REVISED WATER BALANCE - SMITH RANCH
REVISION DATE June 2017(Rev 2)

Year	0 2017	1 2018	2 2019	3 2020	4 2021	5 2022	6 2023	7 2024	8 2025	9 2026	10 2027	11 2028	12 2029	13 2030	14 2031	15 2032	16 2033	17 2034	18 2035	19 2036	20 2037	21 2038	22 2039	23 2040	24 2041	25 2042	26 2043	27 2044	28 2045	29 2046	30 2047	31 2048	32 2049	33 2050	34 2051	35 2052	36 2053	37 2054	38 2055	39 2056
PRODUCTION FLOWS																																								
Resin processing water requirements																																								
Disposal capacity needed (24 hours) gpm	21.9	16.7	9.7	8.7	8.5	8.2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
CPP / SR1 Water Balance																																								
Total CPP / SR1 Production Flow (gpm)	4870	2150	1850	1300	1100	800	500	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total CPP / SR1 Production Bleed (gpm)	24.4	10.8	9.3	6.5	5.5	4	2.5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Satellite SR-2 Water Balance																																								
Total SR-2 Production Flow (gpm)	2100	1600	1600	1100	1100	700	450	220	130	30	30	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total SR-2 Production Bleed (gpm)	10.5	8	8	5.5	5.5	3.5	2.3	1.1	0.7	0.2	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Smith Ranch Production Flow (gpm)	6970	3750	3450	2400	2200	1500	950	620	130	30	30	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production Bleed (gpm)	34.9	18.8	17.3	12	11	7.5	4.8	3.1	0.7	0.2	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ground Water Sweep (Gpm)	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GWS to Disposal	12	0	0	0	0	0																																		
Control Bleed (gpm)	25	15	15	15	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0

RESTORATION FLOWS

	PV with Flair (Kgals)	GWS PV to finish	RO PV to finish	Average flow (gpm)	Treatment time (years)																																					
CPP	62,841,000		0	0																																						
MU-1 (gals RO) (Permiate)	62,841		0	0	0.0	0	0																																			
GWS (gals)					0.0	0	0																																				
Total Disposal (gals)							0																																				
								93802440	76811880	59821320	42830760	25840200	8849640	0	0	0	0	0	0	0																								
CPP	110,793,000	110793000	886344000					814804800	743265600	671726400	600187200	528648000	457108800	385569600	314030400	242491200	170952000	99412800	27873600	0																								
MU-2 (gals RO)	110,793	1	8	144.0	11.71			144	144	144	144	144	144	144	144	144	144	144	144	144																								
GWS (gals)				34.2	6.16			34	34	34	34	34	34	34	34	34	34	34	34	34																								
Total Disposal (gals)								36	36	36	36	36	36	36	36	36	36	36	36	36																								
CPP	152,836,000	152836000	1222688000																																								
MU-3/3 Ext. (gals RO)	152,836	1	8	370.3	6.28																																						
GWS (gals)				87.9	3.31																																						
Total Disposal (gals)																																											
								0	0	0	0	0	0																															
SR-1	66,881,756	16720439	668817560					597278360	454199960	311121560	168043160	24964760	0																															
MU-4 (gals RO)	66,882	0.25	10	240.0	5.30			144	288	288	288	288	144																															
GWS (gals)				57.0	0.56			34	68	68	68	68	34																														
Total Disposal (gals)								36	72	72	72	72	36																															
1101503844											35351684	1370564	0	0	0																												
SR-1	52,342,244	52342244	575764684								504225484	361147084	218068684	74990284	0																												
MU-4A (gals RO)	52,342	1	11	259.2	4.23						144	288	288	288	288																												
GWS (gals)				61.6	1.62						34	68	68	68	68																												
Total Disposal (gals)											36	72	72	72	72																												
										120444440	103453880	86463320	69472760	52482200	35491640	18501080	1510520	0	0	0	0	0	0																			
SR1 / CPP	137,435,000	137435000	1099480000							1027940800	956401600	884862400	813323200	741784000	670244800	598705600	527166400	455627200	384088000	312548800	169470400	26392000	0																			
MU-1S (gals RO)	137,435	1	8	164.6	12.71					144	144	144	144	144	144	144	144	144	144	144	288	288	144																			
GWS (gals)				39.1	6.69					34	34	34	34	34	34	34	34	34	34	34	68	68	34																			
Total Disposal (gals)										36	36	36	36	36	36	36	36	36	36	36	72	72	36																			
																								35682440	1701320	0	0	0														
SR-1/CPP	52,673,000	52673000	421384000																					349844800	206766400	135227200	63688000	0														
MU-1SA (gals RO)	52,673	1	8	172.8	4.64																			144	288	144	144	144														
GWS (gals)				41.0	2.44																			34	68	34	34	34														
Total Disposal (gals)																								36	72	36	36	36														
																	54490880	20509760	0	0	0																						
SR-1	88,472,000	88472000	707776000														564697600	421619200	278540800	135462400	0																						
MU-7 (gals RO)	88,472	1	8	288.0	4.68												288	288	288	288	288																						
GWS (gals)				68.4	2.46												68	68	68	68	68																						
Total Disposal (gals)																	72	72	72	72	72																						
										127890720	119395440	110900160	102404880	93909600	85414320	76919040	68423760	59928480	51433200	42937920	34442640	25947360	0	0	0	0																
SR-2	136,386,000	136386000	1091088000							1055318400	1019548800	983779200	948009600	912240000	876470400	840700800	804931200	769161600	733392000	697622400	661852800	626083200	447235200	268387200	89539200	0																
MU-9 (gals RO)	136,386	1	8	131.3	15.81					72	72	72	72	72	72	72	72	72	72	72	72	72	72	360	360	360	216															
GWS (gals)				31.2	8.32					17	17	17	17	17	17	17	17	17	17	17	17	17	17	86	86	86	51															
Total Disposal (gals)										18	18	18	18	18	18	18	18	18	18	18	18	18	18	90	90	90	54															
																												171457440	139476320	105495200	71514080	37532960	0	0	0	0						
SR-2	190,448,000	190448000	1523584000																									1452044800	1308966400	1165888000	1022809600	879731200	665113600	414726400	164339200	0						
MU-10 (gals RO)	190,448	1	8	352.0	8.24																							144	288	288	288	288	432	504	504	432						
GWS (gals)				83.6	4.33																							34	68	68	68	68	103	120	120	103						
Total Disposal (gals)																												36	72	72	72	72	108	126	126	108						
																												30988160	5502320	0	0	0										
SR-2	56,474,000	56474000	451792000																									344483200	237174400	129865600	22556800	0										
MU-10 Ext. (gals RO)	56,474	1	8	187.2	4.59																							216	216	216	216	72										
GWS (gals)				44.5	2.42																							51	51	51	51	17										
Total Disposal (gals)																												54	54	54	54	18										
Total Restoration Disposal SRH (gpm)						**36**	**108**	**108**	**162**	**162**	**162**	**162**	**162**	**162**	**162**	**162**	**162**	**162**	**162**	**162**	**90**	**162**	**162**	**162**	**162**	**270**	**270**	**270**	**270**	**162**	**126**	**126**	**108**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Installed RO Capacity (gpm) (feed)

Current (gpm)	Future (gpm)	Efficency 80%	With Availability 90%
200		160	144
200		160	144
200		160	144
200		160	144
100		80	72
900	0	720	648

Deep Disposal Well Capacity (gpm)	**Permitted**	**Current**	**Future**	**Online Time (95%)**		52.3	51.47	50.69	49.93	49.18	48.45	47.72	47.00	46.30	45.60	44.92	44.25	43.58	42.93	42.29	41.65	41.03	40.41	39.81	39.21	38.62	38.04	37.47	36.91	36.35	35.81	35.27	34.74	34.22	33.71	33.20	32.70	32.21	31.73	31.25	30.79	30.33	29.87	29.42	28.98
DDW #1	**150**	**55**		**52.3**																																						
DDW #2	**150**	**0**	**0**	**0.0**		0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DDW #10	**126**	**12**		**11.4**		11.4	11.23	11.06	10.89	10.73	10.57	10.41	10.26	10.10	9.95	9.80	9.65	9.51	9.37	9.23	9.09	8.95	8.82	8.68	8.55	8.43	8.30	8.18	8.05	7.93	7.81	7.70	7.58	7.47	7.35	7.24	7.14	7.03	6.92	6.82	6.72	6.62	6.52	6.42	6.32
DDW #6	**105**	**20**		**19.0**		19.0	18.72	18.43	18.16	17.89	17.62	17.35	17.09	16.84	16.58	16.33	16.09	15.85	15.61	15.38	15.15	14.92	14.69	14.47	14.26	14.04	13.83	13.63	13.42	13.22	13.02	12.83	12.63	12.44	12.26	12.07	11.89	11.71	11.54	11.37	11.19	11.03	10.86	10.70	10.54
DDW #7 (Fut)	**100**	**12**	**8**	**11.4**		11.4	11.23	11.06	10.89	10.73	10.57	10.41	10.26	10.10	9.95	9.80	9.65	9.51	9.37	9.23	9.09	8.95	8.82	8.68	8.55	8.43	8.30	8.18	8.05	7.93	7.81	7.70	7.58	7.47	7.35	7.24	7.14	7.03	6.92	6.82	6.72	6.62	6.52	6.42	6.32
Reynolds Ranch Deep Well	**100**	**10**	**10**	**9.5**		0.0	9.50	9.36	9.22	9.08	8.94	8.81	8.68	8.55	8.42	8.29	8.17	8.04	7.92	7.81	7.69	7.57	7.46	7.35	7.24	7.13	7.02	6.92	6.81	6.71	6.61	6.51	6.41	6.32	6.22	6.13	6.04	5.95	5.86	5.77	5.68	5.60	5.51	5.43	5.35
Pipeline to HUP - Additional flow based on capacity		**100**		**95.0**		50.0	60	65	115	110	110	110	110	110	110	110	110	115	110	115	116	120	120	125	150	200	200	150	150	200	200	200	200	200	200	0	0	0	0	0	0	0	0	0	0
Pipeline Total																																												
Total Available		209				144.05	162.14	165.61	214.10	207.61	206.15	204.71	203.28	201.89	200.51	199.15	197.81	201.50	195.20	198.92	198.66	201.42	200.20	204.00	227.81	276.64	275.49	224.36	223.25	272.15	271.07	270.00	268.95	267.92	266.90	65.89	64.91	63.93	62.97	62.03	61.10	60.18	59.28	58.39	57.51
Smith Ranch CPP Elutions						21.9	16.7	9.7	8.7	8.5	8.2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Total Production Bleed (gpm)						34.9	18.8	17.3	12	11	7.5	4.8	3.1	0.7	0.2	0.2	0.2	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GWS tp Disposal						12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Control Bleed (gpm)						25	15	15	15	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0
Total Restoration Disposal SRH (gpm)						36	108	108	162	162	162	162	162	162	162	162	162	162	162	162	90	162	162	162	162	270	270	270	270	162	126	126	108	0	0	0	0	0	0	0	0	0	0
Total Disposal Required (gpm)						130	159	150	198	187	183	180	178	176	175	175	175	175	175	175	175	175	175	175	175	283	283	283	283	175	139	139	121	13	13	13	13	13	13	8	8	8	8
Total Disposal Balance						14	4	16	16	21	23	25	25	26	25	24	23	26	20	24	96	26	25	29	53	-6	-8	-59	-60	97	132	131	148	255	254	53	52	51	50	49	48	52	51	50	50
Equivalent Restoration RO Feed Rate (gpm)						93	27	107	107	140	153	167	167	173	167	160	153	173	133	160	640	173	167	193	353	-40	-53	-393	-400	485	660	655	740	1275	1270	265	260	255	250	245	240	260	255	250	250