C	1.92	Power	9.906	1.421	Power	0.778	1.153	Log-linear	T=t1+{ln(Depth)}*t2	13.4	2.908	1.92											
Hovnanian_A	1.89	Power	5.853	1.531	Power	0.581	0.929	Linear	T = t1+Depth*t2	1.744	8.221	1.89											
Hovnanian_B	1.68	Power	3.071	1.771	Power	0.531	1.007	Linear	T = t1+Depth*t2	0.621	4.676	1.68											
Santimeta_A	4.87	Power	3.502	1.458	Power	0.546	0.939	Power	T = t1*Depth^t2	0.5061	0.417	4.87											
Santimeta_B	2.75	Power	8.926	1.511	Power	0.659	0.982	Power	T = t1*Depth^t2	12.24	0.483	2.75											
Santimeta_C	1.1	Power	11.41	1.413	Power	0.823	1.132	Log-linear	T=t1+{ln(Depth)}*t2	12.6	2.253	1.1											
Ltl_Cedar_A	1.54	Power	5.923	1.531	Power	0.624	1.004	Power	T = t1*Depth^t2	8.563	0.486	1.54											
Ltl_Cedar_B	0.55	Power	23.65	2.14	Power	0.713	1.217	Log-linear	T=t1+{ln(Depth)}*t2	18.33	5.713	0.55	0.79	Power	31.27	2.915	Power	0.279	-0.29	Power	T = t1*Depth^t2	111.8	3.23
Proctor_A	1.71	Power	11.752	1.9824	Power	0.4426	0.9344	Power	T = t1*Depth^t2	24.958	1.0532	1.71											
Proctor_B	1.49	Power	10.308	2.4136	Power	0.4034	0.9451	Power	T = t1*Depth^t2	24.725	1.4969	1.49											
Proctor_TRIB	0.45	Power	3.247	1.639	Power	0.486	0.933	Linear	T = t1+Depth*t2	0.359	7.864	0.45	1.07	Power	9.676	2.885	Power	0.41	1.232	Log-linear	T=t1+{ln(Depth)}*t2	20.71	18.21
Perris_1_A	1.05	Power	4.44	1.76	Power	0.493	0.913	Linear	T = t1+Depth*t2	0.338	8.94	1.05											
Perris_1_B	1	Power	4.115	1.456	Power	0.492	0.798	Exponential	T=t1*e ^ (Depth * t2)	1.527	2.07	1											
Perris_1_C	1.5	Power	2.322	1.456	Power	0.516	0.853	Linear	T = t1+Depth*t2	0.638	3.591	1.5											
Perris_2_A	0.34	Power	5.742	1.817	Power	0.467	0.937	Exponential	T=t1*e ^ (Depth * t2)	0.813	5.713	0.34											
Perris_2_B	0.5	Power	4.316	1.627	Power	0.41	0.81	Exponential	T=t1*e ^ (Depth * t2)	0.945	4.393	0.5											
Perris_3_A	0.77	Power	33.46	2.481	Power	0.351	0.87	Power	T = t1*Depth^t2	95.16	1.612	0.77											
Perris_3_B	0.93	Power	32.35	2.439	Power	0.364	0.902	Power	T = t1*Depth^t2	88.7	1.538	0.93											
AltPerris_A	0.3	Power	100.9	2.19	Power	0.59	1.128	Power	T = t1*Depth^t2	170.5	1.061	0.3											
AltPerris_B	0.34	Power	28.44	1.681	Power	0.899	1.195	Log-linear	T=t1+{ln(Depth)}*t2	23.41	5.331	0.34											
AltPerris_C	0.6	Power	11.67	1.546	Power	0.702	1.046	Power	T = t1*Depth^t2	16.38	0.495	0.6											
Dulzura_A	0.5	Power	8.846	1.626	Power	0.693	1.072	Power	T = t1*Depth^t2	12.49	0.546	0.5	1.67	Power	10.34	1.908	Power	0.539	0.965	Log-linear	T=t1+{ln(Depth)}*t2	20.37	15.43
Dulzura_B	0.75	Power	5.68	1.614	Power	0.765	1.136	Power	T = t1*Depth^t2	7.057	0.458	0.75	1.82	Power	6.083	2.245	Power	0.579	0.68	Log-linear	T=t1+{ln(Depth)}*t2	12.03	18.95
Acton_A	0.41	Power	23.58	2.053	Power	0.415	0.886	Power	T = t1*Depth^t2	56.23	1.165	0.41											

Unique ID	Depth Functions (applicable to this depth)	Area Function Type {area = function (depth)}	Area Parameter #1	Area Parameter #2	Hydraulic Radius Function Type {R = function (depth)}	Hydraulic Radius Parameter #1	Hydraulic Radius Parameter #2	Top Width Function Type {Area = function (depth)}	Top Width Function Form	Top Width Parameter #1	Top Width Parameter #2	Alternative Depth Functions (applicable above this depth)	Alternative Depth Functions (applicable below this depth)	Alternative Area Function Type {area = function (depth)}	Alternative Area Parameter #1	Alternative Area Parameter #2	Alternative Hydraulic Radius Function Type {R = function (depth)}	Alternative Hydraulic Radius Parameter #1	Alternative Hydraulic Radius Parameter #2	Alternative Top Width Function Type {area = function (depth)}	Alternative Top Width Function Form	Alternative Top Width Parameter #1	Alternative Top Width Parameter #2
	Depth_App	*Area_Functn*	*a1*	*a2*	*R_Functn*	*r1*	*r2*	*TW_Functn*	*TW_Func_Frm*	*t1*	*t2*	*Alt_Depth_Min*	*Alt_Depth_Max*	*Alt_A_Functn*	*Alt_a1*	*Alt_a2*	*Alt_R_Functn*	*Alt_r1*	*Alt_r2*	*Alt_TW_Functn*	*Alt_TW_Frm*	*Alt_t1*	*Alt_t2*
	(m)	(power, linear, loglinear)			(power, linear, loglinear)			(power, linear, loglinear)				(m)	(m)	(power, linear, loglinear)			(power, linear, loglinear)			(power, linear, loglinear)			
Acton_B	0.76	Power	5.668	1.359	Power	0.804	1.112	Linear	T = t1+Depth*t2	3.32	4.724	0.76											
Acton_C	2.7	Power	5.895	1.758	Power	0.592	1.063	Log-linear	T=t1+{ln(Depth)}*t2	8.701	2.81	2.7											
Acton_D	2.95	Power	4.608	1.285	Power	0.643	0.902	Log-linear	T=t1+{ln(Depth)}*t2	5.668	1.089	2.95											
Acton_E	2.3	Power	0.959	1.047	Power	0.308	0.591	Linear	T = t1+Depth*t2	0.909	0.087	2.3											
Acton_F	0.41	Power	24.16	2.78	Power	0.448	1.013	Power	T = t1*Depth^t2	54.48	1.79	0.41											
Acton_G	0.75	Power	12.254	1.3181	Power	0.5678	0.8052	Exponential	T=t1*e ^ (Depth * t2)	5.2022	2.1854	0.75											
Borrego_A	3	Power	9.246	1.09	Power	0.801	0.925	Linear	T = t1+Depth*t2	7.99	2.003	3											
Borrego_B	1.77	Power	55.01	1.968	Power	0.655	1.074	Power	T=t1*Depth^t2	83.22	0.89	1.77											
Borrego_C	4.17	Power	19.56	1.222	Power	0.801	1.007	Log-linear	T=t1+{ln(Depth)}*t2	23.5	3.562	4.17											
Borrego_D	6.73	Power	9.0881	1.7383	Power	0.6113	1.0829	Log-linear	T=t1+{ln(Depth)}*t2	18.146	6.2589	6.73											
Borrego_E	3.58	Power	3.052	1.981	Power	0.474	1.009	Linear	T = t1+Depth*t2	0.435	5.249	3.58											
Topanga_A	1.7	Power	7.524	1.848	Power	0.529	1.007	Linear	T = t1+Depth*t2	0.751	12.89	1.7	3.7	Power	8.1139	1.7036	Power	0.3688	1.3963	Log-linear	T=t1+{ln(Depth)}*t2	22.413	4.1282
Topanga_B	2.27	Power	11.379	1.8627	Power	0.5562	0.9539	Linear	T = t1+Depth*t2	1.9373	17.511	2.27											
Topanga_C	4	Power	4.0298	1.3468	Power	0.5715	0.8137	Exponential	T=t1*e ^ (Depth * t2)	2.2435	0.5945	4											
Challengr_A	1.16	Power	3.348	1.464	Power	0.515	0.875	Exponential	T=t1*e ^ (Depth * t2)	1.529	1.428	1.16	1.79	Power	2.7174	3.0883	Power	0.3556	0.7803	Log-linear	T=t1+{ln(Depth)}*t2	4.2141	38.573
Challengr_B	1.47	Power	1.838	1.489	Power	0.457	0.882	Exponential	T=t1*e ^ (Depth * t2)	0.9	1.202	1.47	2.55	Power	0.9136	3.7237	Power	0.1845	1.6913	Log-linear	T=t1+{ln(Depth)}*t2	-0.3355	31.062
Challengr_C	0.88	Power	4.5539	1.6774	Power	0.6248	1.0614	Log-linear	T=t1+{ln(Depth)}*t2	5.684	1.6868	0.88	1.5	Power	5.0369	3.1426	Power	0.3685	0.9534	Log-linear	T=t1+{ln(Depth)}*t2	15.244	33.468
Mcgonigle_A	0.68	Power	17.54	2.377	Power	0.503	0.992	Power	T=t1*Depth^t2	33.17	1.37	0.68	1.5	Power	30.09	2.461	Power	0.601	1.471	Log-linear	T=t1+{ln(Depth)}*t2	51.95	39.74
Sanjuan_A	1.34	Power	12.73	2.103	Power	0.498	0.998	Power	T=t1*Depth^t2	25.11	1.101	1.34	1.88	Power	14.55	2.525	Power	0.407	1.499	Log-linear	T=t1+{ln(Depth)}*t2	32.22	53.96
Sanjuan_B	2.12	Power	9.229	1.637	Power	0.596	1.002	Linear	T = t1+Depth*t2	2.067	12.33	2.12	3.61	Power	9.153	1.745	Power	0.446	1.223	Linear	T = t1+Depth*t2	8.828	9.652
Pigeon_A	0.98	Power	4.057	1.683	Power	0.359	0.79	Exponential	T=t1*e ^ (Depth * t2)	0.984	2.922	0.98	1.35	Power	5.613	3.786	Power	0.214	1.243	Exponential	T=t1*e ^ (Depth * t2)	2.723	2.238
Pigeon_B	0.65	Power	10.03	1.809	Power	0.487	0.924	Linear	T = t1+Depth*t2	-0.011	23.2	0.65	1.1	Power	17.584	2.939	Power	0.343	0.513	Linear	T = t1+Depth*t2	-33.48	74.94
Pigeon_C	2	Power	2.949	1.9	Power	0.492	1.003	Power	T=t1*Depth^t2	5.428	0.873	2											
Stewart_A	1.5	Power	3.4838	2.0799	Power	0.439	0.973	Power	T=t1*Depth^t2	7.4708	1.126	1.5											

Unique ID	Depth Functions (applicable to this depth)	Area Function Type {area = function (depth)}	Area Parameter #1	Area Parameter #2	Hydraulic Radius Function Type {R = function (depth)}	Hydraulic Radius Parameter #1	Hydraulic Radius Parameter #2	Top Width Function Type {Area = function (depth)}	Top Width Function Form	Top Width Parameter #1	Top Width Parameter #2	Alternative Depth Functions (applicable above this depth)	Alternative Depth Functions (applicable below this depth)	Alternative Area Function Type {area = function (depth)}	Alternative Area Parameter #1	Alternative Area Parameter #2	Alternative Hydraulic Radius Function Type {R = function (depth)}	Alternative Hydraulic Radius Parameter #1	Alternative Hydraulic Radius Parameter #2	Alternative Top Width Function Type {area = function (depth)}	Alternative Top Width Function Form	Alternative Top Width Parameter #1	Alternative Top Width Parameter #2
	Depth_App	*Area_Functn*	*a1*	*a2*	*R_Functn*	*r1*	*r2*	*TW_Functn*	*TW_Func_Frm*	*t1*	*t2*	*Alt_Depth_Min*	*Alt_Depth_Max*	*Alt_A_Functn*	*Alt_a1*	*Alt_a2*	*Alt_R_Functn*	*Alt_r1*	*Alt_r2*	*Alt_TW_Functn*	*Alt_TW_Frm*	*Alt_t1*	*Alt_t2*
	(m)	(power, linear, loglinear)			(power, linear, loglinear)			(power, linear, loglinear)				(m)	(m)	(power, linear, loglinear)			(power, linear, loglinear)			(power, linear, loglinear)			
Santiagbd_A	1.12	Power	10.31	2.105	Power	0.649	1.117	Log-linear	T=t1+{ln(Depth)}*t2	11.19	3.821	1.12	3.04	Power	8.103	2.017	Power	0.576	0.998	Log-linear	T=t1+{ln(Depth)}*t2	12.92	22.97
Santiagbd_B	1.25	Power	16.494	1.9158	Power	0.6379	1.0516	Log-linear	T=t1+{ln(Depth)}*t2	20.124	6.9165	1.25											
Santiagnl_A	1.47	Power	8.0064	1.2818	Power	0.7174	0.9526	Power	T=t1*Depth^t2	10.793	0.3149	1.47	2.53	Power	7.6646	1.4832	Power	0.6637	0.9583	Power	T=t1*Depth^t2	11.304	0.4709
Santiagnl_B	1.965	Power	4.188	2.096	Power	0.481	1.082	Linear	T = t1+Depth*t2	0.42	7.045	1.965											
Silverado_A	3.15	Power	3.9952	1.9027	Power	0.5147	1.107	Linear	T = t1+Depth*t2	1.2907	5.1889	3.15											
Silverado_B	3.4	Power	3.3516	2.1043	Power	0.4448	1.1089	Linear	T = t1+Depth*t2	0.7189	5.3839	3.4											
Escondido_A	2.49	Power	7.374	1.879	Power	0.54	1.027	Power	T=t1*Depth^t2	13.43	0.848	2.49	4	Power	7.712	1.836	Power	0.502	1.059	Power	T=t1*Depth^t2	15.17	0.767
Escondido_B	1.98	Power	8.419	1.948	Power	0.525	1.014	Power	T=t1*Depth^t2	15.74	0.928	1.98	4	Power	8.912	1.973	Power	0.574	0.968	Power	T=t1*Depth^t2	15.07	1.009
Sanantoni_A	1.5	Power	8.945	1.715	Power	0.592	1.038	Power	T=t1*Depth^t2	14.75	0.668	1.5	2.92	Power	5.984	2.925	Power	0.421	1.295	Power	T=t1*Depth^t2	13.95	1.612
Sanantoni_B	1	Power	25.37	2.199	Power	0.425	0.911	Power	T=t1*Depth^t2	59.12	1.286	1	2.32	Power	30.47	1.613	Power	0.472	1.553	Power	T=t1*Depth^t2	64	0.03
Alt_RC2_A	1.71	Power	2.425	1.868	Power	0.49	0.993	Power	T=t1*Depth^t2	4.5	0.854	1.71											
Yucaipa_A	2.1	Power	11.443	1.2744	Power	0.7924	1.0327	Log-linear	T=t1+{ln(Depth)}*t2	13.7	2.2987	2.1											
Yucaipa_B	2.625	Power	18.156	0.7166	Power	0.7166	1.1132	Log-linear	T=t1+{ln(Depth)}*t2	24.9	6.4789	2.625											
Oakglenn_A	3.25	Power	3.9051	1.6125	Power	0.5786	1.014	Power	T=t1*Depth^t2	6.0921	0.5588	3.25											

General abbreviations and symbol definitions (excluding units of measure):

#	number
ID	identification
R	hydraulic radius

Table B.6 – Cross-section metrics, bed material, and critical metrics for sediment transport

Unique ID	Bankfull Area	Bankfull Hydraulic Radius	Bankfull Flow Rate	Bankfull Stream Power	Bankfull Specific Stream Power	Bank Height	Bank Hardness Penetrometer	Bank Hardness Rock Hammer	Bank Cohesion	Bank Stratification	Bank Angle	Bank Vegetation	Bed Vegetation	Bar Activity	Median Bed Material	16th Percentile Bed Material	84th Percentile Bed Material	Range of Bed Material (d84/d16)	Percent Sand	Distance to DS Hardpoint	Dhp (ONLY IF Lravg>1.05 for d50>16 mm, or Lravg>1.01 for d50 < 16 mm) else = 0	Dhp/ WQ10	Distance to DS Incising Stream (base-level drop) if >1,000 or NA, =1,000	Hydraulic Radius for Sediment Transport	Depth for Sediment Transport	Area for Sediment Transport	Critical Flow for Sediment Transport
	Area_BF	*Hyd_Radius_BF*	*Flow_BF*	*Pwr_BF*	*Sp_Pwr_BF*	*Bank_ht_max*	*Bank_Pentrom*	*Bank_Hmmr*	*Bank_cohesn*	*Bank_strat*	*Bank_angl*	*Bank_veg*	*Bed_veg*	*Bar_actvty*	*d50*	*d16*	*d84*	*d84_to_d16*	*Prcnt_Sand*	*Dist_Hrdpnt*	*Dhp_Important*	*Dhp/WQ10*	*Dist_BsDrp*	*R_Crit*	*Depth_Crit*	*Area_Crit*	*Flow_Crit*
	(m^2)	(m)	(m^3/s)	(Watt/m)	(Watt/m^2)	(m)	(tons/ft^2)	(10-100)			(°)				(mm)	(mm)	(mm)	(mm/mm)	(%)	(m)	(m)	(m/m)	(m)	(m)	(m)	(m^2)	(m^3/s)
Santiago_A	64.23	0.98	149.7	25,549	339	2.57	N/A	13	yes	yes	55.94	low	low	mod central bars not very vegetated	22	2	70.8	35	18%	9,600	-	-	1000	0.098	0.148	0.295	0.148
Santiago_B	50.06	1.31	131.3	19,317	587	2	N/A	N/A	no	no	33.45	low	low	alternating point bars	34	6.4	127.4	20	9%	10,127	-	-	1000	0.176	0.331	1.111	0.762
Hasley_1_A	4.15	0.72	12.1	3,157	739	1.44	0.75	N/A	no	yes	72.56	low	none	alternating point bars	13	2.1	92.6	44	15%	100	100	25	1000	0.038	0.075	0.029	0.012
Hasley_1_B	7.76	0.69	18.7	6,276	756	1.18	N/A	N/A	no	no	56.14	low	low	alternating point bars	3.2	0.5	25.7	51	44%	164	164	20	1000	0.007	0.012	0.003	0.000
Hasley_1_TRIB	4.95	0.43	6.1	1,563	137	1.64	N/A	N/A	no	no	28.9	mod	mod	none	3.2	0.5	25.7	51	44%	100	100	13	1000	0.009	0.024	0.007	0.001
Hasley_2_A	40.28	0.51	65.0	12,243	179	0.96	3	N/A	yes	yes	76.01	low	low	high/central bars	1.6	0.5	11.6	23	56%	1,700	-	-	1000	0.006	0.010	0.008	0.001
Hasley_2_B	59.30	1.65	171.1	25,004	1,053	2.61	4.5	N/A	yes	yes	67	low	none	high but not major bars	2.6	0.6	28.9	48	46%	1,950	-	-	1000	0.014	0.033	0.032	0.004
Hasley_2_TRIB	12.71	0.48	24.3	8,299	340	0.63	N/A	N/A	no	no	54.33	low	none	high/central bars	1.5	0.5	40	80	58%	1,850	-	-	1000	0.003	0.010	0.021	0.001
Hicks_A_08	0.58	0.14	0.9	118	15	1.02	N/A	N/A	no	no	19.9	low	none	none	0.6	0.3	1.3	4	93%	25	25	3	1000	0.004	0.003	0.002	0.000
Hicks_B_08	1.95	0.36	2.6	354	96	0.425	N/A	N/A	no	yes	57.17	low	none	none	0.6	0.3	1.3	4	93%	150	150	20	1000	0.003	0.004	0.001	0.000
Hicks_C_08	2.05	0.36	2.3	486	76	0.625	N/A	N/A	no	yes	47.73	low	low	mod alt pt bars and overbank braids	3.8	0.5	31.2	62	44%	175	175	10	1000	0.014	0.025	0.010	0.001
Hicks_D_08	3.80	0.40	5.1	1,286	214	0.65	N/A	N/A	no	yes	34.99	low	none	mod alt pt bars	1.9	0.6	72.4	121	51%	283	283	22	1000	0.006	0.013	0.003	0.000
Hicks_D_07	3.20	0.36	3.1	830	140	0.67	N/A	N/A	no	yes	29.9	low	none	mod alt pt bars	0.8	0.3	11.3	38	71%	283	283	19	1000	0.002	0.004	0.000	0.000
Hicks_E_08	2.32	0.47	2.8	541	174	0.825	3	N/A	no	yes	76.45	low	none	mod alt pt bars	1.3	0.4	53.7	134	58%	534	534	34	1000	0.005	0.006	0.002	0.000
Hicks_E_07	2.84	0.48	2.7	507	151	0.89	3	N/A	no	yes	70.89	low	none	mod alt pt bars	1.1	0.4	36.3	91	64%	534	534	30	1000	0.004	0.004	0.002	0.000
Hicks_F_08	4.24	0.35	4.1	663	91	0.58	3	N/A	no	yes	69.68	low	none	mod alt pt bars	1.3	0.4	53.7	134	58%	722	722	20	1000	0.006	0.011	0.003	0.000
Hicks_F_07	4.27	0.33	2.9	414	37	0.53	3	N/A	no	yes	65.16	low	none	mod alt pt bars	1.1	0.4	36.3	91	0.6393	722	722	36	1000	0.006	0.010	0.004	0.000
Agua_Hedi_A	16.98	1.05	32.4	1,335	86	1.7	N/A	N/A	no	no	52.28	high	low	mod alt pt bars	5	2.2	15.5	7	13%	50	50	6	1000	0.092	0.163	0.358	0.135
Agua_Hedi_B	19.54	1.39	25.8	709	60	2.1	N/A	N/A	yes	no	50.26	high	low	mod alt pt bars	5	2.2	15.5	7	13%	225	225	15	1000	0.138	0.239	0.400	0.113
Agua_Hedi_C	24.43	1.65	28.4	585	39	1.91	N/A	N/A	yes	no	76.34	high	low	mod alt pt bars	5	2.2	15.5	7	13%	416	416	30	1000	0.185	0.401	0.411	0.111
Dry_A	21.17	0.92	121.0	26,944	965	1.22	N/A	N/A	no	yes	61.65	low	low	mod alt pt bars	0.7	0.4	1.3	3	94%	33	33	3	1000	0.002	0.004	0.004	0.000

Unique ID	Bankfull Area *Area_BF* (m^2)	Bankfull Hydraulic Radius *Hyd_Radius_BF* (m)	Bankfull Flow Rate *Flow_BF* (m^3/s)	Bankfull Stream Power *Pwr_BF* (Watt/m)	Bankfull Specific Stream Power *Sp_Pwr_BF* (Watt/m^2)	Bank Height *Bank_ht_max* (m)	Bank Hardness Penetrometer *Bank_Pentrom* (tons/ft^2)	Bank Hardness Rock Hammer *Bank_Hmmr* (10-100)	Bank Cohesion *Bank_cohesn*	Bank Stratification *Bank_strat*	Bank Angle *Bank_angl* (°)	Bank Vegetation *Bank_veg*	Bed Vegetation *Bed_veg*	Bar Activity *Bar_actvty*	Median Bed Material *d50* (mm)	16th Percentile Bed Material *d16* (mm)	84th Percentile Bed Material *d84* (mm)	Range of Bed Material (d84/d16) *d84_to_d16* (mm/mm)	Percent Sand *Prcnt_Sand* (%)	Distance to DS Hardpoint *Dist_Hrdpnt* (m)	Dhp (ONLY IF Lravg>1.05 for d50>16 mm, or Lravg>1.01 for d50 < 16 mm) else = 0 *Dhp_Important* (m)	Dhp/ WQ10 *DhpWQ10* (m/m)	Distance to DS Incising Stream (base-level drop) if >1,000 or NA, =1,000 *Dist_BsDrp* (m)	Hydraulic Radius for Sediment Transport *R_Crit* (m)	Depth for Sediment Transport *Depth_Crit* (m)	Area for Sediment Transport *Area_Crit* (m^2)	Critical Flow for Sediment Transport *Flow_Crit* (m^3/s)
Dry_B	22.53	1.10	57.3	11,518	545	1.33	N/A	N/A	no	no	77.18	low	low	mod alt pt bars	0.75	0.4	4.35	11	86%	180	180	15	1000	0.003	0.004	0.003	0.000
Dry_C	25.03	1.65	77.2	18,102	1,280	4.87	N/A	N/A	no	no	70.34	low	low	mod alt pt bars	0.8	0.4	7.4	19	78%	293	293	24	1000	0.003	0.007	0.009	0.000
Hovnanian_A	14.76	1.02	29.8	9,166	557	1.47	N/A	N/A	no	yes	39.01	high	mod	alt bars	36.7	2	157.1	78.6	24%	1,100	-	-	1000	0.091	0.135	0.274	0.110
Hovnanian_B	7.70	0.90	14.2	4,385	539	1.2	N/A	N/A	yes	yes	33.09	high	mod	alt bars	16	2	173.3	86.7	38%	1,100	-	-	1000	0.040	0.076	0.032	0.007
Santimeta_A	4.40	0.63	19.5	14,010	3,113	4.13	4.5	N/A	yes	yes	77.71	low	none	high	0.9	0.3	6	20.0	72%	4,400	4,400	12,502	153.5	0.001	0.001	0.000	0.000
Santimeta_B	26.60	1.34	132.4	65,836	4,736	2.06	4.5	N/A	yes	yes	71.06	low	none	high	0.9	0.35	4.65	13.3	74%	4,547	4,547	648	300	0.001	0.002	0.001	0.000
Santimeta_C	13.05	0.92	55.8	28,086	2,194	1.22	4.5	N/A	yes	yes	74.86	low	none	high	0.9	0.4	3.3	8.3	77%	4,751	4,751	500	504	0.001	0.003	0.004	0.000
Ltl_Cedar_A	11.47	0.96	21.4	4,194	339	0.62	N/A	N/A	no	no	64.68	mod	low	mod?	28.5	16	83.7	5.2	2%	165	165	17	46	0.111	0.178	0.423	0.186
Ltl_Cedar_B	15.30	0.33	18.4	4,687	102	1.26	N/A	N/A	no	no	31.04	mod	mod	mod?	20.3	7.8	62.8	8.1	7%	329	329	20	210	0.061	0.132	0.312	0.121
Proctor_A	34.04	0.73	62.2	7,755	421	0.81	N/A	N/A	no	no	19.6	mod	mod	vegetated	10.5	1.6	70.6	44.1	19%	4,000	-	-	1000	0.064	0.126	0.195	0.070
Proctor_B	4.82	0.30	5.1	702	48	0.57	N/A	N/A	no	no	19.3	mod	mod	vegetated	1.6	0.3	17.7	59.0	55%	4,000	-	-	1000	0.009	0.018	0.001	0.000
Proctor_TRIB	1.91	0.16	1.6	336	16	0.47	N/A	N/A	no	no	28.25	mod	mod	vegetated	6.05	0.95	44.15	46.5	37%	4,000	-	-	1000	0.022	0.037	0.015	0.003
Perris_1_A	1.91	0.32	1.3	74	15	0.75	N/A	N/A	yes	no	31.8	low	low	none	0.8	0.3	2.5	8.3	79%	47	47	9	1000	0.010	0.015	0.003	0.000
Perris_1_B	4.12	0.49	5.0	680	58	1.12	4.5	N/A	no	no	38.78	low	low	none	0.8	0.3	2.6	8.7	79%	53	53	15	1000	0.004	0.003	0.001	0.000
Perris_1_C	4.19	0.73	5.2	370	59	0.43	4.5	N/A	no	no	44.79	low	low	none	0.8	0.3	2.7	9.0	78%	28	28	10	1000	0.009	0.008	0.002	0.000
Perris_2_A	0.81	0.17	0.9	215	41	0.23	N/A	N/A	no	no	17.65	low	low	none	0.9	0.3	2.2	7.3	82%	215	-	-	1000	0.003	0.004	0.000	0.000
Perris_2_B	0.61	0.15	0.7	246	62	0.25	N/A	N/A	no	no	38.06	low	low	none	0.5	0.25	1.6	6.4	90%	447	-	-	1000	0.001	0.001	0.000	0.000
Perris_3_A	17.49	0.28	16.2	2,258	39	1.71	N/A	N/A	no	no	9.02	low	low	moderately vegetated bars	0.8	0.3	2.3	7.7	82%	71	-	-	1000	0.004	0.006	0.000	0.000
Perris_3_B	27.10	0.34	31.2	5,137	79	1.43	N/A	N/A	no	no	7.87	low	low	moderately vegetated bars	0.9	0.3	2.9	9.7	75%	400	-	-	1000	0.004	0.007	0.000	0.000
AltPerris_A	7.22	0.15	4.5	451	9	0.5	0.8	N/A	no	no	19.98	mod	mod	vegetated	0.9	0.4	1.9	4.8	86%	200	200	5	1000	0.007	0.019	0.018	0.001
AltPerris_B	3.97	0.22	2.7	190	12	0.6	0.8	N/A	no	no	12.58	mod	mod	vegetated	0.9	0.4	1.8	4.5	90%	300	300	18	1000	0.010	0.023	0.049	0.004
AltPerris_C	5.30	0.41	6.8	329	25	0.32	0.8	N/A	no	no	20.38	mod	mod	vegetated	0.8	0.3	1.7	5.7	90%	400	400	41	1000	0.013	0.022	0.031	0.004
Dulzura_A	2.41	0.29	1.5	88	13	1.39	N/A	N/A	no	no	31.9	mod	none	alternate point bars	34.6	3.2	81.3	25.4	14%	3,400	-	-	1000	0.447	0.665	4.552	3.705
Dulzura_B	4.11	0.51	3.7	216	37	1.43	N/A	N/A	no	no	42.8	mod	none	alternate point bars	47.7	2	129.4	64.7	20%	3,400	-	-	1000	0.617	0.827	4.180	4.215

Unique ID	Bankfull Area *Area_BF* (m^2)	Bankfull Hydraulic Radius *Hyd_Radius_BF* (m)	Bankfull Flow Rate *Flow_BF* (m^3/s)	Bankfull Stream Power *Pwr_BF* (Watt/m)	Bankfull Specific Stream Power *Sp_Pwr_BF* (Watt/m^2)	Bank Height *Bank_ht_max* (m)	Bank Hardness Penetrometer *Bank_Pentrom* (tons/ft^2)	Bank Hardness Rock Hammer *Bank_Hmmr* (10-100)	Bank Cohesion *Bank_cohesn*	Bank Stratification *Bank_strat*	Bank Angle *Bank_angl* (°)	Bank Vegetation *Bank_veg*	Bed Vegetation *Bed_veg*	Bar Activity *Bar_actvty*	Median Bed Material *d50* (mm)	16th Percentile Bed Material *d16* (mm)	84th Percentile Bed Material *d84* (mm)	Range of Bed Material (d84/d16) *d84_to_d16* (mm/mm)	Percent Sand *Prcnt_Sand* (%)	Distance to DS Hardpoint *Dist_Hrdpnt* (m)	Dhp (ONLY IF Lravg>1.05 for d50>16 mm, or Lravg>1.01 for d50 < 16 mm) else = 0 *Dhp_Important* (m)	Dhp/ WQ10 *DhpWQ10* (m/m)	Distance to DS Incising Stream (base-level drop) if >1,000 or NA, =1,000 *Dist_BsDrp* (m)	Hydraulic Radius for Sediment Transport *R_Crit* (m)	Depth for Sediment Transport *Depth_Crit* (m)	Area for Sediment Transport *Area_Crit* (m^2)	Critical Flow for Sediment Transport *Flow_Crit* (m^3/s)
Acton_A	3.78	0.19	3.5	1,291	71	0.35	0.75	N/A	no	no	26.6	low	none		4.9	2.3	12.1	5.3	10%	70	70	4	1000	0.010	0.015	0.004	0.001
Acton_B	3.90	0.59	22.3	8,240	1,161	0.51	0.75	N/A	no	no	42	low	none		3.8	2	8.8	4.4	20%	425	425	95	1000	0.008	0.016	0.020	0.006
Acton_C	7.89	0.71	22.4	11,179	1,315	2.5	0.75	N/A	no	no	87.8	low	none		5	2.1	16.9	8.0	15%	779	779	126	1000	0.008	0.017	0.004	0.001
Acton_D	18.50	1.71	75.9	24,436	3,941	3.25	0.75	N/A	no	no	88.2	low	none		9.4	2.7	33.1	12.3	10%	866	866	194	1000	0.022	0.024	0.038	0.009
Acton_E	2.29	0.50	9.0	13,363	12,039	2.3	0.75	N/A	no	no	87.5	low	none		9.4	2.7	33.1	12.3	10%	916	916	956	1000	0.005	0.001	0.001	0.000
Acton_F	2.03	0.18	1.3	197	25	0.41	N/A	N/A	no	no	14	med	med		9.4	2.7	33.1	12.3	10%	943	-	-	1000	0.047	0.107	0.049	0.013
Acton_G	1.97	0.19	1.0	108	13	0.25	N/A	N/A	no	no	14	med	med		9.4	2.7	33.1	12.3	10%	949	-	-	1000	0.069	0.074	0.393	0.108
Borrego_A	30.62	2.21	368.6	72,682	5,192	3	N/A	N/A	no	no	45	none	none		1.6	0.8	11.2	14.0	64%	20	20	2	1000	0.006	0.005	0.030	0.007
Borrego_B	154.50	1.15	419.2	73,196	720	2.23	N/A	N/A	no	no	53	low	low	moderately	1.6	0.8	11.2	14.0	64%	340	340	8	1000	0.007	0.015	0.013	0.001
Borrego_C	111.99	3.37	1,007.6	142,344	5,102	4.04	N/A	N/A	no	no	63.4	low	none	high	1	0.4	24.2	60.5	71%	685	685	33	1000	0.005	0.007	0.045	0.006
Borrego_D	160.77	4.394	898.7	269,769	9,151	6.68	N/A	N/A	no	no	72.4	med	low	low	45	2.3	105.2	45.7	16%	1,121	1,121	61	1000	0.114	0.212	0.614	0.301
Borrego_E	38.18	1.72	108.3	29,327	1,594	3.13	N/A	N/A	no	no	52.4	med	low	low	45	2.3	105.2	45.7	16%	20	20	2	1000	0.126	0.270	0.228	0.114
Topanga_A	20.06	0.90	45.9	12,528	524	1.78	N/A	N/A	no	no	17.7	high	none	mid bar (low)	87.8	24.7	240.1	9.7	0%	20	20	1	1000	0.245	0.465	1.831	1.758
Topanga_B	50.5	1.156	108.3	18,590	439	1.66	N/A	N/A	no	no	10.9	high	low	moderate activity/ vegetated	100	14.6	331.7	22.7	4%	100	100	3	1000	0.443	0.788	7.301	8.256
Topanga_C	37.2	1.874	203.4	199,523	11,401	7	N/A	30	no	no	74.1	high	none	none	499.5	270.6	1591.2	5.9	0%	2	2	0	1000	0.387	0.620	2.117	4.043
Challengr_A	3.25	0.51	3.0	277	84	0.98	N/A	N/A	no	no	83.13	high	low	poorly developed point bars	51.2	16.6	112.7	6.8	4%	885	885	34	1000	0.422	0.797	2.403	1.966
Challengr_B	1.55	0.41	0.9	55	28	0.86	N/A	N/A	no	no	76.9	high	low	none	3.4	2	7.5	3.8	4%	1,169	1,169	48	1000	0.043	0.069	0.034	0.005
Challengr_C	2.56	0.43	3.2	759	146	0.97	N/A	N/A	no	no	36.41	high	low	alternating point bars	69.7	3.4	151.8	44.6	13%	146	146	6	1000	0.222	0.376	0.885	0.698
Mcgonigle_A	3.54	0.26	1.5	154	10	0.465	N/A	N/A	no	no	20.1	high	low	alternating point bars	23.4	11.7	41.9	3.6	1%	1,600	-	-	1000	0.176	0.347	1.420	0.475
Sanjuan_A	8.82	0.42	12.4	2,151	52	1.06	4.5	N/A	no	no	42	low	low	Mid bars (high)	34.4	2	104.8	52.4	21%	1,700	-	-	1000	0.151	0.302	1.026	0.729
Sanjuan_B	19.92	0.95	24.6	1,810	87	1.48	N/A	?	no	no	24.8	low	none	none	61.2	3.2	252.4	78.9	13%	2,277	-	-	1000	0.633	1.062	10.178	9.555
Pigeon_A	3.92	0.35	4.7	703	85	0.98	0.75	N/A	no	no	72.9	low	med	high	1.2	0.4	2.7	6.8	75%	300	300	5	1000	0.006	0.006	0.001	0.000
Pigeon_B	4.60	0.33	6.4	1,342	86	0.73	0.75	N/A	no	no	73.1	low	med	high	0.9	0.4	2.4	6.0	80%	310	310	17	1000	0.003	0.004	0.001	0.000
Pigeon_C	11.01	0.99	11.7	846	74	1.42	1	N/A	no	no	60.9	med	low	alternating point bars	1.5	0.6	3.3	5.5	62%	100	100	12	1000	0.016	0.032	0.004	0.000

Unique ID	Bankfull Area *Area_BF* (m^2)	Bankfull Hydraulic Radius *Hyd_Radius_BF* (m)	Bankfull Flow Rate *Flow_BF* (m^3/s)	Bankfull Stream Power *Pwr_BF* (Watt/m)	Bankfull Specific Stream Power *Sp_Pwr_BF* (Watt/m^2)	Bank Height *Bank_ht_max* (m)	Bank Hardness Penetrometer *Bank_Pentrom* (tons/ft^2)	Bank Hardness Rock Hammer *Bank_Hmmr* (10-100)	Bank Cohesion *Bank_cohesn*	Bank Stratification *Bank_strat*	Bank Angle *Bank_angl* (°)	Bank Vegetation *Bank_veg*	Bed Vegetation *Bed_veg*	Bar Activity *Bar_actvty*	Median Bed Material *d50* (mm)	16th Percentile Bed Material *d16* (mm)	84th Percentile Bed Material *d84* (mm)	Range of Bed Material (d84/d16) *d84_to_d16* (mm/mm)	Percent Sand *Prcnt_Sand* (%)	Distance to DS Hardpoint *Dist_Hrdpnt* (m)	Dhp (ONLY IF Lravg>1.05 for d50>16 mm, or Lravg>1.01 for d50 < 16 mm) else = 0 *Dhp_Important* (m)	Dhp/ WQ10 *DhpWQ10* (m/m)	Distance to DS Incising Stream (base-level drop) if >1,000 or NA, =1,000 *Dist_BsDrp* (m)	Hydraulic Radius for Sediment Transport *R_Crit* (m)	Depth for Sediment Transport *Depth_Crit* (m)	Area for Sediment Transport *Area_Crit* (m^2)	Critical Flow for Sediment Transport *Flow_Crit* (m^3/s)
Stewart_A	3.27	0.43	5.8	5,691	882	1.11	N/A	N/A	no	no	27.6	med	none	none	151.8	6.8	724	106.5	2%	200	-	-	1000	0.117	0.257	0.206	0.153
Santiagbd_A	13.09	0.74	29.4	5,677	440	1.12	N/A	N/A	no	no	64.2	low	none	alternating point bars	14.1	3.6	98.3	27.3	10%	12,954	-	-	1000	0.056	0.111	0.100	0.040
Santiagbd_B	13.77	0.58	25.3	4,510	230	11.14	N/A	N/A	no	no	46.3	low	none	none	7.2	2	21.1	10.6	17%	12,954	-	-	1000	0.031	0.056	0.066	0.017
Santiagnl_A	30.4	1.631	136.4	32,375	1,869	1.29	N/A	30	no	no	32.7	low	none	none	7.2	2	21.1	10.6	17%	13,299	-	-	1000	0.023	0.027	0.079	0.021
Santiagnl_B	8.23	0.68	17.3	5,459	910	1.38	N/A	38	no	no	52.7	low	none	none	26.2	4.9	298.6	60.9	9%	13,299	-	-	1000	0.063	0.153	0.082	0.035
Silverado_A	8.42	0.79	17.0	6,376	716	1.1	N/A	44	no	no	38.2	high	low	none	141.5	35.9	353.7	9.9	7%	3,000	-	-	1000	0.287	0.590	1.466	1.503
Silverado_B	5.18	0.56	10.3	4,589	637	1.33	N/A	45	no	no	53.1	high	low	none	124.3	16.8	384	22.9	11%	3,085	-	-	1000	0.212	0.512	0.820	0.852
Escondido_A	15.21	0.80	28.1	10,955	648	2.155	N/A	50	no	no	16.9	high	none	none	128	35.9	370.5	10.3	0%	10	-	-	1000	0.250	0.472	1.803	1.533
Escondido_B	31.85	1.05	39.4	4,289	147	1.87	N/A	N/A	no	no	18.2	high	med	vegetated midbars (low)	31.2	9.6	123.1	12.8	3%	100	-	-	1000	0.218	0.420	1.556	0.675
Sanantoni_A	17.93	0.90	49.8	12,171	573	3.51	N/A	N/A	no	no	63.9	low	low	none	64	16	180	11.3	8%	750	750	21	1000	0.199	0.350	1.481	1.504
Sanantoni_B	115.40	1.70	345.5	42,028	643	2.1	N/A	N/A	no	no	85.2	low	low	high (mid bars and alternating point bars)	16	3.1	70.2	22.6	11%	750	750	12	1000	0.100	0.204	0.773	0.350
Alt_RC2_A	6.61	0.83	27.7	9,770	1,221	1.71	N/A	N/A	yes	no	31.6	mod	mod	none	0.125	0.125	0.6	4.8	96%	200	-	-	1000	0.001	0.003	0.000	0.000
Yucaipa_A	27.0	1.591	208.6	75,906	4,886	2.55	N/A	N/A	no	no	90	mod	none	alternating point bars	3.5	2.1	8.4	4.0	12%	200	200	15	1000	0.007	0.011	0.035	0.008
Yucaipa_B	66.1	2.026	415.8	151,330	5,113	3	N/A	N/A	no	no	90	mod	none	high (mid bars)	4.8	2	18.6	9.3	17%	300	300	15	1000	0.010	0.022	1.163	0.213
Oakglenn_A	24.2	1.752	179.6	129,307	11,147	3.65	N/A	45	no	no	46.5	low	none	none	23.4	3	84.1	28.0	9%	20	20	4	1000	0.025	0.045	0.026	0.011

General abbreviations and symbol definitions (excluding units of measure):

alt	alternating
d16	grain size that 16 percent of the particles are finer than
d50	grain size that 50 percent of the particles are finer than
d84	grain size that 84 percent of the particles are finer than
Dhp	downstream distance to hardpoint
DS	downstream
ID	identification
LRavg	average sediment-transport capacity ratio
mod	moderately
NA	not applicable
pt	point
veg	vegetated
WQ10	top width at the 10-yr flow

Table B.7 – 10-yr hydraulic metrics, load ratio, enlargement, bank stability, and reference width

Unique ID	10-yr Flow Depth *Depth_10yr* (m)	10-yr Area *Area_10yr* (m^2)	10-yr Hydraulic Radius *Hyd-Rad_10yr* (m)	10-yr Top Width *TopWidth_10yr* (m)	Q10_ Overbank? (blank or OVRBNK)	10-yr Stream Power *Q_10yr* (Watt/m)	10-yr Specific Stream Power *ω_10yr* (Watt/m^2)	10-yr Dimensionless Specific Stream Power *ω*_10yr*	10-yr Shear Stress *τ_10yr* (N/m^2)	10-yr Dimensionless Shear Stress *τ*_10yr*	Average Load Ratio (dvp/undvlp) *Lratio* (m^3/m^3)	Reference BF Area *Apre* (m^2)	Reference Source *Ref_source*	Enlargement Ratio (Apost/Apre) *ΔAratio* (m^2/m^2)	Represenative Geotechnical Stability (max Ng of both banks, dependent on 50% MW risk in moderate-/ well-consolidated banks) *Max_Ng* (m/m)	Reference Bankfull Top Width (regional Q10-dependent) *Wref* (m)	Relative Lateral Departure from Wref (regional) *Nw* (>1 tend braided, <1 tend incision)
Santiago_A	1.69	28.98	0.70	40.34		9186.19	227.73	0.67	119.47	0.34	1.01	64.23	AP: 1947, 1982	1.00	1.452	33.888	1.190
Santiago_B	1.76	25.56	0.92	26.88		7804.09	290.37	0.44	135.94	0.25	1.00	50.06	AP: 1947, 1982	1.00	0.286	33.659	0.798
Hasley_1_A	1.23	3.28	0.62	4.07		2277.62	559.06	3.61	163.09	0.78	1.04	2.25	FI: 2002 (grading)	1.84	2.371	14.567	0.280
Hasley_1_B	0.92	4.44	0.50	8.13		2889.51	355.35	18.77	167.12	3.23	1.03	2.25	FI: 2002 (grading)	3.45	1.689	14.483	0.561
Hasley_1_TRIB	0.31	1.06	0.17	7.74		184.48	23.82	1.26	45.02	0.87	1.01	4.95	FI: 2002 (grading)	1.00	0.149	4.579	1.691
Hasley_2_A	0.66	19.33	0.35	54.42		4576.06	84.09	12.56	66.38	2.56	1.04	16.33	AP: 1994	2.47	1.830	23.446	2.321
Hasley_2_B	0.85	10.26	0.54	18.40		2054.72	111.64	8.05	78.69	1.87	1.04	16.33	AP: 1994	3.63	3.344	18.197	1.011
Hasley_2_TRIB	0.41	8.51	0.35	22.79		4520.97	198.37	32.65	120.79	4.97	1.02	4.24	AP: 1989	3.00	0.509	17.701	1.288
Hicks_A_08	0.64	2.97	0.41	7.15	OVRBNK	1213.74	169.86	110.50	52.62	5.42	1.06	1.21	FI & AP:1982	1.00	0.377	15.082	0.474
Hicks_B_08	1.12	4.86	0.64	7.33	OVRBNK	1284.80	175.32	114.06	86.89	8.95	1.05	1.60	FI & AP:1982	1.22	0.652	15.119	0.485
Hicks_C_08	0.93	7.52	0.42	17.50	OVRBNK	1979.56	113.09	4.62	87.23	1.42	1.05	1.60	FI & AP:1982	1.28	0.513	15.124	1.157
Hicks_D_08	1.31	6.29	0.44	13.14	OVRBNK	2307.04	175.61	20.27	113.01	3.67	1.05	1.60	FI & AP:1982	2.37	1.076	14.862	0.884
Hicks_D_07	1.39	7.83	0.46	14.66	OVRBNK	2405.02	164.01	69.30	123.03	9.50	1.05	1.60	FI & AP:1982	2.00	0.724	14.862	0.987
Hicks_E_08	1.25	6.73	0.52	15.81	OVRBNK	1691.79	106.98	21.82	101.01	4.80	1.04	1.60	FI & AP:1982	1.45	1.601	14.612	1.082
Hicks_E_07	1.34	8.39	0.56	17.91	OVRBNK	1648.85	92.09	24.13	105.13	5.90	1.04	1.60	FI & AP:1982	1.78	1.362	14.612	1.225
Hicks_F_08	1.60	8.44	0.37	36.45	OVRBNK	1377.35	37.79	7.71	59.88	2.85	1.04	1.60	FI & AP:1982	2.65	0.841	14.503	2.513
Hicks_F_07	1.90	12.91	0.32	20.26	OVRBNK	1233.70	60.88	15.96	46.06	2.59	1.04	1.60	FI & AP:1982	2.67	0.622	14.503	1.397
Agua_Hedi_A	2.29	20.34	1.76	8.68		2257.67	260.25	7.04	72.32	0.89	5.82	9.44	FI	1.80	0.980	34.172	0.254
Agua_Hedi_B	3.45	33.33	1.91	15.29	OVRBNK	1492.74	97.62	2.64	52.54	0.65	5.84	10.44	FI	1.87	1.463	34.042	0.449
Agua_Hedi_C	4.78	39.18	2.12	13.90	OVRBNK	1110.34	79.88	2.16	43.70	0.54	5.83	14.04	FI	1.74	3.922	33.912	0.410
Dry_A	0.40	3.67	0.27	12.13		2064.99	170.28	87.91	60.46	5.34	1.01	9.66	FI	2.19	0.841	15.007	0.808
Dry_B	0.73	6.30	0.47	12.01		1829.75	152.35	70.92	94.78	7.81	1.02	10.80	FI	2.09	2.660	14.876	0.807
Dry_C	0.72	6.17	0.53	12.43		2090.57	168.18	71.07	124.18	9.59	1.02	10.80	FI	2.32	7.272	14.737	0.843

Unique ID	10-yr Flow Depth *Depth_10yr* (m)	10-yr Area *Area_10yr* (m^2)	10-yr Hydraulic Radius *Hyd-Rad_10yr* (m)	10-yr Top Width *TopWidth_10yr* (m)	Q10_ Overbank? (blank or OVRBNK)	10-yr Stream Power *Ω_10yr* (Watt/m)	10-yr Specific Stream Power *ω_10yr* (Watt/m^2)	10-yr Dimensionless Specific Stream Power *ω*_10yr*	10-yr Shear Stress *τ_10yr* (N/m^2)	10-yr Dimensionless Shear Stress *τ*_10yr*	Average Load Ratio (dvp/undvlp) *Lratio* (m^3/m^3)	Reference BF Area *Apre* (m^2)	Reference Source *Ref_source*	Enlargement Ratio (Apost/Apre) *ΔAratio* (m^2/m^2)	Represenative Geotechnical Stability (max Ng of both banks, dependent on 50% MW risk in moderate-/ well-consolidated banks) *Max_Ng* (m/m)	Reference Bankfull Top Width (regional Q10-dependent) *Wref* (m)	Relative Lateral Departure from Wref (regional) *Nw* (>1 tend braided, <1 tend incision)
Hovnanian_A	1.04	6.19	0.60	10.27		2701.50	263.11	0.36	185.08	0.31	1.04	14.76	AP: 1982	1.00	0.343	14.625	0.702
Hovnanian_B	1.37	5.37	0.73	7.03		2669.91	379.64	1.79	224.78	0.87	1.04	7.70	AP: 1982	1.00	0.197	14.545	0.484
Santimeta_A	0.42	0.98	0.24	0.35		1644.83	4673.45	1654.94	173.04	11.88	1.14	7.10	AP: 1982	4.91	8.440	7.853	0.045
Santimeta_B	0.32	1.57	0.21	7.02		1139.25	162.26	57.46	105.89	7.27	1.09	13.83	AP: 1982	1.92	5.274	7.853	0.894
Santimeta_C	0.25	1.63	0.17	9.50		1152.73	121.39	42.99	87.07	5.98	1.12	1.89	AP: 1982	6.89	2.216	7.853	1.209
Ltl_Cedar_A	1.34	9.23	0.83	9.86		3067.72	311.20	0.62	163.76	0.35	1.00	5.22	FI & AP: 1982	2.20	1.546	19.116	0.516
Ltl_Cedar_B	0.69	10.64	0.45	16.20		4008.28	247.46	0.82	115.03	0.35	1.00	15.09	FI & AP: 1983	1.01	0.052	19.195	0.844
Proctor_A	0.94	10.46	0.42	23.46	OVRBNK	1644.52	70.09	0.62	52.20	0.31	1.06	34.04	FI	1.00	0.140	17.674	1.328
Proctor_B	0.82	6.35	0.33	18.31	OVRBNK	993.55	54.26	8.11	45.84	1.77	1.12	4.82	FI	1.00	0.122	13.377	1.369
Proctor_TRIB	0.76	4.45	0.29	15.81	OVRBNK	1176.49	74.41	1.51	60.64	0.62	1.00	1.91	FI	1.00	0.075	11.989	1.319
Perris_1_A	0.54	1.49	0.28	5.15		52.70	10.23	4.32	16.49	1.27	1.07	3.53	FI	1.51	0.092	5.082	1.014
Perris_1_B	0.40	1.10	0.24	3.52		113.73	32.28	13.64	32.31	2.49	1.09	3.99	FI	1.33	0.259	4.934	0.714
Perris_1_C	0.59	1.08	0.33	2.76		56.04	20.30	8.58	23.27	1.80	1.09	4.18	FI	1.18	0.227	4.806	0.574
Perris_2_A	0.24	0.44	0.12	3.25		96.20	29.63	10.49	30.47	2.09	1.05	0.81	FI	1.00	0.003	3.461	0.938
Perris_2_B	0.19	0.29	0.11	2.19		93.94	42.96	36.74	36.41	4.50	0.94	0.61	FI	1.00	0.054	2.950	0.741
Perris_3_A	0.42	3.97	0.17	23.80		361.56	15.19	6.42	23.14	1.79	1.00	17.49	FI	1.00	0.004	8.321	2.861
Perris_3_B	0.39	3.35	0.16	21.23		379.31	17.87	6.33	25.94	1.78	1.01	27.10	FI	1.00	0.006	7.870	2.698
AltPerris_A	0.24	4.39	0.12	37.34		231.31	6.19	2.19	11.75	0.81	1.00	7.22	FI	1.00	0.014	7.886	4.735
AltPerris_B	0.28	3.32	0.20	16.60		145.87	8.79	3.11	13.81	0.95	0.99	3.97	FI	1.00	0.004	7.485	2.218
AltPerris_C	0.35	2.26	0.23	9.68		95.45	9.86	4.17	11.11	0.86	0.99	3.78	FI	1.40	0.018	7.350	1.317
Dulzura_A	2.30	50.59	1.20	33.21	OVRBNK	4688.55	141.18	0.21	70.82	0.13	1.01	13.52	FI & AP: 1971	1.97	0.172	40.638	0.817
Dulzura_B	2.63	53.23	1.12	30.34	OVRBNK	4694.38	154.73	0.14	65.74	0.09	1.01	13.52	FI & AP: 1972	1.65	0.243	40.661	0.746
Acton_A	0.36	2.97	0.17	17.36		946.53	54.54	1.52	62.11	0.78	1.03	1.71	FI (graded Acton G ~1990s)	2.24	0.021	8.308	2.089
Acton_B	0.25	0.86	0.17	4.50		789.78	175.67	7.17	63.33	1.03	1.04	1.71	FI (graded Acton G ~1990s)	2.23	0.900	7.602	0.591

Unique ID	10-yr Flow Depth	10-yr Area	10-yr Hydraulic Radius	10-yr Top Width	Q10_ Overbank?	10-yr Stream Power	10-yr Specific Stream Power	10-yr Dimensionless Specific Stream Power	10-yr Shear Stress	10-yr Dimensionless Shear Stress	Average Load Ratio (dvp/undvlp)	Reference BF Area	Reference Source	Enlargement Ratio (Apost/Apre)	Represenative Geotechnical Stability (max Ng of both banks, dependent on 50% MW risk in moderate-/ well-consolidated banks)	Reference Bankfull Top Width (regional Q10-dependent)	Relative Lateral Departure from Wref (regional)
	Depth_10yr	*Area_10yr*	*Hyd-Rad_10yr*	*TopWidth_10yr*		*Ω_10yr*	*ω_10yr*	*ω*_10yr*	*τ_10yr*	*τ*_10yr*	*Lratio*	*Apre*	*Ref_source*	*ΔAratio*	*Max_Ng*	*Wref*	*Nw*
	(m)	(m^2)	(m)	(m)	(blank or OVRBNK)	(Watt/m)	(Watt/m^2)		(N/m^2)		(m^3/m^3)	(m^2)		(m^2/m^2)	(m/m)	(m)	(>1 tend braided, <1 tend incision)
Acton_C	0.41	1.21	0.23	6.18		808.72	130.94	3.54	113.73	1.41	1.04	1.71	FI (graded Acton G ~1990s)	13.68	7.479	6.688	0.923
Acton_D	0.33	1.12	0.24	4.47		399.52	89.38	0.94	76.68	0.50	1.07	1.71	FI (graded Acton G ~1990s)	9.85	9.909	5.913	0.756
Acton_E	0.56	0.52	0.22	0.96		1747.19	1824.24	19.14	325.53	2.14	1.05	1.71	FI (graded Acton G ~1990s)	1.35	6.831	5.762	0.166
Acton_F	0.40	1.83	0.17	10.34		173.66	16.79	0.18	26.77	0.18	1.03	1.71	FI (graded Acton G ~1990s)	1.07	0.008	5.672	1.824
Acton_G	0.26	2.08	0.19	9.18	OVRBNK	115.99	12.63	0.13	19.77	0.13	1.07	1.71	FI (graded Acton G ~1990s)	1.00	0.002	5.652	1.625
Borrego_A	0.47	4.10	0.40	8.94		3121.16	349.12	52.16	79.23	3.06	3.52	23.94	AP: 1952	1.38	1.098	19.225	0.465
Borrego_B	0.50	13.94	0.31	44.74		2753.44	61.55	9.19	54.08	2.09	3.53	23.94	AP: 1952	6.04	1.085	19.191	2.331
Borrego_C	0.46	7.64	0.37	20.76		2219.51	106.92	32.33	52.12	3.22	3.50	23.94	AP: 1952	4.38	5.201	19.159	1.083
Borrego_D	1.02	9.35	0.62	18.25		4261.31	233.52	0.23	186.77	0.26	3.76	23.94	AP: 1952	6.72	10.397	18.280	0.998
Borrego_E	1.66	8.35	0.79	9.16		3830.96	418.15	0.42	214.35	0.29	3.63	23.94	AP: 1952	1.51	1.042	18.252	0.502
Topanga_A	1.97	25.81	0.95	25.22	OVRBNK	16700.99	662.30	0.24	259.64	0.18	1.04	20.06	AP: 1989	1.00	0.063	35.978	0.701
Topanga_B	1.77	33.01	0.96	32.95		10723.64	325.41	0.10	164.73	0.10	1.04	25.11	FI & AP: 1989	2.01	0.003	36.310	0.908
Topanga_C	2.64	14.89	1.26	10.77		61193.67	5680.81	0.15	1234.86	0.15	1.04	37.24	AP: 1989	1.00	0.000	36.287	0.297
Challengr_A	1.75	15.35	0.55	25.84	OVRBNK	1382.49	53.50	0.04	50.79	0.06	1.16	2.06	FI & AP: 1982, 1989	1.58	2.476	18.748	1.378
Challengr_B	2.20	17.35	0.70	24.22	OVRBNK	884.90	36.53	1.76	42.05	0.76	1.09	2.37	FI & AP: 1982, 1990	1.55	1.701	18.629	1.300
Challengr_C	1.29	11.21	0.47	23.77	OVRBNK	3497.00	147.14	0.08	112.44	0.10	1.07	2.56	FI & AP: 1982, 1991	1.00	0.226	18.525	1.283
Mcgonigle_A	0.86	20.65	0.48	45.87	OVRBNK	1359.73	29.64	0.08	48.49	0.13	7.51	1.55	FI & AP: 1966, 1980, 1982, 1985, 1989	2.28	0.037	17.833	2.572
Sanjuan_A	1.71	56.70	0.91	61.29	OVRBNK	23251.16	379.38	0.57	158.46	0.28	1.00	8.82	AP 1982	1.00	13.392	51.692	1.186
Sanjuan_B	3.18	68.94	1.84	39.53	OVRBNK	9687.30	245.07	0.15	135.10	0.14	1.00	19.92	AP 1982	1.00	0.072	51.289	0.771
Pigeon_A	1.42	7.28	0.47	61.56	OVRBNK	1584.04	25.73	5.92	70.91	3.65	1.17	2.69	FI & AP: 1966, 1980, 1989	1.61	1.638	15.934	3.863
Pigeon_B	0.80	6.69	0.40	18.53	OVRBNK	2215.58	119.54	42.33	83.13	5.71	1.17	3.44	FI & AP: 1966, 1980, 1990	1.45	1.233	15.934	1.163
Pigeon_C	1.60	7.17	0.79	8.17		474.21	58.07	9.56	57.10	2.35	1.01	4.99	FI & AP: 1966, 1980, 1991	1.16	0.856	12.759	0.640
Stewart_A	1.53	8.48	0.67	12.09	OVRBNK	19864.20	1642.85	0.27	657.44	0.27	1.00	3.27	FI & AP: 1963	1.00	0.097	21.479	0.563
Santiagbd_A	1.32	14.13	0.76	19.26	OVRBNK	6252.07	324.69	1.85	146.59	0.64	1.00	8.23	FI - pre-2007 fire (i.e., filling)	1.59	0.996	26.771	0.719

Unique ID	10-yr Flow Depth *Depth_10yr* (m)	10-yr Area *Area_10yr* (m^2)	10-yr Hydraulic Radius *Hyd-Rad_10yr* (m)	10-yr Top Width *TopWidth_10yr* (m)	Q10_ Overbank? (blank or OVRBNK)	10-yr Stream Power *Ω_10yr* (Watt/m)	10-yr Specific Stream Power *ω_10yr* (Watt/m^2)	10-yr Dimensionless Specific Stream Power *ω*_10yr*	10-yr Shear Stress *τ_10yr* (N/m^2)	10-yr Dimensionless Shear Stress *τ*_10yr*	Average Load Ratio (dvp/undvlp) *Lratio* (m^3/m^3)	Reference BF Area *Apre* (m^2)	Reference Source *Ref_source*	Enlargement Ratio (Apost/Apre) *ΔAratio* (m^2/m^2)	Represenative Geotechnical Stability (max Ng of both banks, dependent on 50% MW risk in moderate-/ well-consolidated banks) *Max_Ng* (m/m)	Reference Bankfull Top Width (regional Q10-dependent) *Wref* (m)	Relative Lateral Departure from Wref (regional) *Nw* (>1 tend braided, <1 tend incision)
Santiagbd_B	1.00	16.50	0.64	20.12	OVRBNK	5774.37	286.93	4.49	113.91	0.98	1.00	8.23	FI - pre-2007 fire (i.e., filling)	1.67	0.054	26.768	0.752
Santiagnl_A	1.25	10.62	0.89	11.57		7533.15	651.15	10.19	210.12	1.80	1.00	8.23	FI - pre-2007 fire (i.e., filling)	3.69	0.315	26.533	0.436
Santiagnl_B	1.71	12.91	0.86	12.47	OVRBNK	10000.69	801.81	1.81	271.64	0.64	1.00	8.23	FI - pre-2007 fire (i.e., filling)	1.00	0.709	26.505	0.471
Silverado_A	2.13	16.90	1.19	12.36	OVRBNK	16752.25	1355.14	0.24	446.30	0.19	1.00	8.42	FI	1.00	0.239	31.098	0.398
Silverado_B	2.06	15.39	0.99	11.83	OVRBNK	19974.77	1688.95	0.37	443.23	0.22	1.00	5.18	FI	1.00	0.048	31.113	0.380
Escondido_A	3.02	58.79	1.62	35.44	OVRBNK	67659.06	1909.11	0.40	630.91	0.30	3.13	15.21	FI	1.00	0.017	58.317	0.608
Escondido_B	3.34	96.42	1.85	50.93	OVRBNK	18917.27	371.42	0.64	201.05	0.40	3.15	31.85	FI	1.00	0.161	58.317	0.873
Sanantoni_A	1.81	33.99	0.91	36.33	OVRBNK	23184.34	638.11	0.38	221.88	0.21	1.00	17.93	AP: 1947, 1967, 1979, 1982, 1985, 1989	6.75	0.396	44.074	0.824
Sanantoni_B	1.40	52.53	0.80	64.65		11545.62	178.58	0.84	97.00	0.37	1.00	17.93	AP: 1947, 1967, 1979, 1982, 1985, 1990	6.44	5.742	44.074	1.467
Alt_RC2_A	0.3812	0.4002	0.1880	1.9746		219.0999	110.9585	759.1091	66.2221	32.7296	0.9968	6.61	FI	1.0000	0.218	4.294	0.460
Yucaipa_A	0.71	7.38	0.56	12.91		10270.57	795.69	36.74	202.03	3.57	1.05	26.23	AP: 1952, 1966, 1969, 1975, 1982, 1983, 1989	1.03	1.411	25.130	0.514
Yucaipa_B	0.51	11.27	0.34	20.59		7883.68	382.87	11.01	124.39	1.60	1.07	26.23	AP: 1952, 1966, 1969, 1975, 1982, 1983, 1990	2.52	10.629	22.232	0.926
Oakglenn_A	0.70	2.19	0.40	4.98		4380.55	879.14	2.35	289.29	0.76	1.04	7.32	AP: 1952, 1982, 1983	3.30	1.081	12.346	0.404

General abbreviations and symbol definitions (excluding units of measure):

Apost	surveyed cross-sectional area to top of bank (2007/2008)
Apre	best estimate of historic (reference) cross-sectional area
AP	Aerial Photograph (and year)
BF	Bankfull (i.e., cross-sectional channel area to top of bank of active channel)
dvp	developed
FI	Field Indicator (and year)
ID	identification
max	maximum
MW	mass wasting
Ng	bank stability
OVRBNK	overbank
Q10	flow with 10-yr return interval
undvlp	undeveloped
Wref	regional reference width (unconfined stable single-thread) for Q10

Table B.8 – Stability, planform, and channel evolution model (CEM) stage

Unique ID	Current Planform	Current Bedform	Manning n (main channel)	Current CEM Phase	CEM for Plotting	Vertical Stability Rating
	Planform	*Bedform*	*Manning_n*	*CEM*		
	(S, B, T, M)	(C, SP, PB, PR, DR)				(stable, unstable, or NA)
Santiago_A	B	PR	0.056	B1	Braiding_Valley	U
Santiago_B	S	PR	0.056	1C	Constructed	NA
Hasley_1_A	S	PB	0.045	2	Incising	U
Hasley_1_B	S	PB	0.06	3	3	U
Hasley_1_TRIB	S	PB	0.075	1C	Constructed	NA
Hasley_2_A	B	PB	0.055	2B	Braided_Widening_Sed	U
Hasley_2_B	S	PB	0.059	2	Incising	U
Hasley_2_TRIB	B	PB	0.06	2B	Braided_Widening_Sed?	U
Hicks_A_08	S	PB	0.02	1C	Constructed	NA
Hicks_B_08	S	PB	0.045	2	Incised	U
Hicks_C_08	S	PB	0.065	3	3	U
Hicks_D_08	S	PB	0.065	3	3	U
Hicks_D_07	S	PB	0.085	3	3	U
Hicks_E_08	M	PB	0.07	2	Incising	U
Hicks_E_07	M	PB	0.09	2	Incising	U
Hicks_F_08	M	PB	0.065	2	Incising	U
Hicks_F_07	M	PB	0.085	2	Incising	U
Agua_Hedi_A	S	PR	0.035	2	Incising	U
Agua_Hedi_B	S	PR	0.05	3	3	U
Agua_Hedi_C	S	PR	0.055	2	Incising	U
Dry_A	S	PB	0.025	3	3	U
Dry_B	S	PB	0.06	3	3	U
Dry_C	S	PB	0.07	3	3	U
Hovnanian_A	M	PR	0.089	1	Confined and Hardpan	NA
Hovnanian_B	M	PR	0.089	1	Confined and Hardpan	NA
Santimeta_A	S	PB	0.045	3	3	U
Santimeta_B	S	PB	0.055	3	3	U
Santimeta_C	S	PB	0.05	3	3	U
Ltl_Cedar_A	S	PB	0.074	2	Incising	U
Ltl_Cedar_B	B	PB	0.064	B1	Braiding_Valley	U
Proctor_A	B	PB	0.05	B1	Braiding_nonalluvial	U-NF
Proctor_B	B	PB	0.05	B1	Braiding_nonalluvial	U-NF
Proctor_TRIB	B	PB	0.05	1	Confined	NA
Perris_1_A	M	PB	0.055	1.5	Incised	R?
Perris_1_B	M	PB	0.06	2	Incising	U

Unique ID	Current Planform *Planform* (S, B, T, M)	Current Bedform *Bedform* (C, SP, PB, PR, DR)	Manning n (main channel) *Manning_n*	Current CEM Phase *CEM*	CEM for Plotting	Vertical Stability Rating (stable, unstable, or NA)
Perris_1_C	M	PB	0.055	2	Incised	U
Perris_2_A	M	PB	0.045	1	1	S
Perris_2_B	M	PB	0.045	1	1	S
Perris_3_A	B	PB	0.055	B1	Braiding_Valley&Sed	U
Perris_3_B	B	PB	0.055	B1	Braiding_Valley&Sed	U
AltPerris_A	B	PB	0.046	B1	Braiding_Tribsed?nonalluvial	U-NF
AltPerris_B	T	PR	0.046	1	Transition	S
AltPerris_C	M	PR	0.03	1	1	S
Dulzura_A	M	PR	0.056	5	1	S
Dulzura_B	M	PR	0.056	5	1	S
Acton_A	B	PB	0.068	2B	Braiding_Valley&Sed	U
Acton_B	S	PB	0.024	2	Transition	U
Acton_C	M	PR	0.063	3	3	U
Acton_D	S	PB	0.063	3	3	U
Acton_E	S	PB	0.063	2	Incising	U
Acton_F	S	PB	0.063	1.5	1	S
Acton_G	S	PB	0.063	1	1	S
Borrego_A	S	PB	0.02	1C	Constructed	NA
Borrego_B	B	PB	0.054	4B	Braided_Sed	U
Borrego_C	S	PB	0.03	3	Braiding_Sed	U
Borrego_D	S	PR	0.08395	4	4	R?
Borrego_E	S	PR	0.08395	2	Incising	U
Topanga_A	S	SP	0.068	1	Confined	NA
Topanga_B	B	PR	0.068	B1	Braiding_Valley	U
Topanga_C	S	SP	0.088	1	Confined	NA
Challengr_A	M	PR	0.0667	1.5	Incised	S?
Challengr_B	M	PR	0.07245	2	Incising	U
Challengr_C	M	PR	0.07245	1	1	S
Mcgonigle_A	M	PR	0.09545	1V	Vegetated	S?
Sanjuan_A	B	PR	0.053	B1	Braiding_Valley	U
Sanjuan_B	S	SP	0.068	1	Confined	NA
Pigeon_A	B	PB	0.05175	B2	Incising	U
Pigeon_B	B	PB	0.05	B2	Incising	U
Pigeon_C	M	PR	0.0805	2	Incising	U
Stewart_A	S	C	0.102	1	Confined	NA
Santiagbd_A	S	PB	0.051	3	Confined_Incising-Wide_Temp	U

Unique ID	Current Planform *Planform* (S, B, T, M)	Current Bedform *Bedform* (C, SP, PB, PR, DR)	Manning n (main channel) *Manning_n*	Current CEM Phase *CEM*	CEM for Plotting	Vertical Stability Rating (stable, unstable, or NA)
Santiagbd_B	S	PB	0.051	2	Confined_Incising_Temp	U
Santiagnl_A	S	PB	0.048	2	Confined_Incising_Temp	U
Santiagnl_B	S	SP	0.06615	1	Confined	NA
Silverado_A	S	SP	0.083	1	Confined	NA
Silverado_B	S	SP	0.073	1	Confined	NA
Escondido_A	S	SP	0.093	1	Constricting_Confined	NA
Escondido_B	B	PR	0.088	B1	Braiding_Valley	U
Sanantoni_A	S	SP	0.053	B2	Incising	U
Sanantoni_B	B	PR	0.053	B1	Braided	U
Alt_RC2_A	M	PR	0.04	1	1	NA-NF
Yucaipa_A	S	PB	0.034	3	Constructed_Widening	U
Yucaipa_B	S	PB	0.049	4B	Constructed_Braided_Valley&Wide&Sed	U
Oakglenn_A	S	SP	0.053	1C	Constructed	NA

General abbreviations and symbol definitions (excluding units of measure):

CEM	Channel Evolution Model
ID	identification
n	Manning's roughness

Current planform:

B	braided
M	meandering
S	straight
T	transition (e.g., single-thread to braided)

Current bedform:

C	cascade
DR	dune riffle
PB	plane bed
PR	pool riffle
SP	step pool

Vertical stability:

NA	not applicable	constructed, confined, or other stable due to outside boundary conditions
S	stable	no significant channel adjustments such as incision nearing critical bank height, widening, braiding, etc.
U	unstable	active channel adjustments such as significant incision, widening, braiding, etc.
R?	recovered?	possibly nearing or at a return to quasi-equilibrium following an obvious period of adjustment
U-NF	unstable-nonfluvial	braided planform/distributary flow; however, limited alluvium or evident fluvial activity – the channel itself is hard to locate

CEM phases:

1	stable	no significant channel incision or bank failure
1.5	beginnings of incision	incision but not past critical bank height
2	incising	nearing, at, or beyond critical bank height, but no significant widening
3	widening	significant widening (~> 10% channel width) – incision still possible/likely
4	deposition	bank failure and widening still possible, but clear evidence of significant deposition (with possible beginnings of floodplain reformation, alternating bars, etc.)
5	recovered	return to single-thread equilibrium

Other CEM phases:

1C	constructed	stable but constructed via bed and/or bank protection
1V	vegetated	stable, vegetated encroached low-flow channel
B1	braided	braided but relatively stable active belt width
B2	braided-incising	incision near, at, or beyond critical bank height within a braided channel
2B	wide-to-braided	evidence that a single-thread channel transitioned to braided planform with little intermediate incision (i.e., not far beyond critical bank height, but change in width >>2x)
4B	incised-wide-braided	evidence that a single-thread channel first incised well past critical bank height before widening to the current braided form

Other CEM Notes:

_Confined	valley confinement from adjacent hillslopes
_Transition	cross section located at transition between single-thread and braided planform
_Constricting	cross section located at transition between braided and single-thread planform due to downstream valley confinement
_Braided_Valley	braiding primarily due to valley expansion
_Braided_Sed	braiding primarily due to sediment-load increase (not associated with valley expansion)
_Braided_Widening	braiding primarily due to excess channel widening
Braided_nonalluvial	channel has multiple flow paths, but very little alluvial material note: could have a combination of any/all factors (e.g., Braided_Valley&Sed)