

Appendix 8G
Chloride

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3 **8G.1 Chloride Methodology**

4 Chloride was modeled quantitatively for the Delta in two ways. First, a quantitative assessment
5 utilizing a mass-balance approach (DSM2 fingerprinting data combined with historical source water
6 quality data) was employed. Additionally, results of a second modeling approach utilizing DSM2-
7 QUAL modeled EC and EC to chloride relationships were used to supplement the results of the mass-
8 balance approach. Section 8.3.1.3 and the chloride discussion under section 8.3.1.7 provide more
9 detailed information regarding the assessment methodology for chloride and the details of the
10 quantitative approaches. Figures and tables to support the assessment are provided below.
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1 **Table CI-1. Period average change in chloride concentrations (mg/L) for No Action LLT, relative to**
 2 **existing conditions. Calculation of chloride concentrations was based on a mass balance approach.**

Chloride			OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Annual Avg. Change	
No Act. LLT	Location	Period ^a	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	Ex. Condi.	
Delta Interior	Moke. R. (SF) at Staten Island	ALL	0	0	0	-1	-1	0	0	0	-1	-1	0	0	0	
			(-1%)	(1%)	(-2%)	(-5%)	(-4%)	(-2%)	(-2%)	(-3%)	(-6%)	(-5%)	(0%)	(0%)	(-3%)	
	SJR at Buckley Cove	ALL	-2	0	-6	-5	-4	-3	-5	-5	-10	-12	-13	-5	-6	
			(-3%)	(-1%)	(-8%)	(-6%)	(-5%)	(-4%)	(-5%)	(-6%)	(-11%)	(-14%)	(-14%)	(-6%)	(-7%)	
	Franks Tract	ALL	-67	-134	-45	3	6	3	3	5	7	-46	-47	-15	-27	
			(-23%)	(-35%)	(-15%)	(2%)	(10%)	(8%)	(8%)	(10%)	(12%)	(-24%)	(-20%)	(-5%)	(-16%)	
	Old R. at Rock Slough	ALL	-42	-110	-44	3	3	4	3	3	4	-33	-40	-11	-22	
			(-17%)	(-35%)	(-17%)	(2%)	(5%)	(8%)	(6%)	(5%)	(8%)	(-22%)	(-21%)	(-5%)	(-14%)	
	Western Delta	Sac. R. at Emmaton	ALL	-204	-134	50	34	26	14	17	29	38	4	70	28	-2
				(-24%)	(-15%)	(11%)	(22%)	(38%)	(48%)	(43%)	(24%)	(17%)	(1%)	(15%)	(3%)	(-1%)
		SJR at Antioch	ALL	-659	-550	-65	39	52	38	42	54	68	-157	-7	-213	-113
				(-30%)	(-22%)	(-4%)	(6%)	(20%)	(34%)	(29%)	(15%)	(12%)	(-13%)	(-0%)	(-10%)	(-10%)
Sac. R. at Mallard Island		ALL	-810	-623	-63	10	82	81	86	118	116	-232	2	-447	-140	
			(-17%)	(-13%)	(-2%)	(1%)	(9%)	(18%)	(12%)	(9%)	(6%)	(-8%)	(0%)	(-11%)	(-5%)	
Major Diversions (Pumping Stations)		NBA at Barker Slough PP	ALL	-1	-1	0	0	2	1	-1	0	-1	-2	-1	-1	0
				(-8%)	(-5%)	(0%)	(1%)	(12%)	(5%)	(-6%)	(-1%)	(-7%)	(-10%)	(-6%)	(-3%)	(-3%)
		Contra Costa PP #1	ALL	-34	-63	-73	-20	17	4	3	2	5	-15	-47	-14	-20
				(-14%)	(-25%)	(-31%)	(-11%)	(22%)	(7%)	(5%)	(4%)	(9%)	(-12%)	(-23%)	(-7%)	(-13%)
		Banks PP	ALL	-17	-59	-35	-5	4	2	2	1	2	-21	-37	-17	-15
				(-10%)	(-29%)	(-18%)	(-3%)	(5%)	(3%)	(2%)	(2%)	(3%)	(-20%)	(-24%)	(-10%)	(-12%)
	Jones PP	ALL	-17	-54	-25	-5	2	2	1	1	3	-18	-31	-17	-13	
			(-12%)	(-29%)	(-16%)	(-4%)	(2%)	(2%)	(1%)	(1%)	(5%)	(-16%)	(-22%)	(-11%)	(-11%)	
		ALL	-7	-48	-20	-13	0	1	1	1	10	-28	-53	-10	-14	
			(-4%)	(-24%)	(-11%)	(-10%)	(-0%)	(1%)	(1%)	(2%)	(19%)	(-19%)	(-26%)	(-6%)	(-11%)	

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 4 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years
 5 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic
 6 classification index).

1 **Table CI-2. Period average change in chloride concentrations (mg/L) for No Action LLT relative to**
 2 **existing conditions. Calculation of chloride concentrations was based on EC-chloride relationship.**

Chloride			OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Avg. Chang	
No Act. LLT	Location	Period ^a	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	
Delta Interior	Moke. R. (SF) at Staten Island	ALL	0 (-0%)	0 (0%)	0 (-1%)	-1 (-3%)	-1 (-3%)	0 (-1%)	0 (-1%)	0 (-1%)	0 (-1%)	0 (-0%)	0 (1%)	0 (1%)	0 (-1%)	
		DROUGHT	0 (-0%)	0 (0%)	0 (-1%)	-1 (-3%)	-1 (-3%)	-1 (-3%)	-1 (-3%)	0 (-2%)	0 (-1%)	0 (-0%)	0 (1%)	0 (-1%)	0 (-1%)	
	SJR at Buckley Cove	ALL	-5 (-5%)	-9 (-8%)	-27 (-20%)	-29 (-18%)	-17 (-12%)	-15 (-11%)	-8 (-8%)	-7 (-9%)	-4 (-4%)	-15 (-14%)	-20 (-19%)	-13 (-13%)	-14 (-12%)	
		DROUGHT	-9 (-7%)	-15 (-11%)	-33 (-20%)	-40 (-19%)	-25 (-12%)	-21 (-10%)	-13 (-8%)	-15 (-12%)	-33 (-26%)	-37 (-33%)	-50 (-42%)	-25 (-19%)	-26 (-17%)	
	Franks Tract	ALL	-39 (-21%)	-80 (-35%)	-37 (-18%)	-10 (-8%)	2 (2%)	2 (6%)	1 (5%)	3 (8%)	8 (19%)	-27 (-21%)	-32 (-21%)	-10 (-5%)	-18 (-15%)	
		DROUGHT	-19 (-8%)	-68 (-25%)	-34 (-12%)	-27 (-15%)	16 (22%)	6 (14%)	1 (4%)	9 (28%)	26 (61%)	-39 (-18%)	-50 (-22%)	27 (11%)	-13 (-8%)	
	Old R. at Rock Slough	ALL	-23 (-15%)	-65 (-34%)	-33 (-18%)	-9 (-7%)	-1 (-1%)	4 (9%)	1 (2%)	1 (3%)	6 (15%)	-18 (-18%)	-27 (-21%)	-8 (-5%)	-14 (-13%)	
		DROUGHT	-1 (-1%)	-55 (-26%)	-32 (-14%)	-26 (-15%)	4 (5%)	7 (11%)	3 (5%)	7 (16%)	18 (48%)	-26 (-16%)	-43 (-22%)	14 (8%)	-11 (-8%)	
	Western Delta	Sac. R. at Emmaton	ALL	-137 (-24%)	-92 (-17%)	23 (7%)	19 (15%)	21 (29%)	15 (43%)	15 (42%)	25 (28%)	39 (21%)	13 (6%)	47 (14%)	33 (6%)	2 (1%)
			DROUGHT	-150 (-19%)	-79 (-10%)	54 (11%)	62 (32%)	62 (56%)	18 (40%)	19 (52%)	67 (57%)	112 (46%)	59 (18%)	95 (21%)	193 (24%)	43 (12%)
		SJR at Antioch	ALL	-447 (-30%)	-382 (-26%)	-93 (-9%)	6 (1%)	39 (15%)	44 (37%)	44 (39%)	55 (22%)	79 (16%)	-79 (-9%)	-19 (-2%)	-120 (-8%)	-73 (-10%)
			DROUGHT	-454 (-25%)	-367 (-19%)	-129 (-9%)	80 (11%)	134 (34%)	55 (34%)	54 (38%)	123 (33%)	183 (27%)	-24 (-2%)	11 (1%)	191 (11%)	-12 (-1%)
Sac. R. at Mallard Island		ALL	-660 (-21%)	-552 (-19%)	-146 (-7%)	-12 (-1%)	69 (8%)	118 (26%)	130 (25%)	157 (17%)	187 (13%)	-108 (-5%)	-6 (-0%)	-280 (-9%)	-92 (-5%)	
		DROUGHT	-693 (-19%)	-624 (-16%)	-200 (-6%)	77 (4%)	247 (18%)	138 (21%)	149 (20%)	195 (14%)	238 (11%)	-36 (-1%)	5 (0%)	169 (5%)	-28 (-1%)	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	0 (-2%)	0 (-2%)	0 (-0%)	0 (-0%)	1 (7%)	1 (3%)	-1 (-2%)	0 (1%)	0 (-2%)	0 (-2%)	0 (-1%)	0 (-1%)	0 (-0%)	
		DROUGHT	0 (-2%)	-1 (-4%)	0 (1%)	0 (1%)	0 (2%)	1 (3%)	1 (5%)	2 (10%)	0 (-1%)	0 (-2%)	0 (-0%)	0 (-0%)	0 (1%)	
	Contra Costa PP #1	ALL	-22 (-14%)	-37 (-23%)	-54 (-30%)	-28 (-15%)	13 (12%)	-7 (-8%)	-3 (-3%)	0 (-1%)	4 (8%)	-7 (-9%)	-32 (-22%)	-14 (-10%)	-16 (-13%)	
		DROUGHT	-6 (-3%)	-16 (-8%)	-56 (-24%)	3 (2%)	5 (5%)	9 (11%)	5 (7%)	5 (9%)	14 (31%)	-5 (-4%)	-58 (-26%)	-19 (-11%)	-10 (-7%)	
	Banks PP	ALL	-12 (-10%)	-34 (-26%)	-27 (-18%)	-15 (-11%)	-2 (-2%)	-1 (-2%)	-2 (-2%)	0 (-0%)	6 (9%)	-6 (-8%)	-21 (-21%)	-11 (-10%)	-10 (-10%)	
		DROUGHT	-4 (-3%)	-25 (-16%)	-26 (-14%)	-18 (-11%)	-6 (-4%)	-3 (-3%)	-2 (-2%)	0 (-0%)	11 (16%)	-11 (-11%)	-39 (-25%)	-10 (-7%)	-11 (-8%)	
	Jones PP	ALL	-7 (-6%)	-29 (-23%)	-23 (-15%)	-17 (-11%)	-1 (-1%)	-2 (-1%)	-1 (-1%)	-1 (-1%)	13 (21%)	1 (1%)	-15 (-15%)	-8 (-8%)	-7 (-7%)	
		DROUGHT	3 (2%)	-23 (-15%)	-21 (-12%)	-23 (-12%)	-4 (-2%)	-2 (-1%)	1 (1%)	-2 (-1%)	11 (18%)	-9 (-8%)	-32 (-21%)	-5 (-4%)	-9 (-6%)	

3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years
 4 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic
 5 classification index).
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1 **Table CI-3. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions and No Action LLT. Calculation of chloride concentrations was based on a mass**
 3 **balance approach.**

Chloride	No Act. LLT	Location	Period ^a	Period Average Concentration mg/L		Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b	
				Frequency of Criterion/Objective Exceedance (%)		Ex. Cond.	No Act. LLT
				Ex. Cond.	No Act. LLT		
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	0	0	
		DROUGHT	16.8	16.3	0	0	
	SJR at Buckley Cove	ALL	82.9	77.2	0	0	
		DROUGHT	86.5	76.5	0	0	
	Franks Tract	ALL	173.8	146.4	34	22	
		DROUGHT	212.8	190.9	47	35	
Old R. at Rock Slough	ALL	152.0	130.5	28	17		
	DROUGHT	180.2	161.4	42	27		
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	44	44	
		DROUGHT	516.4	559.3	55	60	
	SJR at Antioch	ALL	1087.3	974.2	66	73	
		DROUGHT	1400.6	1345.6	82	87	
	Sac. R. at Mallard Island	ALL	2552.0	2411.9	85	86	
		DROUGHT	3233.9	3123.1	100	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	0	0	
		DROUGHT	17.7	17.7	0	0	
	Contra Costa PP #1	ALL	146.5	126.9	24	14	
		DROUGHT	176.5	161.3	37	22	
	Banks PP	ALL	123.4	108.5	4	2	
		DROUGHT	143.7	128.0	7	2	
	Jones PP	ALL	116.9	103.4	1	1	
		DROUGHT	132.9	118.9	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 **Table CI-4. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing condition and No Action LLT. Calculation of chloride concentrations was based on EC-chloride**
 3 **relationship.**

Chloride No Act. LLT	Location	Period ^a	Period Average Concentration (mg/L)		Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b	
			Ex. Cond.	No Act. LLT	Frequency of Criterion/Objective Exceedance (%)	
					Ex. Cond.	No Act. LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18.5	18.3	0	0
		DROUGHT	19.3	19.0	0	0
	SJR at Buckley Cove	ALL	115.7	101.7	0	0
		DROUGHT	154.9	128.5	0	0
	Franks Tract	ALL	119.9	101.5	14	8
		DROUGHT	152.8	140.0	22	15
Old R. at Rock Slough	ALL	107.9	93.7	4	3	
	DROUGHT	135.9	125.2	7	5	
Western Delta	Sac. R. at Emmaton	ALL	258.0	259.7	36	32
		DROUGHT	363.7	406.4	50	55
	SJR at Antioch	ALL	756.6	683.7	61	65
		DROUGHT	1001.9	990.0	80	82
	Sac. R. at Mallard Island	ALL	1766.4	1674.5	77	83
		DROUGHT	2345.9	2317.9	98	98
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	18.8	18.8	0	0
		DROUGHT	18.7	18.9	0	0
	Contra Costa PP #1	ALL	120.4	104.7	5	3
		DROUGHT	142.8	133.1	8	7
	Banks PP	ALL	101.6	91.1	1	1
		DROUGHT	134.0	122.9	2	2
	Jones PP	ALL	108.8	101.4	0	0
		DROUGHT	144.7	136.0	0	0

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-5. No Action LLT use of assimilative capacity available under existing conditions relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Annual Avg. Change
			Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.	Ex. Cond.
No Act. LLT															
Delta Interior	Moke. R. (SF) at Staten Island	ALL	0	0	0	0	0	0	0	0	0	0	0	0	0
		DROUGHT	0	0	0	0	0	0	0	0	0	0	0	0	0
	SJR at Buckley Cove	ALL	1	0	4	3	2	2	3	3	6	8	8	3	3
		DROUGHT	2	2	5	6	3	4	6	6	12	11	14	5	6
	Franks Tract	ALL	-	-	-	-3	-3	-1	-1	-2	-3	80	-	-	36
		DROUGHT	-	-	-	41	-9	-2	-1	-5	-14	-	-	-	59
	Old R. at Rock Slough	ALL	-	-	-	-3	-2	-2	-2	-1	-2	34	67	-	22
		DROUGHT	-	-	-	30	-4	-3	-1	-3	-9	-	-	-	27
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-34	-14	-6	-8	-23	-100	-	-	-	
		DROUGHT	-	-	-	-100	-45	-7	-10	-100	-	-	-	-	
	SJR at Antioch	ALL	-	-	-	-	-	-28	-39	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-44	-97	-	-	-	-	-	
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	1	0	0	0	-1	0	0	0	1	1	1	0	
		DROUGHT	1	1	0	0	0	0	0	-1	0	1	0	0	
	Contra Costa PP #1	ALL	-	-	-	28	-10	-2	-1	-1	-3	12	-	43	
		DROUGHT	-	-	-	-58	-7	-3	-2	-2	-8	20	-	21	
	Banks PP	ALL	20	-	57	4	-2	-1	-1	-1	-1	14	37	20	
		DROUGHT	10	-	-	20	-1	-1	-1	-1	-3	23	-	31	
	Jones PP	ALL	18	84	26	4	-1	-1	0	0	-2	13	29	18	
		DROUGHT	9	99	27	11	0	-1	0	-1	-5	29	-	14	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

2

1 Table CI-6. No Action LLT use of assimilative capacity available under existing conditions relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride No Act. LLT	Location	Period ^a	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Annual Avg. Change
			EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·	EX · COND ·
Delta Interior	Moke. R. (SF) at Staten Island	ALL	0	0	0	0	0	0	0	0	0	0	0	0	0
		DROUGHT	0	0	0	0	0	0	0	0	0	0	0	0	0
	SJR at Buckley Cove	ALL	3	6	25	33	16	14	5	4	2	11	14	9	10
		DROUGHT	7	14	40	-	75	59	16	12	28	27	39	21	28
	Franks Tract	ALL	64	-	89	9	-1	-1	-1	-1	-4	22	33	17	14
		DROUGHT	97	-	-	39	-9	-3	0	-4	-12	-	-	-100	13
	Old R. at Rock Slough	ALL	24	-	47	8	0	-2	0	-1	-3	12	22	8	10
		DROUGHT	2	-	-	33	-3	-4	-2	-3	-9	30	73	-23	9
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-15	-12	-7	-7	-16	-60	-52	-	-	
		DROUGHT	-	-	-	-100	-44	-9	-9	-51	-100	-	-	-	
	SJR at Antioch	ALL	-	-	-	-	-	-34	-32	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-63	-51	-	-	-	-	-	
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	0	0	0	0	-1	0	0	0	0	0	0	0	
		DROUGHT	0	0	0	0	0	0	0	-1	0	0	0	0	
	Contra Costa PP #1	ALL	24	41	79	42	-9	5	1	0	-2	5	29	13	
		DROUGHT	10	26	-	-8	-4	-5	-3	-3	-7	4	-	24	
	Banks PP	ALL	8	29	25	13	2	1	1	0	-3	3	14	8	
		DROUGHT	4	25	38	23	5	3	2	0	-6	7	41	9	
	Jones PP	ALL	5	24	23	17	1	1	0	0	-7	-1	10	6	
		DROUGHT	-2	23	31	39	6	4	-1	1	-6	6	31	4	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-7. Period average change in chloride concentrations (mg/L) for Alternative 1A LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change				
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
			2	3	3	3	1	2	1	2	1	2	1	2	3	3	2	2	2	2	5	6	6	7	6	6	5	5	3	4	
Alt 1 LLT	Delta Interior	Moke R. (SF) at Staten Island	ALL	20%	22%	26%	25%	11%	12%	7%	13%	7%	12%	16%	19%	14%	16%	10%	13%	29%	36%	34%	40%	47%	47%	41%	40%	21%	24%		
			DROUGHT	2	2	3	3	2	2	0	1	-1	0	2	3	1	2	2	2	7	8	10	10	7	6	4	5	3	4		
		SJR at Buckley Cove	ALL	-3%	0%	-1%	0%	-2%	4%	-3%	2%	-4%	1%	-3%	1%	-4%	1%	-4%	1%	-5%	3%	-9%	3%	-11%	4%	-7%	8%	-5%	0%	-4%	2%
			DROUGHT	-3	0	-2	1	-5	4	-6	3	-4	2	-4	2	-7	3	-7	2	-13	6	-12	6	-11	10	-7	1	-7	3		
		Franks Tract	ALL	10	77	-91	43	-27	19	24	21	17	11	17	13	10	7	4	-1	12	5	-50	-4	-30	16	18	34	-7	20		
			DROUGHT	3	34	-24	17	-9	7	15	13	28	16	43	33	27	18	8	-1	22	8	-26	8	-13	8	9	6	12	-21	14	
	Old R. at Rock Slough	ALL	23	65	-67	42	-20	24	19	16	16	13	13	9	2	-1	-5	-8	9	4	-34	-1	-27	13	17	28	-4	17			
		DROUGHT	2	6	-23	6	-17	3	-8	1	12	1	20	3	17	6	2	8	2	23	4	-74	-26	-43	24	22	6	-15	3		
	Western Delta	Sac. R. at Emmaton	ALL	-177	27	-49	85	76	24	11	-14	16	2	30	13	80	51	92	54	152	149	255	185	245	217	63	65				
			DROUGHT	-265	-26	-94	18	79	-15	31	-51	37	-26	22	8	41	20	158	86	188	87	339	283	268	151	6	-241	68	25		
		SJR at Antioch	ALL	-505	154	-516	35	-46	19	-35	-73	8	-44	42	4	71	29	126	71	112	44	32	189	265	273	251	464	-16	97		
			DROUGHT	-598	101	-668	-131	-216	-106	-229	36	-104	42	3	79	28	175	70	204	69	139	250	294	299	-93	-300	-59	-4			
Sac. R. at Mallard Island		ALL	-703	107	-423	200	-13	50	-3	-12	83	1	141	60	252	165	385	267	263	148	252	483	446	445	412	859	91	231			
		DROUGHT	-835	94	-733	25	-240	-106	-103	-229	159	-55	184	121	237	161	240	190	238	161	268	458	396	420	-120	-216	-26	85			
Major Diversions (Pumping Stations)		NBA at Barker Slough PP	ALL	15	16	20	21	20	20	10	10	2	0	-1	-2	-3	-2	-4	-3	-5	-4	-3	0	1	2	11	12	5	6		
			DROUGHT	21	23	32	33	36	36	25	25	12	12	4	3	2	1	0	-3	-1	0	6	8	11	11	21	21	14	14		
		Contra Costa PP #1	ALL	38	72	-7	56	-35	38	-4	16	56	38	18	14	13	10	-5	-7	5	0	-18	-2	-46	1	-3	11	1	21		
			DROUGHT	27	40	-35	-6	-74	-4	-29	-47	7	-5	7	0	6	2	4	0	18	0	-44	-31	-98	-9	13	43	-17	-1		
		Banks PP	ALL	8	24	-70	-11	-64	-29	-69	-64	-34	-37	-48	-50	-35	-36	-20	-22	-26	-27	-37	-16	-61	-24	-35	-18	-41	-26		
			DROUGHT	7	12	-63	-17	-73	-38	-55	-39	-4	-5	-40	-42	-27	-29	-11	-13	4	-2	-64	-40	-81	-19	-20	-5	-36	-20		
	Jones PP	ALL	-33	-15	-95	-41	-54	-29	-43	-38	-35	-36	-34	-36	-30	-30	-26	-27	-25	-28	-39	-20	-35	-4	-59	-42	-42	-29			
		DROUGHT	-48	-41	-111	-63	-45	-25	-38	-25	-26	-26	-9	-10	-26	-26	-29	-30	-8	-18	-53	-25	-61	-7	-27	-16	-40	-26			

2
3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

- 1 **Table CI-9. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 1A LLT. Calculation of chloride concentrations was**
 3 **based on a mass balance approach.**

Chloride Alt 1 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
			Ex. Cond.	No Act. LLT	Alt 1 LLT	Frequency of Criterion/Objective Exceedance (%)		
						Ex. Cond.	No Act. LLT	Alt 1 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	19.0	0	0	0
		DROUGHT	16.8	16.3	19.8	0	0	0
	SJR at Buckley Cove	ALL	82.9	77.2	78.8	0	0	0
		DROUGHT	86.5	76.5	79.7	0	0	0
	Franks Tract	ALL	173.8	146.4	166.6	34	22	30
		DROUGHT	212.8	190.9	191.7	47	35	38
Old R. at Rock Slough	ALL	152.0	130.5	147.6	28	17	21	
	DROUGHT	180.2	161.4	164.9	42	27	32	
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	431.9	44	44	50
		DROUGHT	516.4	559.3	583.9	55	60	67
	SJR at Antioch	ALL	1087.3	974.2	1071.1	66	73	74
		DROUGHT	1400.6	1345.6	1341.4	82	87	90
Sac. R. at Mallard Island	ALL	2552.0	2411.9	2643.1	85	86	87	
	DROUGHT	3233.9	3123.1	3208.3	100	100	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	22.5	0	0	0
		DROUGHT	17.7	17.7	31.8	0	0	0
	Contra Costa PP #1	ALL	146.5	126.9	147.5	24	14	21
		DROUGHT	176.5	161.3	159.9	37	22	28
	Banks PP	ALL	123.4	108.5	82.8	4	2	1
		DROUGHT	143.7	128.0	108.2	7	2	2
	Jones PP	ALL	116.9	103.4	74.6	1	1	0
		DROUGHT	132.9	118.9	92.9	0	0	0

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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5

- 1 **Table CI-10. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 1A LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride Alt 1 LLT	Location	Period ^a	Period Average Concentration (mg/L)			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
			Ex. Cond.	No Act. LLT	Alt 1 LLT	Frequency of Criterion/Objective Exceedance (%)		
						Ex. Cond.	No Act. LLT	Alt 1 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18	18	20	0	0	0
		DROUGHT	19	19	20	0	0	0
	SJR at Buckley Cove	ALL	116	102	99	0	0	0
		DROUGHT	155	128	131	0	0	0
	Franks Tract	ALL	120	102	115	14	8	9
		DROUGHT	153	140	141	22	15	17
Old R. at Rock Slough	ALL	108	94	104	4	3	2	
	DROUGHT	136	125	128	7	5	0	
Western Delta	Sac. R. at Emmaton	ALL	258	260	305	36	32	44
		DROUGHT	364	406	428	50	55	62
	SJR at Antioch	ALL	757	684	759	61	65	71
		DROUGHT	1002	990	995	80	82	85
	Sac. R. at Mallard Island	ALL	1766	1674	1878	77	83	84
		DROUGHT	2346	2318	2404	98	98	98
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	19	19	21	0	0	0
		DROUGHT	19	19	25	0	0	0
	Contra Costa PP #1	ALL	120	105	119	5	3	4
		DROUGHT	143	133	130	8	7	2
	Banks PP	ALL	102	91	72	1	1	0
		DROUGHT	134	123	101	2	2	0
	Jones PP	ALL	109	101	82	0	0	0
		DROUGHT	145	136	112	0	0	0

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 Table CI-11. Alternative 1A use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 1 LLT	Delta Interior	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2	-3	-3	-3	-3	-3	-2	-2	-1	-2
		DROUGHT	-1	-1	-1	-1	-1	-1	0	0	0	0	-1	-1	0	-1	-1	-1	-1	-3	-3	-4	-4	-3	-3	-2	-2	-1	-2
	SJR at Buckley Cove	ALL	2	0	0	0	1	-2	2	-1	2	0	1	-1	2	-1	2	0	5	-1	6	-2	4	-3	3	0	2	-1	
		DROUGHT	2	0	1	0	3	-2	4	-2	2	-1	2	-1	4	-1	4	-1	8	-3	7	-3	7	-6	4	-1	4	-2	
	Franks Tract	ALL	-	-100	-	-100	-	-	-25	-23	-9	-6	-8	-6	-5	-4	-2	0	-6	-3	86	3	-	-24	-	-	9	-19	
		DROUGHT	-	-	-	-	-	-	49	6	-7	3	-4	-2	-3	-2	-6	-1	-16	-3	-	-	-	-100	-	-	57	-1	
Old R. at Rock Slough	ALL	-100	-100	-	-85	-	-65	-20	-17	-9	-7	-6	-5	-1	0	3	4	-4	-2	35	1	46	-13	-100	-100	5	-14		
	DROUGHT	-	-	-	-	-	-	26	-3	-5	-1	-4	-1	-3	-1	-4	-1	-11	-2	-	43	-	-57	-	-	22	-4		
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	-24	16	-6	9	-7	-1	-14	-7	-62	-51	-100	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-100	-	-26	33	-11	-4	-20	-11	-100	-	-	-	-	-	-	-	-	-	-	-	
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-31	-4	-66	-44	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-48	-6	-100	-100	-	-	-	-	-	-	-	-	-	-	-	-	
Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-6	-7	-9	-9	-8	-8	-4	-4	-1	0	1	1	1	1	2	1	2	2	1	0	0	-1	-5	-5	-2	-3	
		DROUGHT	-9	-10	-14	-14	-15	-15	-11	-10	-5	-5	-2	-1	-1	0	0	1	0	0	-3	-4	-5	-5	-9	-9	-6	-6	
	Contra Costa PP #1	ALL	-100	-100	-	-88	-	-44	5	-18	-33	-25	-9	-7	-6	-5	2	4	-3	0	14	2	-	-1	11	-23	-1	-17	
		DROUGHT	-	-	-	-	-	23	94	-	-4	3	-3	0	-3	-1	-2	0	-9	0	65	38	-	34	-	-100	23	2	
	Banks PP	ALL	-9	-24	-	10	-	30	63	56	20	23	27	28	19	20	12	12	14	15	25	9	61	18	42	18	32	18	
		DROUGHT	-13	-21	-	25	-	65	69	41	2	3	22	23	14	16	6	7	-2	1	61	31	-	22	41	8	33	16	
	Jones PP	ALL	33	13	-	34	56	24	32	27	20	22	20	21	18	18	15	16	14	16	28	13	32	3	62	37	32	20	
		DROUGHT	67	53	-	65	60	26	32	19	16	16	5	6	15	15	17	18	4	10	55	20	-	7	37	20	34	20	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 Table CI-13. Period average change in chloride concentrations (mg/L) for Alternative 2A LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 2 LLT	Delta Interior	Moke R. (SF) at Staten Island	ALL	3	4	3	3	2	2	2	3	2	3	3	4	3	3	3	3	6	7	6	7	6	6	4	4	4	4
				(29%)	(31%)	(28%)	(26%)	(12%)	(14%)	(9%)	(15%)	(10%)	(16%)	(19%)	(22%)	(20%)	(23%)	(16%)	(20%)	(32%)	(40%)	(31%)	(38%)	(46%)	(45%)	(34%)	(34%)	(23%)	(26%)
		DROUGHT	3	3	3	3	1	2	1	2	0	1	2	3	1	2	2	3	7	8	10	10	7	6	4	5	3	4	
				(27%)	(27%)	(25%)	(24%)	(10%)	(12%)	(4%)	(8%)	(0%)	(5%)	(11%)	(18%)	(6%)	(13%)	(10%)	(17%)	(38%)	(44%)	(57%)	(58%)	(46%)	(41%)	(32%)	(34%)	(21%)	(24%)
		SJR at Buckley Cove	ALL	-2	1	0	1	-2	4	-2	3	-2	2	-1	2	-3	2	-3	2	-6	4	-8	4	-9	4	-4	1	-3	2
				(-2%)	(1%)	(0%)	(1%)	(-3%)	(5%)	(-2%)	(4%)	(-2%)	(3%)	(-2%)	(3%)	(-3%)	(2%)	(-4%)	(2%)	(-7%)	(5%)	(-9%)	(6%)	(-10%)	(5%)	(-5%)	(1%)	(-4%)	(3%)
	DROUGHT	-2	1	-2	1	-5	4	-6	4	-3	3	-3	3	-5	4	-6	4	-10	8	-10	7	-15	7	-6	2	-6	4		
			(-2%)	(2%)	(-3%)	(1%)	(-6%)	(5%)	(-6%)	(5%)	(-3%)	(3%)	(-3%)	(4%)	(-6%)	(5%)	(-7%)	(5%)	(-12%)	(11%)	(-11%)	(10%)	(-15%)	(10%)	(-7%)	(2%)	(-7%)	(5%)	
	Franks Tract	ALL	-90	-23	-194	-60	-103	-58	-27	-30	3	-3	13	10	12	9	10	5	18	12	-42	4	-21	26	-26	-10	-37	-10	
			(-31%)	(-10%)	(-51%)	(-24%)	(-35%)	(-23%)	(-17%)	(-19%)	(5%)	(-5%)	(34%)	(24%)	(31%)	(21%)	(21%)	(10%)	(34%)	(19%)	(-22%)	(3%)	(-9%)	(14%)	(-9%)	(-4%)	(-21%)	(-7%)	
	DROUGHT	-75	-37	-172	-56	-78	-38	-21	-2	4	-13	9	4	9	6	15	4	39	12	-89	-21	-43	34	17	-16	-32	-10		
			(-21%)	(-12%)	(-39%)	(-17%)	(-21%)	(-11%)	(-10%)	(-1%)	(6%)	(-16%)	(33%)	(12%)	(39%)	(26%)	(50%)	(9%)	(76%)	(16%)	(-29%)	(-9%)	(-13%)	(14%)	(5%)	(-4%)	(-15%)	(-5%)	
Old R. at Rock Slough	ALL	-46	-5	-149	-39	-86	-42	-26	-29	4	0	10	6	5	2	3	0	15	11	-27	6	-17	22	-11	0	-27	-6		
		(-19%)	(-2%)	(-48%)	(-20%)	(-33%)	(-20%)	(-17%)	(-18%)	(5%)	(0%)	(21%)	(13%)	(9%)	(3%)	(4%)	(-0%)	(28%)	(19%)	(-18%)	(5%)	(-9%)	(15%)	(-4%)	(0%)	(-18%)	(-4%)		
DROUGHT	-33	-23	-129	-33	-60	-14	-22	-4	0	-7	7	1	7	4	10	4	31	11	-63	-15	-39	28	29	13	-22	-3			
		(-11%)	(-8%)	(-37%)	(-13%)	(-19%)	(-5%)	(-12%)	(-3%)	(0%)	(-9%)	(18%)	(2%)	(21%)	(11%)	(32%)	(10%)	(71%)	(18%)	(-26%)	(-8%)	(-14%)	(13%)	(10%)	(4%)	(-12%)	(-2%)		
Western Delta	Sac. R. at Emmaton	ALL	-356	-152	-208	-74	-22	-72	-27	-60	10	-16	17	3	29	13	65	35	89	51	149	145	254	184	-65	-93	-5	-3	
			(-42%)	(-24%)	(-23%)	(-10%)	(-5%)	(-15%)	(-17%)	(-32%)	(15%)	(-17%)	(58%)	(7%)	(76%)	(23%)	(54%)	(24%)	(40%)	(20%)	(45%)	(44%)	(54%)	(34%)	(-8%)	(-11%)	(-1%)	(-1%)	
	DROUGHT	-375	-136	-270	-157	-37	-131	-24	-106	42	-22	23	9	41	20	156	84	186	85	350	294	277	160	12	-235	32	-11		
			(-33%)	(-15%)	(-22%)	(-14%)	(-5%)	(-17%)	(-11%)	(-34%)	(38%)	(-13%)	(51%)	(15%)	(83%)	(29%)	(88%)	(34%)	(61%)	(21%)	(74%)	(56%)	(47%)	(22%)	(1%)	(-17%)	(6%)	(-2%)	
	SJR at Antioch	ALL	-1049	-391	-948	-398	-310	-246	-180	-218	-28	-81	39	1	58	17	76	21	108	40	42	199	279	286	-376	-163	-191	-78	
			(-48%)	(-25%)	(-39%)	(-21%)	(-21%)	(-18%)	(-30%)	(-34%)	(-11%)	(-25%)	(35%)	(1%)	(41%)	(9%)	(21%)	(5%)	(18%)	(6%)	(3%)	(18%)	(19%)	(19%)	(-18%)	(-9%)	(-18%)	(-8%)	
	DROUGHT	-1026	-327	-1040	-504	-392	-283	-221	-344	0	-141	41	3	71	21	167	62	216	81	142	253	297	301	-81	-288	-152	-97		
			(-38%)	(-17%)	(-34%)	(-20%)	(-19%)	(-14%)	(-26%)	(-36%)	(-0%)	(-26%)	(26%)	(1%)	(36%)	(8%)	(30%)	(9%)	(26%)	(8%)	(8%)	(16%)	(18%)	(18%)	(-3%)	(-10%)	(-11%)	(-7%)	
	Sac. R. at Mallard Island	ALL	-1292	-481	-940	-316	-302	-239	-202	-212	40	-42	151	70	217	131	254	136	243	127	248	480	452	450	-492	-45	-135	5	
			(-28%)	(-13%)	(-19%)	(-7%)	(-9%)	(-7%)	(-12%)	(-13%)	(4%)	(-4%)	(33%)	(13%)	(29%)	(16%)	(18%)	(9%)	(13%)	(6%)	(8%)	(17%)	(13%)	(13%)	(-12%)	(-1%)	(-5%)	(0%)	
	DROUGHT	-1346	-417	-1234	-477	-460	-326	-266	-392	102	-113	183	120	221	145	225	175	245	168	272	462	400	424	-102	-199	-147	-36		
			(-25%)	(-9%)	(-20%)	(-9%)	(-10%)	(-7%)	(-11%)	(-15%)	(6%)	(-6%)	(26%)	(16%)	(20%)	(12%)	(11%)	(8%)	(10%)	(7%)	(7%)	(13%)	(11%)	(11%)	(-2%)	(-4%)	(-5%)	(-1%)	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	8	10	14	14	15	15	7	7	1	-1	-2	-3	-3	-2	-4	-4	-5	-4	-3	-1	1	2	9	9	3	4	
			(50%)	(63%)	(93%)	(102%)	(111%)	(110%)	(50%)	(49%)	(5%)	(-6%)	(-12%)	(-16%)	(-21%)	(-16%)	(-25%)	(-24%)	(-26%)	(-21%)	(-13%)	(-3%)	(3%)	(10%)	(46%)	(51%)	(18%)	(21%)	
	DROUGHT	14	16	26	27	30	29	20	20	10	9	3	2	1	0	-1	-4	-1	0	5	7	10	10	19	19	11	11		
			(65%)	(82%)	(158%)	(186%)	(239%)	(218%)	(164%)	(155%)	(71%)	(64%)	(22%)	(15%)	(4%)	(-1%)	(-8%)	(-22%)	(-6%)	(-1%)	(24%)	(34%)	(45%)	(46%)	(85%)	(85%)	(64%)	(63%)	
	Contra Costa PP #1	ALL	-29	5	-91	-28	-96	-23	-45	-25	3	-14	12	8	9	6	0	-2	11	6	-11	4	-36	11	-6	8	-23	-4	
			(-12%)	(3%)	(-36%)	(-15%)	(-41%)	(-14%)	(-25%)	(-16%)	(4%)	(-14%)	(22%)	(14%)	(17%)	(11%)	(1%)	(-3%)	(19%)	(9%)	(-9%)	(4%)	(-17%)	(7%)	(-3%)	(4%)	(-16%)	(-3%)	
	DROUGHT	-21	-8	-74	-45	-107	-37	-52	-70	-1	-13	5	-2	6	1	6	1	23	5	-33	-20	-91	-1	17	47	-27	-12		
			(-7%)	(-3%)	(-25%)	(-17%)	(-36%)	(-16%)	(-24%)	(-29%)	(-2%)	(-14%)	(10%)	(-5%)	(13%)	(3%)	(15%)	(2%)	(52%)	(8%)	(-18%)	(-12%)	(-29%)	(-1%)	(7%)	(21%)	(-15%)	(-7%)	
	Banks PP	ALL	-39	-22	-118	-59	-105	-70	-85	-80	-43	-46	-41	-43	-43	-44	-20	-21	-24	-26	-40	-19	-58	-21	-62	-46	-56	-41	
			(-23%)	(-15%)	(-59%)	(-41%)	(-55%)	(-45%)	(-61%)	(-59%)	(-52%)	(-54%)	(-61%)	(-62%)	(-60%)	(-61%)	(-27%)	(-29%)	(-36%)	(-38%)	(-38%)	(-23%)	(-38%)	(-19%)	(-37%)	(-30%)	(-45%)	(-37%)	
	DROUGHT	-10	-5	-89	-44	-99	-65	-100	-84	-30	-31	-35	-37	-27	-30	-9	-11	-4	-11	-62	-38	-86	-24	-6	10	-42	-26		
			(-5%)	(-2%)	(-40%)	(-25%)	(-44%)	(-34%)	(-59%)	(-55%)	(-32%)	(-33%)	(-53%)	(-54%)	(-42%)	(-44%)	(-14%)	(-18%)	(-8%)	(-18%)	(-43%)	(-31%)	(-38%)	(-15%)	(-3%)	(5%)	(-29%)	(-21%)	
Jones PP	ALL	-59	-41	-108	-53	-90	-65	-66	-61	-41	-43	-45	-47	-39	-39	-37	-38	-28	-31	-41	-23	-26	5	-62	-45	-53	-40		
		(-39%)	(-31%)	(-58%)	(-41%)	(-58%)	(-50%)	(-57%)	(-55%)	(-51%)	(-52%)	(-59%)	(-60%)	(-48%)	(-48%)	(-45%)	(-46%)	(-42%)	(-44%)	(-37%)	(-24%)	(-18%)	(5%)	(-40%)	(-33%)	(-45%)	(-38%)		
DROUGHT	-50	-44	-91	-43	-89	-69	-78	-65	-12	-12	-29	-30	-24	-25	-36	-38	-2	-12	-77	-49	-50	3	-6	4	-44	-30			
		(-28%)	(-25%)	(-45%)	(-28%)	(-51%)	(-44%)	(-59%)	(-54%)	(-14%)	(-14%)	(-37%)	(-38%)	(-31%)	(-32%)	(-47%)	(-48%)	(-3%)	(-19%)	(-51%)	(-39%)	(-25%)	(2%)	(-3%)	(2%)	(-33%)	(-25%)		

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3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

1 Table CI-14. Period average change in chloride concentrations (mg/L) for Alternative 2A LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT		
Alt 2 LLT	Delta Interior	Moke R. (SF) at Staten Island	ALL	1	1	1	1	1	1	1	2	2	2	2	3	2	2	1	2	2	2	1	2	2	2	1	1	2	2	
				(8%)	(8%)	(9%)	(8%)	(4%)	(5%)	(5%)	(9%)	(7%)	(10%)	(11%)	(12%)	(11%)	(12%)	(8%)	(9%)	(13%)	(14%)	(9%)	(10%)	(11%)	(10%)	(8%)	(7%)	(8%)	(9%)	
			1	1	1	1	1	1	0	1	0	1	1	2	1	1	1	2	3	3	2	2	2	2	2	1	1	1	1	2
			(7%)	(8%)	(7%)	(7%)	(3%)	(4%)	(1%)	(4%)	(-1%)	(2%)	(6%)	(10%)	(4%)	(7%)	(7%)	(9%)	(16%)	(17%)	(14%)	(14%)	(10%)	(10%)	(8%)	(8%)	(6%)	(8%)	(6%)	(8%)
		SJR at Buckley Cove	ALL	-3	1	-11	-2	-31	-4	-36	-8	-20	-4	-18	-3	-6	2	1	8	3	6	-6	9	-4	16	-5	8	-11	3	
				(-3%)	(1%)	(-10%)	(-2%)	(-23%)	(-3%)	(-22%)	(-6%)	(-14%)	(-3%)	(-13%)	(-3%)	(-6%)	(2%)	(2%)	(12%)	(3%)	(7%)	(-6%)	(10%)	(-3%)	(19%)	(-5%)	(9%)	(-10%)	(3%)	
		DROUGHT	-5	4	-16	0	-38	-5	-50	-10	-33	-8	-26	-6	-13	1	3	18	-8	25	-4	33	-4	47	-7	18	-17	10		
			(-4%)	(4%)	(-11%)	(0%)	(-23%)	(-4%)	(-24%)	(-6%)	(-15%)	(-4%)	(-12%)	(-3%)	(-8%)	(1%)	(2%)	(16%)	(-6%)	(26%)	(-4%)	(44%)	(-3%)	(66%)	(-5%)	(17%)	(-11%)	(8%)		
	Franks Tract	ALL	-56	-17	-118	-38	-80	-43	-31	-21	2	0	11	9	10	8	8	6	16	8	-24	3	-12	20	-13	-3	-24	-6		
			(-30%)	(-11%)	(-51%)	(-25%)	(-38%)	(-25%)	(-23%)	(-17%)	(3%)	(0%)	(29%)	(22%)	(31%)	(25%)	(16%)	(39%)	(17%)	(-19%)	(3%)	(-8%)	(17%)	(-7%)	(-2%)	(-20%)	(-6%)	(-6%)		
		DROUGHT	-45	-25	-104	-36	-67	-33	-30	-2	3	-13	16	10	14	13	18	9	41	15	-50	-11	-22	28	18	-9	-17	-5		
			(-19%)	(-12%)	(-39%)	(-18%)	(-25%)	(-14%)	(-17%)	(-2%)	(5%)	(-14%)	(40%)	(23%)	(48%)	(43%)	(57%)	(23%)	(97%)	(22%)	(-23%)	(-6%)	(-10%)	(16%)	(8%)	(-3%)	(-11%)	(-3%)		
Old R. at Rock Slough	ALL	-26	-2	-85	-21	-62	-30	-22	-13	4	4	7	2	3	2	3	1	14	9	-14	5	-10	17	-1	7	-16	-2			
		(-17%)	(-2%)	(-45%)	(-17%)	(-35%)	(-20%)	(-17%)	(-10%)	(5%)	(6%)	(14%)	(4%)	(7%)	(5%)	(6%)	(3%)	(36%)	(19%)	(-13%)	(5%)	(-8%)	(17%)	(-1%)	(5%)	(-15%)	(-2%)			
	DROUGHT	-15	-14	-73	-18	-50	-19	-27	-1	-1	-5	11	4	13	10	14	7	32	14	-33	-6	-21	22	25	10	-10	0			
		(-8%)	(-7%)	(-34%)	(-11%)	(-22%)	(-9%)	(-16%)	(-1%)	(-1%)	(-5%)	(18%)	(6%)	(23%)	(17%)	(33%)	(15%)	(85%)	(25%)	(-20%)	(-5%)	(-11%)	(15%)	(13%)	(5%)	(-8%)	(0%)			
Western Delta	Sac. R. at Emmaton	ALL	-253	-116	-165	-73	-41	-64	-33	-51	-1	-23	16	1	24	9	53	28	85	47	119	105	189	143	-27	-60	-3	-5		
			(-44%)	(-27%)	(-30%)	(-16%)	(-13%)	(-19%)	(-25%)	(-35%)	(-2%)	(-24%)	(46%)	(2%)	(68%)	(18%)	(58%)	(24%)	(46%)	(21%)	(53%)	(44%)	(57%)	(37%)	(-5%)	(-10%)	(-1%)	(-2%)		
		DROUGHT	-257	-107	-201	-122	-59	-113	-35	-97	26	-36	26	9	36	17	138	71	198	85	294	235	239	144	34	-159	36	-6		
			(-33%)	(-17%)	(-26%)	(-17%)	(-12%)	(-21%)	(-18%)	(-38%)	(23%)	(-21%)	(59%)	(14%)	(98%)	(30%)	(117%)	(38%)	(81%)	(24%)	(89%)	(60%)	(54%)	(27%)	(4%)	(-16%)	(10%)	(-2%)		
	SJR at Antioch	ALL	-732	-285	-666	-285	-293	-199	-178	-184	-57	-95	37	-7	55	11	76	21	122	43	67	146	228	247	-218	-97	-130	-57		
			(-49%)	(-27%)	(-45%)	(-26%)	(-29%)	(-21%)	(-36%)	(-37%)	(-22%)	(-32%)	(31%)	(-4%)	(49%)	(7%)	(30%)	(7%)	(25%)	(8%)	(8%)	(19%)	(22%)	(24%)	(-15%)	(-7%)	(-17%)	(-8%)		
	DROUGHT	-711	-257	-722	-355	-373	-244	-229	-309	-35	-169	57	2	75	20	186	63	271	88	196	220	293	281	-2	-193	-83	-71			
		(-39%)	(-19%)	(-38%)	(-23%)	(-25%)	(-18%)	(-32%)	(-39%)	(-9%)	(-32%)	(35%)	(1%)	(52%)	(10%)	(49%)	(13%)	(40%)	(10%)	(16%)	(18%)	(23%)	(22%)	(-0%)	(-10%)	(-8%)	(-7%)			
Sac. R. at Mallard Island	ALL	-1096	-436	-887	-335	-393	-247	-261	-249	-56	-125	162	44	220	91	258	100	290	104	263	371	439	445	-302	-22	-114	-22			
		(-36%)	(-18%)	(-30%)	(-14%)	(-18%)	(-12%)	(-21%)	(-20%)	(-7%)	(-14%)	(36%)	(8%)	(43%)	(14%)	(28%)	(9%)	(20%)	(6%)	(13%)	(19%)	(18%)	(18%)	(-10%)	(-1%)	(-6%)	(-1%)			
	DROUGHT	-1097	-404	-1037	-413	-538	-338	-377	-455	4	-243	229	91	264	116	358	163	416	179	401	436	454	449	20	-149	-75	-47			
		(-30%)	(-13%)	(-27%)	(-13%)	(-17%)	(-11%)	(-19%)	(-22%)	(0%)	(-15%)	(35%)	(11%)	(36%)	(13%)	(25%)	(10%)	(20%)	(8%)	(15%)	(16%)	(16%)	(15%)	(1%)	(-4%)	(-3%)	(-2%)			
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	3	3	4	4	5	5	2	2	-1	-2	-2	-2	-2	-2	-2	0	0	1	2	2	3	4	4	1	1			
			(16%)	(19%)	(20%)	(23%)	(30%)	(31%)	(11%)	(12%)	(-3%)	(-9%)	(-7%)	(-10%)	(-12%)	(-9%)	(-8%)	(-8%)	(-1%)	(0%)	(7%)	(10%)	(14%)	(15%)	(23%)	(24%)	(7%)	(7%)		
		DROUGHT	5	5	8	8	13	12	10	10	6	5	3	2	0	-1	0	-2	2	2	5	5	7	7	9	9	5	5		
			(27%)	(29%)	(43%)	(48%)	(73%)	(71%)	(55%)	(53%)	(29%)	(27%)	(13%)	(9%)	(1%)	(-4%)	(-1%)	(-10%)	(9%)	(11%)	(26%)	(28%)	(37%)	(37%)	(48%)	(48%)	(29%)	(28%)		
	Contra Costa PP #1	ALL	-15	7	-52	-15	-74	-20	-49	-21	11	-2	-2	5	1	3	-9	-8	9	5	-2	6	-23	8	-3	11	-17	-2		
			(-10%)	(5%)	(-33%)	(-12%)	(-41%)	(-16%)	(-27%)	(-14%)	(10%)	(-1%)	(-2%)	(6%)	(1%)	(4%)	(-13%)	(-12%)	(18%)	(9%)	(-2%)	(7%)	(-16%)	(8%)	(-2%)	(9%)	(-14%)	(-2%)		
		DROUGHT	-8	-2	-41	-26	-84	-28	-64	-67	-4	-9	5	-4	8	3	5	-1	24	10	-12	-7	-56	1	13	32	-18	-8		
			(-4%)	(-1%)	(-22%)	(-15%)	(-37%)	(-16%)	(-30%)	(-31%)	(-4%)	(-8%)	(7%)	(-4%)	(11%)	(4%)	(8%)	(-1%)	(52%)	(16%)	(-10%)	(-6%)	(-25%)	(1%)	(8%)	(21%)	(-13%)	(-6%)		
	Banks PP	ALL	-21	-9	-66	-32	-70	-44	-83	-69	-47	-44	-42	-41	-41	-39	-8	-8	-12	-18	-18	-12	-30	-9	-32	-21	-38	-28		
			(-19%)	(-9%)	(-50%)	(-33%)	(-49%)	(-37%)	(-60%)	(-56%)	(-46%)	(-44%)	(-48%)	(-47%)	(-49%)	(-48%)	(-11%)	(-11%)	(-19%)	(-25%)	(-25%)	(-18%)	(-30%)	(-12%)	(-29%)	(-21%)	(-38%)	(-31%)		
		DROUGHT	-3	2	-50	-25	-77	-51	-105	-87	-53	-47	-81	-78	-64	-61	-18	-18	-2	-14	-23	-12	-48	-9	2	12	-39	-28		
			(-2%)	(1%)	(-33%)	(-20%)	(-42%)	(-33%)	(-61%)	(-57%)	(-39%)	(-36%)	(-61%)	(-60%)	(-49%)	(-48%)	(-17%)	(-17%)	(-3%)	(-17%)	(-22%)	(-13%)	(-31%)	(-8%)	(2%)	(10%)	(-29%)	(-23%)		
Jones PP	ALL	-34	-27	-59	-29	-67	-44	-82	-65	-58	-57	-63	-61	-28	-27	-28	-28	-15	-28	-16	-17	-10	5	-30	-22	-41	-33			
		(-31%)	(-26%)	(-45%)	(-29%)	(-44%)	(-34%)	(-54%)	(-49%)	(-46%)	(-45%)	(-53%)	(-52%)	(-32%)	(-31%)	(-37%)	(-36%)	(-23%)	(-36%)	(-20%)	(-21%)	(-10%)	(5%)	(-28%)	(-22%)	(-37%)	(-33%)			
	DROUGHT	-26	-29	-45	-22	-67	-46	-117	-94	-55	-51	-98	-95	-35	-36	-52	-50	0	-11	-41	-32	-22	9	7	12	-44	-35			
		(-20%)	(-22%)	(-30%)	(-17%)	(-37%)	(-29%)	(-61%)	(-56%)	(-29%)	(-28%)	(-50%)	(-50%)	(-26%)	(-27%)	(-46%)	(-45%)	(1%)	(-15%)	(-38%)	(-32%)	(-15%)	(8%)	(5%)	(10%)	(-30%)	(-26%)			

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3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

- 1 **Table CI-15. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 2A LLT. Calculation of chloride concentrations was**
 3 **based on a mass balance approach.**

Chloride	Alt 2 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
				Ex. Cond.	No Act. LLT	Alt 2 LLT	Frequency of Criterion/Objective Exceedance (%)		
							Ex. Cond.	No Act. LLT	Alt 2 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	19.4	0	0	0	
		DROUGHT	16.8	16.3	20.2	0	0	0	
	SJR at Buckley Cove	ALL	82.9	77.2	79.5	0	0	0	
		DROUGHT	86.5	76.5	80.5	0	0	0	
	Franks Tract	ALL	173.8	146.4	136.6	34	22	19	
		DROUGHT	212.8	190.9	180.8	47	35	35	
Old R. at Rock Slough	ALL	152.0	130.5	124.9	28	17	15		
	DROUGHT	180.2	161.4	158.4	42	27	30		
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	363.6	44	44	44	
		DROUGHT	516.4	559.3	548.2	55	60	63	
	SJR at Antioch	ALL	1087.3	974.2	896.5	66	73	70	
		DROUGHT	1400.6	1345.6	1248.4	82	87	85	
Sac. R. at Mallard Island	ALL	2552.0	2411.9	2416.8	85	86	88		
	DROUGHT	3233.9	3123.1	3087.2	100	100	100		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	20.2	0	0	0	
		DROUGHT	17.7	17.7	29.0	0	0	0	
	Contra Costa PP #1	ALL	146.5	126.9	123.3	24	14	12	
		DROUGHT	176.5	161.3	149.5	37	22	23	
	Banks PP	ALL	123.4	108.5	67.9	4	2	1	
		DROUGHT	143.7	128.0	101.7	7	2	2	
	Jones PP	ALL	116.9	103.4	63.8	1	1	0	
		DROUGHT	132.9	118.9	89.3	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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- 1 **Table CI-16. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 2A LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride	Location	Period ^a	Period Average Concentration (mg/L)			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b			
			Frequency of Criterion/Objective Exceedance (%)			Ex. Cond.	No Act. LLT	Alt 2 LLT	
			Ex. Cond.	No Act. LLT	Alt 2 LLT				
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18	18	20	0	0	0	
		DROUGHT	19	19	21	0	0	0	
	SJR at Buckley Cove	ALL	116	102	104	0	0	0	
		DROUGHT	155	128	138	0	0	0	
	Franks Tract	ALL	120	102	96	14	8	8	
		DROUGHT	153	140	135	22	15	17	
	Old R. at Rock Slough	ALL	108	94	92	4	3	2	
		DROUGHT	136	125	126	7	5	2	
	Western Delta	Sac. R. at Emmatton	ALL	258	260	255	36	32	36
			DROUGHT	364	406	400	50	55	57
SJR at Antioch		ALL	757	684	627	61	65	64	
		DROUGHT	1002	990	919	80	82	78	
Sac. R. at Mallard Island		ALL	1766	1674	1653	77	83	83	
		DROUGHT	2346	2318	2271	98	98	98	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	19	19	20	0	0	0	
		DROUGHT	19	19	24	0	0	0	
	Contra Costa PP #1	ALL	120	105	103	5	3	3	
		DROUGHT	143	133	125	8	7	3	
	Banks PP	ALL	102	91	63	1	1	0	
		DROUGHT	134	123	95	2	2	0	
	Jones PP	ALL	109	101	68	0	0	0	
		DROUGHT	145	136	101	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 Table CI-17. Alternative 2A use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 2 LLT	Moke. R. (SF) at Staten Island	ALL	-1	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2	-1	-1	-1	-1	-3	-3	-2	-3	-3	-3	-2	-2	-2	-2	
		DROUGHT	-1	-1	-1	-1	-1	-1	0	-1	0	0	-1	-1	0	-1	-1	-1	-1	-3	-3	-4	-4	-3	-3	-2	-2	-1	-2
	SJR at Buckley Cove	ALL	1	0	0	0	1	-2	1	-2	1	-1	1	-1	2	-1	2	-1	4	-2	5	-2	5	-2	2	0	2	-1	
		DROUGHT	1	-1	1	-1	3	-2	3	-2	2	-1	2	-2	3	-2	4	-2	7	-5	6	-4	9	-4	4	-1	4	-2	
	Franks Tract	ALL	-	91	-	-	-	-	29	33	-1	2	-6	-5	-6	-4	-5	-3	-9	-6	73	-4	-	-39	-	-	49	10	
		DROUGHT	-	-	-	-	-	-	45	3	-2	8	-4	-2	-4	-3	-7	-2	-20	-7	-	-	-	-	-	-	86	17	
	Old R. at Rock Slough	ALL	-	9	-	80	-	-	26	30	-2	0	-5	-3	-2	-1	-1	0	-8	-6	28	-5	29	-23	-	-2	28	5	
		DROUGHT	-	-	-	-	-	-	37	6	0	4	-3	0	-3	-2	-5	-2	-15	-6	-	25	-	-67	-	-	31	3	
	Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	27	94	-6	10	-8	-1	-14	-6	-50	-36	-	-	-	-	-	-	-	-	-	-
			DROUGHT	-	-	-	-	-	-	98	-	-29	28	-11	-5	-20	-11	-	-	-	-	-	-	-	-	-	-	-	-
SJR at Antioch		ALL	-	-	-	-	-	-	-	-	-	-	-29	-1	-54	-25	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-47	-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sac. R. at Mallard Island		ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-4	-4	-6	-6	-6	-6	-3	-3	0	0	1	1	1	1	2	2	2	2	1	0	0	-1	-4	-4	-1	-2	
		DROUGHT	-6	-7	-11	-12	-13	-12	-9	-8	-4	-4	-1	-1	0	0	1	2	1	0	-2	-3	-5	-5	-8	-8	-5	-5	
	Contra Costa PP #1	ALL	-	-12	-	45	-	27	64	28	-2	9	-6	-4	-5	-3	0	1	-5	-3	9	-3	78	-12	19	-17	22	3	
		DROUGHT	-	-	-	-	-	-	-	-	1	8	-2	1	-3	-1	-3	0	-11	-3	49	24	-	6	-	-100	37	13	
	Banks PP	ALL	46	22	-	56	-	73	77	69	25	28	23	24	24	25	11	12	13	14	28	11	58	16	76	47	44	29	
		DROUGHT	19	8	-	63	-	-	-	87	19	20	19	20	15	16	4	6	2	6	60	30	-	28	11	-15	39	22	
	Jones PP	ALL	60	36	-	45	94	53	49	43	24	26	26	27	23	23	22	23	16	18	30	14	24	-4	66	40	40	27	
		DROUGHT	71	57	-	44	-	73	66	49	7	7	17	18	14	15	21	22	1	6	80	39	-	-3	9	-5	37	23	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-19. Period average change in chloride concentrations (mg/L) for Alternative 3 LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change																												
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT																											
			Alt 3 LLT																																																				
Delta Interior	Moke. R. (SF) at Staten Island	ALL	2	2	3	3	1	1	1	2	1	2	2	3	2	2	1	2	5	6	6	7	7	6	5	5	3	3	(19%)	(21%)	(22%)	(21%)	(8%)	(10%)	(4%)	(9%)	(4%)	(9%)	(13%)	(16%)	(10%)	(13%)	(9%)	(13%)	(29%)	(36%)	(33%)	(39%)	(47%)	(47%)	(39%)	(39%)	(19%)	(22%)	
		DROUGHT	2	2	3	3	1	1	0	1	-1	0	2	3	1	2	1	2	7	8	9	9	6	6	4	4	3	3	(15%)	(15%)	(26%)	(25%)	(10%)	(11%)	(-0%)	(4%)	(-3%)	(1%)	(7%)	(14%)	(3%)	(9%)	(7%)	(13%)	(38%)	(44%)	(55%)	(56%)	(45%)	(40%)	(29%)	(32%)	(18%)	(21%)	
	SJR at Buckley Cove	ALL	-3	0	-1	0	-3	3	-3	1	-3	1	-2	1	-4	1	-4	1	-8	2	-10	3	-7	6	-4	0	-4	2	(-3%)	(-0%)	(-1%)	(-0%)	(-4%)	(5%)	(-4%)	(2%)	(-4%)	(1%)	(-3%)	(1%)	(-4%)	(1%)	(-5%)	(1%)	(-9%)	(2%)	(-11%)	(4%)	(-8%)	(8%)	(-5%)	(0%)	(-5%)	(2%)	
		DROUGHT	-3	0	-2	1	-5	4	-6	3	-4	2	-4	2	-7	2	-7	2	-15	4	-12	5	-11	11	-6	2	-7	3	(-4%)	(0%)	(-3%)	(1%)	(-6%)	(6%)	(-7%)	(4%)	(-5%)	(2%)	(-5%)	(2%)	(-8%)	(3%)	(-9%)	(2%)	(-16%)	(6%)	(-14%)	(7%)	(-11%)	(14%)	(-7%)	(3%)	(-8%)	(4%)	
	Franks Tract	ALL	17	84	-91	43	-35	11	19	16	9	3	12	9	8	5	4	-1	12	5	-47	-1	-30	17	21	36	-8	19	(6%)	(37%)	(-24%)	(17%)	(-12%)	(4%)	(12%)	(10%)	(15%)	(4%)	(31%)	(22%)	(20%)	(12%)	(8%)	(-2%)	(21%)	(8%)	(-25%)	(-1%)	(-13%)	(9%)	(7%)	(13%)	(-5%)	(13%)	
		DROUGHT	4	43	-105	11	-63	-23	3	22	10	-7	8	3	6	3	15	4	37	10	-97	-29	-43	35	7	-26	-18	4	(1%)	(13%)	(-24%)	(3%)	(-17%)	(-7%)	(1%)	(12%)	(16%)	(-9%)	(30%)	(9%)	(25%)	(13%)	(50%)	(9%)	(71%)	(13%)	(-31%)	(-12%)	(-13%)	(14%)	(2%)	(-7%)	(-9%)	(2%)	
	Old R. at Rock Slough	ALL	31	72	-64	45	-34	10	12	9	8	4	12	9	1	-3	-6	-8	8	4	-32	1	-26	14	20	32	-6	16	(13%)	(37%)	(-21%)	(23%)	(-13%)	(5%)	(8%)	(6%)	(11%)	(6%)	(26%)	(17%)	(1%)	(-5%)	(-10%)	(-14%)	(15%)	(6%)	(-21%)	(1%)	(-14%)	(9%)	(8%)	(14%)	(-4%)	(12%)	
		DROUGHT	20	31	-80	16	-60	-15	-5	13	9	2	7	1	1	-2	6	0	28	9	-71	-23	-42	25	17	1	-14	5	(7%)	(11%)	(-23%)	(6%)	(-19%)	(-5%)	(-3%)	(8%)	(13%)	(2%)	(18%)	(2%)	(4%)	(-5%)	(19%)	(-1%)	(65%)	(14%)	(-30%)	(-12%)	(-15%)	(12%)	(6%)	(0%)	(-8%)	(3%)	
	Western Delta	Sac. R. at Emmaton	ALL	-194	10	-79	54	85	35	1	-33	7	-19	15	1	31	14	84	55	90	52	151	147	252	182	233	205	56	59	(-23%)	(1%)	(-9%)	(7%)	(19%)	(7%)	(1%)	(-18%)	(10%)	(-20%)	(51%)	(2%)	(80%)	(26%)	(70%)	(37%)	(41%)	(20%)	(46%)	(45%)	(53%)	(33%)	(28%)	(24%)	(15%)	(16%)
			DROUGHT	-306	-67	-186	-73	141	47	-25	-107	16	-47	21	7	44	24	171	99	172	71	335	279	253	136	-24	-271	51	8	(-27%)	(-7%)	(-15%)	(-6%)	(20%)	(6%)	(-11%)	(-35%)	(15%)	(-27%)	(46%)	(11%)	(90%)	(35%)	(96%)	(40%)	(57%)	(18%)	(71%)	(53%)	(43%)	(19%)	(-2%)	(-20%)	(10%)	(1%)
		SJR at Antioch	ALL	-536	122	-540	10	-24	41	-79	-118	-16	-68	34	-4	72	30	136	82	113	45	37	194	261	268	260	474	-23	90	(-24%)	(8%)	(-22%)	(1%)	(-2%)	(3%)	(-13%)	(-18%)	(-6%)	(-22%)	(30%)	(-2%)	(51%)	(16%)	(38%)	(20%)	(19%)	(7%)	(3%)	(18%)	(18%)	(18%)	(12%)	(25%)	(-2%)	(9%)
			DROUGHT	-657	41	-843	-306	-98	12	-184	-307	-26	-166	35	-4	86	35	205	100	196	61	138	249	280	285	-116	-323	-82	-27	(-25%)	(2%)	(-27%)	(-12%)	(-5%)	(1%)	(-22%)	(-32%)	(-6%)	(-30%)	(21%)	(-2%)	(43%)	(14%)	(36%)	(15%)	(23%)	(6%)	(8%)	(15%)	(17%)	(17%)	(-5%)	(-12%)	(-6%)	(-2%)
Sac. R. at Mallard Island		ALL	-781	30	-457	166	15	78	-73	-82	62	-19	128	47	260	174	400	282	268	152	254	485	441	439	412	858	77	218	(-17%)	(1%)	(-9%)	(4%)	(0%)	(2%)	(-4%)	(-5%)	(7%)	(-2%)	(28%)	(9%)	(35%)	(21%)	(29%)	(19%)	(14%)	(8%)	(8%)	(17%)	(13%)	(10%)	(23%)	(3%)	(9%)		
		DROUGHT	-996	-68	-917	-160	-147	-13	-251	-378	84	-130	161	98	253	177	265	215	227	149	263	453	380	404	-146	-243	-69	42	(-19%)	(-2%)	(-15%)	(-3%)	(-3%)	(-0%)	(-10%)	(-15%)	(5%)	(-7%)	(23%)	(13%)	(23%)	(15%)	(13%)	(10%)	(9%)	(6%)	(7%)	(13%)	(10%)	(11%)	(-3%)	(-5%)	(-2%)	(1%)	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	15	16	19	20	17	17	9	9	2	0	-2	-3	-3	-2	-4	-4	-5	-4	-3	0	1	2	11	12	5	5	(87%)	(103%)	(130%)	(141%)	(131%)	(131%)	(63%)	(62%)	(10%)	(-2%)	(-11%)	(-15%)	(-19%)	(-14%)	(-23%)	(-22%)	(-26%)	(-20%)	(-12%)	(-2%)	(4%)	(11%)	(60%)	(65%)	(28%)	(32%)	
		DROUGHT	20	22	31	32	33	32	23	23	11	10	3	2	1	0	-1	-4	-1	0	5	7	10	10	19	19	13	13	(95%)	(115%)	(188%)	(219%)	(263%)	(241%)	(189%)	(178%)	(78%)	(71%)	(22%)	(16%)	(7%)	(1%)	(-5%)	(-19%)	(-6%)	(-1%)	(22%)	(31%)	(41%)	(42%)	(88%)	(88%)	(72%)	(72%)	
	Contra Costa PP #1	ALL	46	80	10	72	-55	18	-27	-7	25	7	12	8	10	8	-5	-8	5	0	-15	0	-43	4	-1	13	-3	16	(19%)	(38%)	(4%)	(39%)	(-23%)	(11%)	(-15%)	(-4%)	(31%)	(8%)	(23%)	(15%)	(19%)	(13%)	(-8%)	(-12%)	(8%)	(-1%)	(-12%)	(0%)	(-21%)	(2%)	(-0%)	(7%)	(-2%)	(13%)	
		DROUGHT	30	43	19	48	-78	-8	-34	-53	8	-3	7	-1	1	-3	2	-3	20	3	-43	-29	-95	-6	11	41	-13	3	(10%)	(15%)	(6%)	(18%)	(-26%)	(-3%)	(-16%)	(-22%)	(10%)	(-3%)	(14%)	(-1%)	(3%)	(-6%)	(6%)	(-6%)	(47%)	(5%)	(-23%)	(-17%)	(-30%)	(-3%)	(4%)	(18%)	(-7%)	(2%)	
	Banks PP	ALL	4	20	-60	-1	-53	-18	-46	-41	-18	-22	-32	-34	-29	-30	-16	-18	-15	-17	-42	-21	-59	-23	-40	-23	-34	-19	(2%)	(14%)	(-30%)	(-1%)	(-28%)	(-12%)	(-33%)	(-30%)	(-22%)	(-25%)	(-47%)	(-48%)	(-41%)	(-42%)	(-22%)	(-24%)	(-23%)	(-25%)	(-40%)	(-25%)	(-40%)	(-20%)	(-24%)	(-15%)	(-27%)	(-17%)	
		DROUGHT	10	15	-70	-25	-65	-31	-93	-77	4	3	-23	-25	-23	-25	-8	-11	6	-1	-85	-61	-80	-17	-11	5	-34	-19	(5%)	(8%)	(-31%)	(-14%)	(-29%)	(-16%)	(-55%)	(-50%)	(4%)	(3%)	(-35%)	(-36%)	(-35%)	(-37%)	(-14%)	(-17%)	(11%)	(-2%)	(-59%)	(-50%)	(-35%)	(-11%)	(-5%)	(3%)	(-24%)	(-15%)	
	Jones PP	ALL	-31	-13	-78	-23	-37	-12	-48	-42	-30	-32	-30	-31	-14	-14	-20	-21	-26	-29	-37	-19	-33	-2	-43	-26	-22	(-20%)	(-10%)	(-42%)	(-18%)	(-24%)	(-9%)	(-41%)	(-39%)	(-38%)	(-39%)	(-39%)	(-40%)	(-17%)	(-18%)	(-24%)	(-25%)	(-38%)	(-41%)	(-33%)	(-20%)	(-23%)	(-2%)	(-28%)	(-19%)	(-30%)	(-21%)		
		DROUGHT	-38	-32	-94	-45	-45	-25	-78	-65	-30	-30	-26	-27	-11	-12	-23	-25	-10	-20	-50	-21	-58	-5	-36	-26	-40	-26	(-21%)	(-18%)	(-47%)	(-30%)	(-26%)	(-16%)	(-59%)	(-54%)	(-36%)	(-35%)	(-33%)	(-34%)	(-15%)	(-15%)	(-30%)	(-31%)	(-19%)	(-32%)	(-32%)	(-17%)	(-28%)	(-3%)	(-20%)	(-16%)	(-30%)	(-22%)	

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3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

1 Table CI-20. Period average change in chloride concentrations (mg/L) for Alternative 3 LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT		
Delta Interior	Moke. R. (SF) at Staten Island	ALL	1 (5%)	1 (5%)	1 (7%)	1 (7%)	0 (3%)	1 (3%)	1 (2%)	1 (5%)	1 (3%)	1 (6%)	1 (7%)	2 (8%)	1 (6%)	1 (7%)	1 (6%)	1 (7%)	2 (12%)	2 (13%)	2 (10%)	2 (10%)	2 (11%)	2 (10%)	1 (9%)	1 (8%)	1 (6%)	1 (7%)		
		DROUGHT	1 (4%)	1 (4%)	1 (8%)	1 (8%)	1 (3%)	1 (4%)	0 (-1%)	0 (2%)	-1 (-3%)	0 (0%)	1 (4%)	2 (8%)	0 (2%)	1 (5%)	1 (5%)	1 (7%)	3 (16%)	3 (17%)	2 (14%)	2 (14%)	2 (10%)	1 (9%)	1 (7%)	1 (8%)	1 (5%)	1 (7%)		
	SJR at Buckley Cove	ALL	-8 (-8%)	-3 (-3%)	-16 (-15%)	-7 (-7%)	-36 (-26%)	-9 (-8%)	-45 (-28%)	-16 (-12%)	-30 (-21%)	-13 (-10%)	-27 (-20%)	-12 (-10%)	-6 (-6%)	2 (3%)	3 (3%)	10 (13%)	-3 (-3%)	0 (0%)	-16 (-15%)	-1 (-2%)	-14 (-13%)	6 (7%)	-10 (-10%)	3 (3%)	-17 (-15%)	-3 (-3%)		
		DROUGHT	-12 (-9%)	-2 (-2%)	-20 (-14%)	-4 (-4%)	-41 (-24%)	-8 (-6%)	-60 (-28%)	-20 (-12%)	-49 (-22%)	-24 (-12%)	-40 (-19%)	-20 (-10%)	-11 (-7%)	2 (1%)	6 (5%)	21 (19%)	-16 (-12%)	18 (18%)	-21 (-19%)	16 (21%)	-21 (-18%)	29 (41%)	-16 (-12%)	9 (8%)	-25 (-16%)	1 (1%)		
	Franks Tract	ALL	8 (4%)	47 (32%)	-61 (-26%)	19 (13%)	-37 (-18%)	0 (0%)	8 (6%)	18 (15%)	5 (8%)	4 (6%)	10 (28%)	8 (21%)	5 (17%)	4 (12%)	3 (8%)	0 (0%)	12 (29%)	4 (9%)	-27 (-21%)	0 (0%)	-17 (-11%)	16 (13%)	15 (8%)	25 (14%)	-6 (-5%)	12 (12%)		
		DROUGHT	2 (1%)	21 (10%)	-69 (-26%)	-1 (-1%)	-57 (-21%)	-24 (-10%)	-4 (-2%)	23 (15%)	11 (15%)	-5 (-6%)	12 (30%)	6 (14%)	5 (16%)	4 (12%)	3 (9%)	12 (39%)	3 (9%)	36 (86%)	10 (15%)	-56 (-27%)	-17 (-10%)	-21 (-9%)	28 (16%)	10 (4%)	-16 (-6%)	-10 (-7%)	3 (2%)	
	Old R. at Rock Slough	ALL	17 (11%)	40 (30%)	-44 (-23%)	20 (17%)	-35 (-19%)	-2 (-1%)	3 (3%)	13 (10%)	7 (10%)	7 (10%)	9 (18%)	5 (9%)	-5 (-10%)	-6 (-11%)	-7 (-16%)	-9 (-18%)	10 (26%)	4 (10%)	-16 (-16%)	2 (2%)	-14 (-11%)	13 (13%)	15 (9%)	22 (15%)	-5 (-5%)	9 (10%)		
		DROUGHT	13 (7%)	14 (8%)	-51 (-24%)	4 (3%)	-53 (-23%)	-21 (-11%)	-5 (-3%)	21 (14%)	16 (18%)	11 (12%)	9 (14%)	2 (3%)	-4 (-7%)	-7 (-12%)	2 (4%)	-5 (-11%)	27 (71%)	9 (15%)	-40 (-25%)	-13 (-10%)	-22 (-12%)	21 (14%)	16 (8%)	1 (1%)	-8 (-6%)	3 (2%)		
	Western Delta	Sac. R. at Emmaton	ALL	-134 (-23%)	3 (1%)	-83 (-15%)	10 (2%)	41 (13%)	18 (6%)	-3 (-2%)	-21 (-14%)	-2 (-2%)	-23 (-25%)	16 (45%)	1 (1%)	25 (70%)	10 (20%)	66 (73%)	41 (35%)	89 (48%)	51 (23%)	122 (54%)	108 (46%)	188 (56%)	141 (37%)	174 (31%)	140 (24%)	42 (16%)	40 (15%)	
			DROUGHT	-211 (-27%)	-61 (-10%)	-151 (-19%)	-72 (-10%)	74 (15%)	20 (4%)	-29 (-15%)	-91 (-36%)	-2 (-2%)	-64 (-37%)	22 (50%)	4 (7%)	38 (104%)	19 (34%)	149 (126%)	81 (44%)	184 (75%)	72 (20%)	281 (85%)	222 (57%)	220 (49%)	125 (23%)	7 (1%)	-186 (-19%)	49 (13%)	6 (1%)	
		SJR at Antioch	ALL	-352 (-24%)	95 (9%)	-413 (-28%)	-31 (-3%)	-62 (-6%)	31 (3%)	-72 (-14%)	-78 (-16%)	-35 (-14%)	-74 (-25%)	38 (32%)	-6 (-4%)	65 (58%)	22 (14%)	118 (47%)	64 (21%)	132 (27%)	53 (9%)	69 (8%)	149 (19%)	218 (21%)	237 (23%)	221 (15%)	342 (26%)	-6 (-1%)	67 (10%)	
			DROUGHT	-452 (-25%)	2 (0%)	-604 (-32%)	-237 (-15%)	-128 (-9%)	1 (0%)	-175 (-25%)	-256 (-32%)	-67 (-17%)	-201 (-38%)	47 (29%)	-8 (-4%)	84 (59%)	30 (15%)	213 (57%)	91 (18%)	252 (37%)	69 (8%)	191 (15%)	215 (18%)	280 (22%)	269 (21%)	-29 (-2%)	-220 (-11%)	-32 (-3%)	-20 (-2%)	
Sac. R. at Mallard Island		ALL	-510 (-17%)	150 (6%)	-495 (-17%)	57 (2%)	-34 (-2%)	112 (5%)	-69 (-5%)	-57 (-5%)	5 (1%)	-64 (-7%)	156 (35%)	38 (7%)	253 (49%)	123 (19%)	386 (42%)	229 (21%)	350 (24%)	164 (10%)	280 (14%)	388 (20%)	434 (18%)	440 (18%)	401 (13%)	680 (25%)	96 (5%)	188 (11%)		
		DROUGHT	-732 (-20%)	-39 (-1%)	-785 (-21%)	-161 (-5%)	-188 (-6%)	13 (0%)	-293 (-15%)	-371 (-18%)	-41 (-3%)	-287 (-17%)	204 (31%)	66 (8%)	288 (39%)	139 (16%)	402 (28%)	207 (13%)	402 (19%)	164 (7%)	390 (14%)	426 (16%)	441 (15%)	435 (15%)	-18 (-1%)	-187 (-5%)	6 (0%)	34 (1%)		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	5 (27%)	5 (31%)	5 (31%)	6 (34%)	6 (34%)	6 (34%)	3 (14%)	3 (15%)	-1 (-2%)	-2 (-8%)	-1 (-7%)	-2 (-9%)	-2 (-10%)	-2 (-8%)	-1 (-7%)	-1 (-7%)	0 (-1%)	0 (1%)	1 (8%)	2 (10%)	2 (13%)	3 (15%)	5 (27%)	5 (28%)	2 (10%)	2 (10%)		
		DROUGHT	7 (37%)	7 (40%)	10 (53%)	10 (59%)	13 (74%)	12 (71%)	11 (59%)	10 (56%)	5 (27%)	5 (24%)	2 (12%)	2 (8%)	1 (3%)	0 (-2%)	0 (1%)	-2 (-9%)	2 (10%)	2 (11%)	4 (23%)	5 (26%)	6 (33%)	6 (33%)	8 (47%)	9 (48%)	6 (31%)	5 (29%)		
	Contra Costa PP #1	ALL	23 (15%)	45 (33%)	-2 (-1%)	35 (29%)	-47 (-26%)	7 (5%)	-39 (-21%)	-11 (-7%)	25 (23%)	13 (11%)	2 (2%)	9 (11%)	0 (0%)	3 (4%)	-13 (-19%)	-13 (-19%)	5 (10%)	1 (2%)	-4 (-5%)	3 (4%)	-27 (-19%)	5 (4%)	-2 (-1%)	13 (10%)	-7 (-5%)	9 (9%)		
		DROUGHT	17 (9%)	23 (12%)	5 (3%)	21 (12%)	-63 (-28%)	-8 (-5%)	-44 (-21%)	-47 (-22%)	14 (13%)	9 (8%)	8 (10%)	-2 (-2%)	-5 (-7%)	-10 (-13%)	-5 (-9%)	-11 (-17%)	18 (39%)	4 (6%)	-20 (-16%)	-15 (-13%)	-59 (-27%)	-1 (-1%)	9 (5%)	28 (18%)	-11 (-7%)	-1 (-1%)		
	Banks PP	ALL	1 (0%)	12 (12%)	-39 (-29%)	-4 (-5%)	-43 (-30%)	-17 (-14%)	-48 (-35%)	-34 (-27%)	-16 (-15%)	-13 (-13%)	-38 (-44%)	-37 (-43%)	-35 (-41%)	-34 (-41%)	-15 (-20%)	-15 (-20%)	-9 (-14%)	-14 (-21%)	-21 (-28%)	-15 (-22%)	-30 (-30%)	-9 (-11%)	-19 (-18%)	-8 (-8%)	-26 (-26%)	-15 (-17%)		
		DROUGHT	7 (5%)	11 (9%)	-45 (-30%)	-20 (-16%)	-55 (-30%)	-29 (-18%)	-93 (-54%)	-75 (-49%)	4 (3%)	10 (7%)	4 (4%)	10 (3%)	5 (4%)	-53 (-40%)	-50 (-38%)	-56 (-43%)	-54 (-42%)	-27 (-25%)	-27 (-25%)	7 (10%)	-4 (-5%)	-49 (-48%)	-38 (-42%)	-43 (-28%)	-4 (-4%)	-2 (-2%)	8 (6%)	-32 (-24%)
	Jones PP	ALL	-9 (-8%)	-2 (-2%)	-34 (-26%)	-5 (-5%)	-31 (-21%)	-8 (-7%)	-62 (-41%)	-45 (-33%)	-40 (-32%)	-39 (-31%)	-39 (-33%)	-37 (-32%)	-17 (-19%)	-16 (-18%)	-20 (-27%)	-20 (-26%)	-15 (-24%)	-28 (-37%)	-13 (-15%)	-14 (-17%)	-12 (-12%)	3 (4%)	-18 (-16%)	-9 (-10%)	-26 (-24%)	-18 (-18%)		
		DROUGHT	-12 (-9%)	-15 (-11%)	-28 (-18%)	-5 (-4%)	-46 (-25%)	-25 (-15%)	-106 (-55%)	-83 (-49%)	-82 (-43%)	-78 (-42%)	-80 (-41%)	-78 (-40%)	-20 (-15%)	-21 (-16%)	-39 (-34%)	-37 (-33%)	-14 (-22%)	-25 (-34%)	-17 (-16%)	-8 (-8%)	-24 (-16%)	8 (6%)	-13 (-10%)	-8 (-6%)	-38 (-26%)	-29 (-21%)		

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3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

- 1 **Table CI-21. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 3 LLT. Calculation of chloride concentrations was**
 3 **based on a mass balance approach.**

Chloride Alt 3 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
			Ex. Cond.	No Act. LLT	Alt 3 LLT	Frequency of Criterion/Objective Exceedance (%)		
						Ex. Cond.	No Act. LLT	Alt 3 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	18.7	0	0	0
		DROUGHT	16.8	16.3	19.7	0	0	0
	SJR at Buckley Cove	ALL	82.9	77.2	78.7	0	0	0
		DROUGHT	86.5	76.5	79.6	0	0	0
	Franks Tract	ALL	173.8	146.4	165.3	34	22	30
		DROUGHT	212.8	190.9	194.7	47	35	37
Old R. at Rock Slough	ALL	152.0	130.5	146.2	28	17	24	
	DROUGHT	180.2	161.4	166.1	42	27	33	
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	425.3	44	44	50
		DROUGHT	516.4	559.3	567.4	55	60	65
	SJR at Antioch	ALL	1087.3	974.2	1063.9	66	73	74
		DROUGHT	1400.6	1345.6	1318.6	82	87	88
Sac. R. at Mallard Island	ALL	2552.0	2411.9	2629.4	85	86	87	
	DROUGHT	3233.9	3123.1	3165.1	100	100	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	21.9	0	0	0
		DROUGHT	17.7	17.7	30.5	0	0	0
	Contra Costa PP #1	ALL	146.5	126.9	143.3	24	14	20
		DROUGHT	176.5	161.3	163.9	37	22	30
	Banks PP	ALL	123.4	108.5	89.8	4	2	1
		DROUGHT	143.7	128.0	109.4	7	2	0
Jones PP	ALL	116.9	103.4	81.6	1	1	0	
	DROUGHT	132.9	118.9	93.1	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 **Table CI-22. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 3 LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride Alt 3 LLT	Location	Period ^a	Period Average Concentration (mg/L)			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
			Ex. Cond.	No Act. LLT	Alt 3 LLT	Frequency of Criterion/Objective Exceedance (%)		
						Ex. Cond.	No Act. LLT	Alt 3 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18	18	20	0	0	0
		DROUGHT	19	19	20	0	0	0
	SJR at Buckley Cove	ALL	116	102	98	0	0	0
		DROUGHT	155	128	130	0	0	0
	Franks Tract	ALL	120	102	114	14	8	9
		DROUGHT	153	140	143	22	15	15
Old R. at Rock Slough	ALL	108	94	103	4	3	3	
	DROUGHT	136	125	128	7	5	2	
Western Delta	Sac. R. at Emmaton	ALL	258	260	300	36	32	43
		DROUGHT	364	406	412	50	55	57
	SJR at Antioch	ALL	757	684	751	61	65	71
		DROUGHT	1002	990	970	80	82	83
	Sac. R. at Mallard Island	ALL	1766	1674	1863	77	83	84
		DROUGHT	2346	2318	2352	98	98	98
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	19	19	21	0	0	0
		DROUGHT	19	19	24	0	0	0
	Contra Costa PP #1	ALL	120	105	114	5	3	2
		DROUGHT	143	133	132	8	7	2
	Banks PP	ALL	102	91	76	1	1	0
		DROUGHT	134	123	102	2	2	0
	Jones PP	ALL	109	101	83	0	0	0
		DROUGHT	145	136	107	0	0	0

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 **Table CI-25A. Period average change in chloride concentrations (mg/L) for Alternative 4 LLT Scenario H1 relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass**
 2 **balance approach.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 4 LLT Scenario H1	Delta Interior	Moke. R. (SF) at Staten Island	ALL	3	4	3	3	1	2	1	2	1	2	3	3	3	3	3	3	6	7	6	6	6	6	4	4	3	4
			DROUGHT	(29%)	(30%)	(27%)	(25%)	(11%)	(13%)	(6%)	(11%)	(7%)	(12%)	(17%)	(20%)	(18%)	(21%)	(16%)	(20%)	(31%)	(39%)	(31%)	(37%)	(43%)	(42%)	(37%)	(37%)	(22%)	(25%)
		SJR at Buckley Cove	ALL	-2	1	0	1	-2	4	-2	3	-2	2	-1	2	-3	2	-3	2	-6	4	-8	4	-9	4	-4	1	-4	2
			DROUGHT	(-2%)	(1%)	(0%)	(1%)	(-3%)	(5%)	(-2%)	(4%)	(-2%)	(3%)	(-2%)	(3%)	(-3%)	(2%)	(-4%)	(2%)	(-7%)	(5%)	(-9%)	(5%)	(-10%)	(5%)	(-5%)	(1%)	(-4%)	(3%)
		Franks Tract	ALL	-4	63	-157	-23	-58	-13	-19	-22	2	-4	12	9	11	8	9	5	18	11	-41	6	-14	33	40	56	-17	11
			DROUGHT	(-1%)	(28%)	(-41%)	(-9%)	(-19%)	(-5%)	(-12%)	(-14%)	(3%)	(-6%)	(31%)	(21%)	(30%)	(20%)	(20%)	(9%)	(33%)	(18%)	(-21%)	(4%)	(-6%)	(18%)	(13%)	(20%)	(-10%)	(7%)
	Old R. at Rock Slough	ALL	21	62	-125	-15	-54	-10	-19	-22	-1	-4	10	6	4	1	2	-1	15	11	-26	7	-11	28	38	50	-12	9	
		DROUGHT	(9%)	(31%)	(-40%)	(-8%)	(-21%)	(-5%)	(-13%)	(-14%)	(-1%)	(-6%)	(21%)	(12%)	(8%)	(2%)	(4%)	(-1%)	(28%)	(19%)	(-17%)	(6%)	(-6%)	(19%)	(16%)	(21%)	(-8%)	(7%)	
	Western Delta	Sac. R. at Emmaton	ALL	-173	31	-44	90	37	-13	-19	-53	12	-14	16	2	29	12	67	37	92	54	152	148	235	165	206	178	51	53
			DROUGHT	(-20%)	(5%)	(-5%)	(12%)	(9%)	(-3%)	(-12%)	(-28%)	(17%)	(-15%)	(55%)	(5%)	(75%)	(22%)	(55%)	(25%)	(41%)	(21%)	(46%)	(45%)	(50%)	(30%)	(25%)	(21%)	(14%)	(15%)
		SJR at Antioch	ALL	-614	44	-554	-3	-176	-111	-173	-212	-26	-79	35	-3	58	16	79	24	110	42	45	202	271	278	222	436	-60	53
			DROUGHT	(-28%)	(3%)	(-23%)	(-0%)	(-12%)	(-8%)	(-28%)	(-33%)	(-10%)	(-25%)	(31%)	(-2%)	(41%)	(9%)	(22%)	(6%)	(19%)	(6%)	(4%)	(19%)	(18%)	(19%)	(10%)	(23%)	(-6%)	(5%)
Sac. R. at Mallard Island		ALL	-662	148	-412	211	-188	-125	-246	-256	29	-53	139	58	217	131	261	143	246	130	248	480	440	438	369	816	37	177	
		DROUGHT	(-14%)	(4%)	(-8%)	(5%)	(-6%)	(-4%)	(-15%)	(-15%)	(3%)	(-5%)	(30%)	(11%)	(29%)	(16%)	(19%)	(10%)	(13%)	(6%)	(8%)	(17%)	(13%)	(13%)	(9%)	(21%)	(1%)	(7%)	
Major Diversions (Pumping Stations)		NBA at Barker Slough PP	ALL	14	15	18	19	19	19	10	10	2	0	-1	-2	-3	-2	-4	-3	-6	-4	-3	-1	0	2	10	10	5	5
			DROUGHT	(81%)	(97%)	(124%)	(135%)	(144%)	(143%)	(69%)	(68%)	(13%)	(2%)	(-9%)	(-13%)	(-17%)	(-12%)	(-21%)	(-21%)	(-29%)	(-24%)	(-16%)	(-6%)	(2%)	(8%)	(53%)	(58%)	(28%)	(31%)
		Contra Costa PP #1	ALL	52	86	-6	57	-81	-7	-46	-26	6	-11	11	7	9	6	0	-2	12	7	-12	3	-32	15	18	33	-6	14
			DROUGHT	(21%)	(41%)	(-2%)	(30%)	(-34%)	(-4%)	(-26%)	(-16%)	(8%)	(-12%)	(20%)	(12%)	(16%)	(11%)	(0%)	(-3%)	(21%)	(11%)	(-10%)	(3%)	(-16%)	(10%)	(8%)	(16%)	(-4%)	(11%)
		Banks PP	ALL	44	58	-35	-5	-94	-24	-56	-74	-2	-13	6	-1	1	-3	4	-1	24	7	-37	-24	-88	2	19	49	-18	-3
			DROUGHT	(15%)	(20%)	(-12%)	(-2%)	(-31%)	(-10%)	(-25%)	(-31%)	(-2%)	(-14%)	(13%)	(-2%)	(3%)	(-6%)	(10%)	(-2%)	(56%)	(11%)	(-20%)	(-14%)	(-28%)	(1%)	(7%)	(22%)	(-10%)	(-2%)
	Jones PP	ALL	-23	-6	-90	-31	-80	-46	-63	-59	-37	-41	-42	-44	-40	-42	-20	-21	-24	-26	-41	-20	-57	-20	-26	-9	-45	-30	
		DROUGHT	(-14%)	(-4%)	(-44%)	(-21%)	(-42%)	(-30%)	(-45%)	(-44%)	(-45%)	(-47%)	(-62%)	(-63%)	(-57%)	(-58%)	(-27%)	(-28%)	(-36%)	(-38%)	(-39%)	(-24%)	(-38%)	(-18%)	(-15%)	(-6%)	(-37%)	(-28%)	
	Jones PP	ALL	-5	1	-66	-21	-72	-38	-79	-63	-32	-33	-34	-36	-26	-28	-10	-13	7	0	-68	-44	-87	-25	-3	13	-40	-24	
		DROUGHT	(-2%)	(0%)	(-29%)	(-12%)	(-32%)	(-20%)	(-47%)	(-41%)	(-35%)	(-35%)	(-51%)	(-53%)	(-40%)	(-42%)	(-17%)	(-20%)	(13%)	(-0%)	(-47%)	(-36%)	(-39%)	(-15%)	(-1%)	(7%)	(-28%)	(-19%)	
	Jones PP	ALL	-42	-24	-87	-33	-56	-31	-38	-33	-29	-30	-33	-35	-34	-35	-35	-36	-33	-36	-39	-20	-25	6	-52	-35	-42	-28	
		DROUGHT	(-27%)	(-18%)	(-47%)	(-25%)	(-36%)	(-24%)	(-33%)	(-30%)	(-35%)	(-37%)	(-44%)	(-45%)	(-42%)	(-42%)	(-44%)	(-44%)	(-48%)	(-51%)	(-35%)	(-22%)	(-17%)	(6%)	(-34%)	(-25%)	(-36%)	(-28%)	
Jones PP	ALL	-37	-30	-73	-24	-60	-40	-33	-19	-10	-10	-13	-14	-21	-22	-33	-34	-11	-21	-74	-45	-47	7	-1	9	-34	-20		
	DROUGHT	(-21%)	(-18%)	(-36%)	(-16%)	(-34%)	(-26%)	(-25%)	(-16%)	(-12%)	(-12%)	(-17%)	(-18%)	(-27%)	(-27%)	(-43%)	(-44%)	(-21%)	(-34%)	(-48%)	(-36%)	(-23%)	(4%)	(-1%)	(5%)	(-26%)	(-17%)		

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 4 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

1 **Table CI-25B. Period average change in chloride concentrations (mg/L) for Alternative 4 LLT Scenario H2 relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass**
 2 **balance approach.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 4 LLT Scenario H2	Delta Interior	Moke. R. (SF) at Staten Island	ALL	4	4	3	3	2	2	1	2	1	2	3	3	3	3	2	3	7	8	7	8	6	6	5	5	4	4	
				(29%)	(31%)	(26%)	(25%)	(14%)	(15%)	(6%)	(12%)	(7%)	(12%)	(17%)	(20%)	(18%)	(20%)	(15%)	(19%)	(36%)	(43%)	(41%)	(48%)	(44%)	(43%)	(38%)	(38%)	(23%)	(27%)	
			DROUGHT	3	3	3	3	2	2	1	1	0	1	2	3	1	2	2	3	8	8	9	10	6	6	4	4	3	4	
			(22%)	(22%)	(27%)	(26%)	(17%)	(19%)	(2%)	(7%)	(-1%)	(4%)	(9%)	(16%)	(8%)	(15%)	(11%)	(18%)	(41%)	(47%)	(56%)	(57%)	(45%)	(40%)	(28%)	(30%)	(20%)	(24%)		
		SJR at Buckley Cove	ALL	-2	1	0	1	-2	4	-2	3	-2	2	-1	2	-3	2	-3	2	-6	4	-8	4	-9	4	-4	1	-3	2	
				(-2%)	(1%)	(0%)	(1%)	(-3%)	(5%)	(-2%)	(4%)	(-2%)	(3%)	(-2%)	(3%)	(-3%)	(2%)	(-4%)	(2%)	(-7%)	(5%)	(-10%)	(5%)	(-10%)	(5%)	(-5%)	(1%)	(-4%)	(3%)	
		DROUGHT	-2	1	-2	1	-5	4	-6	4	-6	4	-3	3	-3	3	-5	4	-6	4	-10	8	-11	6	-15	7	-6	2	-6	4
		(-2%)	(2%)	(-3%)	(1%)	(-6%)	(5%)	(-6%)	(5%)	(-3%)	(3%)	(-3%)	(4%)	(-6%)	(5%)	(-7%)	(5%)	(-11%)	(12%)	(-12%)	(9%)	(-15%)	(9%)	(-7%)	(2%)	(-7%)	(5%)			
	Franks Tract	ALL	-7	61	-156	-22	-62	-16	-26	-29	2	-4	12	9	12	9	10	5	18	11	-53	-7	-31	16	27	42	-21	6		
			(-2%)	(27%)	(-41%)	(-9%)	(-21%)	(-6%)	(-16%)	(-18%)	(4%)	(-6%)	(32%)	(22%)	(31%)	(21%)	(21%)	(11%)	(32%)	(18%)	(-27%)	(-5%)	(-13%)	(9%)	(9%)	(15%)	(-12%)	(4%)		
		DROUGHT	-50	-11	-164	-48	-45	-5	-21	-2	8	-9	10	5	10	7	15	3	34	7	-86	-18	-23	54	10	-23	-25	-3		
		(-14%)	(-4%)	(-37%)	(-15%)	(-12%)	(-1%)	(-10%)	(-1%)	(13%)	(-11%)	(36%)	(14%)	(44%)	(30%)	(48%)	(8%)	(65%)	(9%)	(-28%)	(-7%)	(-7%)	(22%)	(3%)	(-6%)	(-12%)	(-2%)			
Old R. at Rock Slough	ALL	20	61	-124	-14	-57	-13	-26	-29	1	-2	11	7	7	3	4	2	17	13	-36	-3	-27	13	27	39	-15	6			
		(8%)	(31%)	(-40%)	(-7%)	(-22%)	(-6%)	(-17%)	(-19%)	(2%)	(-3%)	(22%)	(13%)	(13%)	(6%)	(7%)	(3%)	(31%)	(22%)	(-24%)	(-3%)	(-14%)	(9%)	(11%)	(17%)	(-10%)	(5%)			
	DROUGHT	-13	-3	-130	-34	-46	-1	-19	-2	3	-5	8	2	11	8	12	5	27	8	-65	-17	-20	47	24	7	-17	1			
	(-5%)	(-1%)	(-37%)	(-13%)	(-15%)	(-0%)	(-10%)	(-1%)	(4%)	(-6%)	(22%)	(5%)	(32%)	(21%)	(37%)	(14%)	(63%)	(12%)	(-27%)	(-9%)	(-7%)	(22%)	(8%)	(2%)	(-10%)	(1%)				
Western Delta	Sac. R. at Emmaton	ALL	-185	18	-41	93	91	42	-27	-61	7	-18	14	0	25	9	57	28	95	58	191	188	249	179	224	196	58	61		
			(-22%)	(3%)	(-5%)	(12%)	(21%)	(9%)	(-18%)	(-33%)	(11%)	(-20%)	(47%)	(-1%)	(65%)	(15%)	(47%)	(19%)	(43%)	(22%)	(58%)	(57%)	(52%)	(33%)	(27%)	(23%)	(16%)	(17%)		
		DROUGHT	-450	-211	-141	-29	182	88	5	-77	49	-14	20	6	39	19	148	76	187	86	375	320	271	154	-49	-296	53	10		
		(-39%)	(-23%)	(-11%)	(-3%)	(26%)	(11%)	(2%)	(-25%)	(45%)	(-8%)	(45%)	(10%)	(80%)	(27%)	(83%)	(30%)	(62%)	(21%)	(80%)	(61%)	(45%)	(22%)	(-4%)	(-22%)	(10%)	(2%)			
	SJR at Antioch	ALL	-628	31	-553	-3	-129	-64	-178	-216	-37	-89	27	-11	45	3	56	1	98	29	65	223	290	297	235	448	-59	54		
			(-28%)	(2%)	(-23%)	(-0%)	(-9%)	(-5%)	(-29%)	(-33%)	(-14%)	(-28%)	(24%)	(-7%)	(32%)	(2%)	(16%)	(0%)	(16%)	(4%)	(5%)	(20%)	(20%)	(11%)	(23%)	(-5%)	(6%)			
		DROUGHT	-1007	-308	-722	-185	-136	-26	-140	-263	26	-114	29	-10	57	6	145	40	196	61	189	300	300	305	-129	-337	-99	-44		
		(-38%)	(-16%)	(-23%)	(-7%)	(-7%)	(-1%)	(-17%)	(-27%)	(6%)	(-21%)	(18%)	(-5%)	(29%)	(3%)	(26%)	(6%)	(23%)	(6%)	(11%)	(19%)	(18%)	(18%)	(-5%)	(-12%)	(-7%)	(-3%)			
	Sac. R. at Mallard Island	ALL	-702	108	-430	193	-129	-66	-208	-217	21	-60	119	38	141	55	169	50	228	112	297	529	463	461	394	841	30	170		
			(-15%)	(3%)	(-9%)	(5%)	(-4%)	(-2%)	(-12%)	(-13%)	(2%)	(-6%)	(26%)	(7%)	(19%)	(7%)	(12%)	(3%)	(12%)	(6%)	(10%)	(19%)	(13%)	(13%)	(9%)	(22%)	(1%)	(7%)		
		DROUGHT	-1284	-356	-783	-26	-177	-43	-89	-216	145	-70	146	83	211	135	206	156	231	153	307	497	396	420	-165	-262	-72	39		
		(-24%)	(-8%)	(-13%)	(-0%)	(-4%)	(-1%)	(-4%)	(-8%)	(9%)	(-4%)	(21%)	(11%)	(19%)	(12%)	(10%)	(7%)	(9%)	(6%)	(8%)	(14%)	(11%)	(11%)	(-3%)	(-5%)	(-2%)	(1%)			
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	15	17	19	20	20	20	12	12	3	2	-1	-1	-2	-1	-3	-3	-5	-4	-2	0	2	3	11	11	6	6		
			(91%)	####	(129%)	(140%)	(149%)	(149%)	(82%)	(80%)	(21%)	(9%)	(-5%)	(-9%)	(-15%)	(-10%)	(-20%)	(-20%)	(-26%)	(-21%)	(-11%)	(-1%)	(8%)	(16%)	(57%)	(62%)	(33%)	(37%)		
		DROUGHT	22	24	29	31	36	35	28	28	14	14	5	4	3	2	1	-3	-1	0	6	8	12	12	21	21	15	15		
		(104%)	####	(179%)	(209%)	(291%)	(266%)	(229%)	(217%)	(101%)	(93%)	(34%)	(27%)	(17%)	(11%)	(3%)	(-12%)	(-4%)	(2%)	(27%)	(37%)	(54%)	(54%)	(95%)	(94%)	(83%)	(83%)			
	Contra Costa PP #1	ALL	43	77	-36	26	-78	-5	-43	-23	-2	-19	9	5	11	8	3	1	13	8	-19	-3	-49	-2	11	25	-11	8		
			(18%)	(37%)	(-15%)	(14%)	(-33%)	(-3%)	(-24%)	(-15%)	(-2%)	(-20%)	(17%)	(9%)	(20%)	(14%)	(5%)	(1%)	(23%)	(13%)	(-15%)	(-3%)	(-24%)	(-1%)	(5%)	(12%)	(-8%)	(6%)		
		DROUGHT	12	25	-39	-10	-106	-36	-52	-70	1	-11	7	0	9	5	9	4	19	2	-35	-22	-72	18	28	58	-18	-3		
		(4%)	(9%)	(-13%)	(-4%)	(-35%)	(-15%)	(-24%)	(-30%)	(1%)	(-12%)	(15%)	(-0%)	(22%)	(11%)	(23%)	(10%)	(44%)	(3%)	(-19%)	(-13%)	(-23%)	(8%)	(11%)	(26%)	(-10%)	(-2%)			
	Banks PP	ALL	-19	-2	-85	-26	-85	-50	-67	-62	-38	-42	-36	-38	-43	-44	-23	-24	-30	-32	-41	-21	-60	-23	-32	-15	-46	-31		
			(-11%)	(-1%)	(-42%)	(-18%)	(-45%)	(-33%)	(-48%)	(-46%)	(-47%)	(-49%)	(-53%)	(-54%)	(-60%)	(-61%)	(-32%)	(-33%)	(-45%)	(-47%)	(-40%)	(-24%)	(-40%)	(-20%)	(-19%)	(-10%)	(-38%)	(-29%)		
		DROUGHT	-19	-14	-75	-29	-98	-64	-59	-43	-29	-30	-25	-27	-38	-40	-28	-31	-8	-15	-67	-43	-70	-8	-22	-6	-45	-29		
		(-10%)	(-7%)	(-33%)	(-16%)	(-44%)	(-34%)	(-35%)	(-28%)	(-32%)	(-33%)	(-38%)	(-40%)	(-58%)	(-60%)	(-48%)	(-50%)	(-15%)	(-25%)	(-46%)	(-35%)	(-31%)	(-5%)	(-11%)	(-3%)	(-31%)	(-23%)			
Jones PP	ALL	-47	-29	-97	-43	-70	-45	-45	-40	-36	-37	-43	-45	-41	-41	-34	-35	-22	-25	-45	-26	-39	-8	-54	-37	-48	-34			
		(-31%)	(-22%)	(-52%)	(-33%)	(-46%)	(-35%)	(-39%)	(-36%)	(-44%)	(-45%)	(-57%)	(-58%)	(-50%)	(-51%)	(-42%)	(-42%)	(-33%)	(-36%)	(-40%)	(-28%)	(-28%)	(-7%)	(-35%)	(-27%)	(-41%)	(-33%)			
	DROUGHT	-54	-48	-84	-35	-70	-50	-43	-30	-20	-19	-29	-30	-35	-35	-22	-24	-1	-11	-70	-42	-54	-1	-28	-18	-43	-29			
	(-30%)	(-28%)	(-42%)	(-23%)	(-40%)	(-32%)	(-33%)	(-25%)	(-23%)	(-23%)	(-37%)	(-38%)	(-44%)	(-45%)	(-29%)	(-30%)	(-2%)	(-18%)	(-46%)	(-34%)	(-26%)	(-1%)	(-16%)	(-11%)	(-32%)	(-24%)				

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 4 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

1 **Table CI-25C. Period average change in chloride concentrations (mg/L) for Alternative 4 LLT Scenario H3 relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass balance**
 2 **approach.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 4 LLT Scenario H3	Delta Interior	Moke. R. (SF) at Staten Island	ALL	4	4	3	3	2	2	1	2	1	2	3	3	3	3	3	3	6	7	6	7	6	6	4	4	3	4	
				(30%)	(32%)	(27%)	(26%)	(12%)	(14%)	(7%)	(12%)	(7%)	(12%)	(17%)	(20%)	(19%)	(22%)	(16%)	(19%)	(31%)	(39%)	(32%)	(39%)	(45%)	(44%)	(32%)	(32%)	(22%)	(25%)	
			DROUGHT	3	3	3	3	1	1	0	1	0	1	2	3	1	2	2	3	7	8	10	10	7	6	4	4	3	4	
			(25%)	(25%)	(24%)	(23%)	(9%)	(11%)	(2%)	(6%)	(-1%)	(4%)	(9%)	(16%)	(7%)	(13%)	(10%)	(16%)	(39%)	(45%)	(58%)	(59%)	(47%)	(42%)	(29%)	(32%)	(20%)	(23%)		
			ALL	-1	1	0	1	-2	4	-2	3	-2	2	-1	2	-3	2	-3	2	-6	4	-8	4	-9	4	-4	1	-3	2	
			(-2%)	(1%)	(0%)	(1%)	(-3%)	(5%)	(-2%)	(4%)	(-2%)	(3%)	(-2%)	(3%)	(-3%)	(2%)	(-4%)	(2%)	(-7%)	(5%)	(-9%)	(6%)	(-10%)	(5%)	(-5%)	(1%)	(-4%)	(3%)		
		DROUGHT	-2	1	-2	1	-5	4	-6	4	-3	3	-3	3	-5	4	-6	4	-11	8	-10	7	-15	7	-6	2	-6	4		
		(-2%)	(2%)	(-3%)	(1%)	(-6%)	(5%)	(-6%)	(5%)	(-3%)	(3%)	(-3%)	(4%)	(-6%)	(5%)	(-7%)	(5%)	(-12%)	(11%)	(-11%)	(10%)	(-16%)	(9%)	(-7%)	(2%)	(-7%)	(5%)			
		ALL	-92	-24	-194	-60	-110	-65	-46	-49	-4	-10	11	8	11	8	9	5	17	11	-41	5	-16	30	-24	-9	-40	-13		
		(-31%)	(-11%)	(-51%)	(-24%)	(-37%)	(-26%)	(-30%)	(-31%)	(-6%)	(-15%)	(29%)	(19%)	(30%)	(20%)	(20%)	(10%)	(32%)	(18%)	(-22%)	(3%)	(-7%)	(17%)	(-8%)	(-3%)	(-23%)	(-9%)			
		DROUGHT	-79	-41	-189	-73	-98	-58	-56	-37	-2	-19	8	2	7	5	14	3	38	11	-90	-22	-42	35	20	-13	-39	-17		
		(-22%)	(-13%)	(-43%)	(-23%)	(-26%)	(-17%)	(-27%)	(-20%)	(-3%)	(-23%)	(28%)	(7%)	(33%)	(20%)	(46%)	(7%)	(73%)	(14%)	(-29%)	(-9%)	(-13%)	(14%)	(6%)	(-3%)	(-18%)	(-9%)			
	ALL	-49	-8	-147	-38	-94	-50	-48	-51	-6	-9	9	5	5	1	2	0	14	10	-27	6	-13	27	-9	2	-30	-9			
	(-21%)	(-4%)	(-47%)	(-19%)	(-36%)	(-23%)	(-32%)	(-33%)	(-8%)	(-13%)	(18%)	(9%)	(9%)	(2%)	(4%)	(-1%)	(27%)	(17%)	(-18%)	(5%)	(-7%)	(18%)	(-4%)	(1%)	(-20%)	(-7%)				
	DROUGHT	-35	-24	-144	-48	-81	-36	-56	-38	-7	-15	5	-1	6	2	9	3	29	10	-64	-16	-38	29	31	15	-29	-10			
	(-12%)	(-9%)	(-41%)	(-19%)	(-26%)	(-13%)	(-29%)	(-22%)	(-10%)	(-19%)	(13%)	(-2%)	(16%)	(6%)	(29%)	(7%)	(67%)	(15%)	(-27%)	(-8%)	(-14%)	(14%)	(11%)	(5%)	(-16%)	(-6%)				
Western Delta	Sac. R. at Emmaton	ALL	-329	-125	-199	-65	-34	-84	-29	-63	13	-13	18	4	30	13	65	36	94	56	161	157	251	181	-93	-120	-4	-2		
		(-39%)	(-19%)	(-22%)	(-9%)	(-8%)	(-17%)	(-19%)	(-34%)	(19%)	(-13%)	(62%)	(10%)	(78%)	(24%)	(54%)	(24%)	(42%)	(21%)	(49%)	(47%)	(53%)	(33%)	(-11%)	(-14%)	(-1%)	(-1%)			
		DROUGHT	-457	-218	-255	-142	-74	-168	-19	-101	50	-14	21	7	42	22	156	84	192	91	363	308	276	159	-17	-264	23	-20		
		(-40%)	(-24%)	(-20%)	(-12%)	(-11%)	(-21%)	(-8%)	(-33%)	(46%)	(-8%)	(47%)	(12%)	(86%)	(31%)	(88%)	(33%)	(63%)	(22%)	(77%)	(59%)	(46%)	(22%)	(-2%)	(-19%)	(4%)	(-4%)			
	SJR at Antioch	ALL	-1004	-346	-920	-370	-361	-296	-196	-235	-22	-74	40	2	58	16	76	22	112	44	52	209	284	292	-401	-188	-190	-77		
		(-45%)	(-22%)	(-38%)	(-20%)	(-25%)	(-21%)	(-32%)	(-36%)	(-8%)	(-23%)	(36%)	(1%)	(41%)	(9%)	(22%)	(5%)	(19%)	(7%)	(4%)	(19%)	(19%)	(20%)	(-19%)	(-10%)	(-17%)	(-8%)			
		DROUGHT	-1137	-438	-998	-461	-514	-405	-223	-346	25	-115	36	-3	69	18	166	61	221	86	153	264	294	299	-81	-288	-166	-111		
		(-42%)	(-22%)	(-32%)	(-18%)	(-25%)	(-21%)	(-27%)	(-36%)	(6%)	(-21%)	(22%)	(-1%)	(35%)	(7%)	(29%)	(9%)	(26%)	(9%)	(9%)	(16%)	(17%)	(18%)	(-3%)	(-10%)	(-12%)	(-8%)			
	Sac. R. at Mallard Island	ALL	-1220	-410	-924	-301	-366	-303	-220	-229	45	-36	147	66	221	134	255	137	250	135	257	489	456	454	-522	-75	-135	5		
		(-26%)	(-11%)	(-19%)	(-7%)	(-11%)	(-9%)	(-13%)	(-14%)	(5%)	(-4%)	(32%)	(12%)	(30%)	(16%)	(18%)	(9%)	(13%)	(7%)	(9%)	(18%)	(13%)	(13%)	(-12%)	(-2%)	(-5%)	(0%)			
		DROUGHT	-1447	-518	-1184	-426	-604	-470	-190	-316	144	-70	165	103	229	153	225	175	254	177	284	474	398	422	-111	-207	-153	-42		
		(-27%)	(-12%)	(-19%)	(-8%)	(-13%)	(-11%)	(-8%)	(-12%)	(9%)	(-4%)	(23%)	(13%)	(21%)	(13%)	(11%)	(8%)	(10%)	(7%)	(8%)	(13%)	(11%)	(11%)	(-2%)	(-4%)	(-5%)	(-1%)			
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	8	10	13	14	14	14	7	7	1	-1	-2	-3	-3	-2	-4	-4	-6	-5	-4	-1	1	2	9	9	3	3		
		(49%)	(62%)	(87%)	(96%)	(107%)	(106%)	(50%)	(48%)	(4%)	(-6%)	(-13%)	(-17%)	(-21%)	(-16%)	(-25%)	(-24%)	(-30%)	(-25%)	(-16%)	(-7%)	(4%)	(11%)	(47%)	(51%)	(16%)	(20%)			
		DROUGHT	13	15	24	26	29	28	20	19	10	9	3	2	1	0	-1	-4	-2	-1	5	6	11	11	18	18	11	11		
	(62%)	(79%)	(149%)	(175%)	(230%)	(210%)	(160%)	(150%)	(70%)	(63%)	(21%)	(15%)	(4%)	(-2%)	(-8%)	(-22%)	(-9%)	(-4%)	(21%)	(31%)	(46%)	(46%)	(83%)	(83%)	(61%)	(61%)				
	Contra Costa PP #1	ALL	-32	2	-79	-16	-102	-28	-61	-41	-10	-28	8	4	8	5	0	-2	10	5	-10	5	-32	15	-1	14	-25	-5		
		(-13%)	(1%)	(-31%)	(-9%)	(-43%)	(-17%)	(-34%)	(-26%)	(-13%)	(-29%)	(15%)	(7%)	(15%)	(9%)	(1%)	(-3%)	(17%)	(7%)	(-8%)	(5%)	(-16%)	(9%)	(-0%)	(7%)	(-17%)	(-4%)			
		DROUGHT	-16	-3	-77	-48	-117	-47	-67	-85	-11	-23	3	-4	4	0	5	0	21	3	-35	-22	-90	0	17	47	-30	-15		
		(-5%)	(-1%)	(-26%)	(-18%)	(-39%)	(-20%)	(-31%)	(-36%)	(-14%)	(-24%)	(7%)	(-8%)	(9%)	(-1%)	(13%)	(1%)	(47%)	(5%)	(-19%)	(-13%)	(-29%)	(-0%)	(7%)	(21%)	(-17%)	(-9%)			
	Banks PP	ALL	-40	-24	-108	-49	-102	-67	-83	-78	-38	-42	-39	-41	-43	-45	-22	-23	-22	-24	-38	-17	-58	-22	-49	-32	-53	-38		
		(-24%)	(-16%)	(-53%)	(-34%)	(-54%)	(-44%)	(-59%)	(-58%)	(-47%)	(-49%)	(-57%)	(-59%)	(-61%)	(-62%)	(-30%)	(-32%)	(-33%)	(-35%)	(-36%)	(-20%)	(-39%)	(-19%)	(-29%)	(-21%)	(-43%)	(-35%)			
		DROUGHT	-14	-9	-93	-48	-115	-81	-104	-88	-32	-33	-37	-39	-35	-37	-9	-12	8	1	-62	-38	-102	-40	5	21	-47	-31		
		(-7%)	(-4%)	(-41%)	(-27%)	(-51%)	(-42%)	(-61%)	(-57%)	(-35%)	(-36%)	(-56%)	(-57%)	(-53%)	(-55%)	(-15%)	(-19%)	(15%)	(2%)	(-43%)	(-31%)	(-45%)	(-24%)	(3%)	(11%)	(-33%)	(-24%)			
Jones PP	ALL	-60	-43	-105	-51	-73	-48	-47	-42	-34	-36	-42	-44	-35	-36	-34	-34	-32	-35	-40	-21	-23	8	-55	-37	-48	-35			
	(-40%)	(-32%)	(-57%)	(-39%)	(-47%)	(-37%)	(-41%)	(-38%)	(-42%)	(-43%)	(-55%)	(-56%)	(-43%)	(-44%)	(-41%)	(-42%)	(-47%)	(-49%)	(-36%)	(-23%)	(-16%)	(7%)	(-35%)	(-27%)	(-41%)	(-34%)				
	DROUGHT	-49	-43	-89	-40	-76	-56	-60	-47	-27	-27	-20	-21	-26	-26	-31	-33	-9	-19	-74	-46	-49	5	1	11	-41	-27			
	(-27%)	(-25%)	(-44%)	(-26%)	(-43%)	(-36%)	(-45%)	(-39%)	(-32%)	(-32%)	(-26%)	(-27%)	(-33%)	(-33%)	(-41%)	(-42%)	(-17%)	(-31%)	(-49%)	(-37%)	(-24%)	(3%)	(0%)	(7%)	(-31%)	(-22%)				

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 4 ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

1 **Table CI-25D. Period average change in chloride concentrations (mg/L) for Alternative 4 LLT Scenario H4 relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass**
 2 **balance approach.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 4 LLT Scenario H4	Delta Interior	Moke. R. (SF) at Staten Island	ALL	3	3	3	3	2	2	2	3	2	2	3	3	3	3	2	3	7	8	8	9	6	6	4	4	4	4
			DROUGHT	(28%)	(29%)	(26%)	(24%)	(12%)	(14%)	(9%)	(14%)	(8%)	(13%)	(18%)	(20%)	(18%)	(21%)	(15%)	(19%)	(36%)	(44%)	(42%)	(49%)	(42%)	(41%)	(31%)	(31%)	(23%)	(26%)
		SJR at Buckley Cove	ALL	-1	1	0	1	-2	4	-2	3	-2	2	-1	2	-3	2	-3	2	-6	4	-8	4	-9	4	-4	1	-3	2
			DROUGHT	(-2%)	(1%)	(0%)	(1%)	(-3%)	(5%)	(-2%)	(4%)	(-2%)	(3%)	(-2%)	(3%)	(-3%)	(2%)	(-4%)	(2%)	(-7%)	(5%)	(-9%)	(6%)	(-10%)	(5%)	(-5%)	(1%)	(-4%)	(3%)
		Franks Tract	ALL	-87	-20	-204	-70	-118	-72	-32	-35	4	-2	13	10	12	9	10	5	18	11	-55	-9	-34	13	-25	-10	-41	-14
			DROUGHT	(-30%)	(-9%)	(-53%)	(-28%)	(-40%)	(-29%)	(-20%)	(-22%)	(6%)	(-4%)	(35%)	(24%)	(32%)	(23%)	(22%)	(11%)	(33%)	(19%)	(-29%)	(-6%)	(-15%)	(7%)	(-8%)	(-3%)	(-24%)	(-10%)
	Old R. at Rock Slough	ALL	-44	-3	-155	-45	-102	-58	-38	-41	3	-1	12	8	7	4	5	2	18	14	-37	-4	-30	9	-11	0	-31	-10	
		DROUGHT	(-19%)	(-1%)	(-50%)	(-23%)	(-40%)	(-27%)	(-25%)	(-26%)	(4%)	(-1%)	(24%)	(15%)	(14%)	(7%)	(8%)	(3%)	(33%)	(24%)	(-25%)	(-3%)	(-16%)	(6%)	(-5%)	(-0%)	(-21%)	(-7%)	
	Western Delta	Sac. R. at Emmaton	ALL	-359	-155	-238	-104	5	-45	9	-25	17	-9	15	1	25	8	57	27	95	57	192	188	235	165	-95	-123	-4	-1
			DROUGHT	(-42%)	(-24%)	(-27%)	(-14%)	(1%)	(-9%)	(6%)	(-13%)	(24%)	(-10%)	(50%)	(2%)	(65%)	(15%)	(47%)	(18%)	(43%)	(22%)	(59%)	(57%)	(49%)	(30%)	(-12%)	(-15%)	(-1%)	(-0%)
		SJR at Antioch	ALL	-1041	-382	-1004	-453	-294	-229	-110	-149	-13	-65	30	-8	46	4	56	1	97	28	59	216	288	296	-392	-179	-190	-77
			DROUGHT	(-47%)	(-25%)	(-41%)	(-24%)	(-20%)	(-16%)	(-18%)	(-23%)	(-5%)	(-21%)	(27%)	(-5%)	(32%)	(2%)	(16%)	(0%)	(16%)	(4%)	(5%)	(20%)	(19%)	(20%)	(-18%)	(-9%)	(-17%)	(-8%)
Sac. R. at Mallard Island		ALL	-1310	-499	-992	-369	-278	-215	-64	-74	60	-21	129	48	142	55	171	53	224	108	292	524	459	457	-514	-68	-140	0	
		DROUGHT	(-28%)	(-13%)	(-20%)	(-9%)	(-8%)	(-7%)	(-4%)	(-4%)	(6%)	(-2%)	(28%)	(9%)	(19%)	(7%)	(12%)	(4%)	(12%)	(5%)	(10%)	(19%)	(13%)	(13%)	(-12%)	(-2%)	(-5%)	(-0%)	
Major Diversions (Pumping Stations)		NBA at Barker Slough PP	ALL	8	9	13	14	14	14	8	8	2	0	-1	-2	-3	-2	-4	-4	-5	-4	-3	-1	1	3	8	9	3	4
			DROUGHT	(48%)	(61%)	(88%)	(97%)	(110%)	(109%)	(56%)	(55%)	(10%)	(-1%)	(-9%)	(-13%)	(-19%)	(-14%)	(-23%)	(-23%)	(-28%)	(-22%)	(-13%)	(-3%)	(7%)	(14%)	(45%)	(49%)	(19%)	(22%)
		Contra Costa PP #1	ALL	-26	7	-85	-23	-106	-33	-61	-41	3	-15	12	8	10	8	3	1	17	12	-18	-3	-53	-6	-8	7	-26	-7
			DROUGHT	(-11%)	(4%)	(-34%)	(-12%)	(-45%)	(-20%)	(-34%)	(-26%)	(3%)	(-15%)	(22%)	(14%)	(19%)	(13%)	(5%)	(2%)	(30%)	(19%)	(-15%)	(-3%)	(-26%)	(-4%)	(-4%)	(3%)	(-18%)	(-5%)
		Banks PP	ALL	-29	-13	-116	-57	-104	-69	-80	-75	-37	-40	-36	-38	-37	-39	-22	-23	-31	-33	-46	-25	-57	-21	-71	-55	-56	-41
			DROUGHT	(-18%)	(-9%)	(-58%)	(-40%)	(-55%)	(-45%)	(-57%)	(-56%)	(-44%)	(-47%)	(-53%)	(-54%)	(-52%)	(-53%)	(-30%)	(-31%)	(-46%)	(-48%)	(-44%)	(-30%)	(-38%)	(-18%)	(-42%)	(-36%)	(-45%)	(-37%)
	Jones PP	ALL	-61	-43	-102	-48	-74	-48	-60	-55	-38	-40	-43	-45	-41	-42	-33	-34	-26	-29	-41	-23	-37	-6	-51	-34	-50	-37	
		DROUGHT	(-40%)	(-32%)	(-55%)	(-36%)	(-48%)	(-37%)	(-52%)	(-50%)	(-47%)	(-48%)	(-56%)	(-57%)	(-51%)	(-51%)	(-41%)	(-42%)	(-38%)	(-40%)	(-37%)	(-25%)	(-26%)	(-5%)	(-33%)	(-25%)	(-43%)	(-36%)	
	Major Diversions (Pumping Stations)	Jones PP	ALL	-51	-45	-99	-51	-80	-60	-69	-56	-35	-35	-26	-27	-34	-34	-22	-23	-4	-14	-51	-22	-53	1	1	11	-42	-28
			DROUGHT	(-29%)	(-26%)	(-49%)	(-33%)	(-46%)	(-39%)	(-52%)	(-47%)	(-41%)	(-41%)	(-33%)	(-34%)	(-43%)	(-44%)	(-28%)	(-30%)	(-8%)	(-23%)	(-33%)	(-18%)	(-26%)	(0%)	(0%)	(7%)	(-31%)	(-23%)

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 4 ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

1 **Table CI-26A. Period average change in chloride concentrations (mg/L) for Alternative 4 LLT Scenario H1 relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride**
 2 **relationship.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 4 Scn H1	Delta Interior	Moke. R. (SF) at Staten Island	ALL	1	1	1	1	1	1	2	1	2	2	2	2	2	1	2	2	2	1	2	2	1	1	1	1	2		
				(7%)	(8%)	(8%)	(8%)	(4%)	(5%)	(3%)	(7%)	(5%)	(8%)	(9%)	(11%)	(10%)	(11%)	(8%)	(9%)	(13%)	(14%)	(9%)	(9%)	(10%)	(9%)	(9%)	(8%)	(8%)	(9%)	
		SJR at Buckley Cove	ALL	-3	1	-11	-2	-31	-4	-37	-8	-20	-4	-18	-3	-6	2	1	8	3	6	-6	9	-4	16	-5	9	-12	2	
				(-3%)	(1%)	(-10%)	(-2%)	(-23%)	(-4%)	(-23%)	(-6%)	(-14%)	(-3%)	(-13%)	(-3%)	(-6%)	(2%)	(2%)	(12%)	(3%)	(7%)	(-6%)	(10%)	(-4%)	(19%)	(-5%)	(9%)	(-10%)	(2%)	
		Franks Tract	ALL	-7	33	-99	-19	-49	-12	-20	-10	0	-1	10	8	9	7	8	5	16	8	-23	3	-8	24	26	36	-11	7	
				(-4%)	(22%)	(-43%)	(-13%)	(-23%)	(-7%)	(-15%)	(-8%)	(0%)	(-2%)	(27%)	(20%)	(29%)	(23%)	(23%)	(15%)	(38%)	(16%)	(-18%)	(3%)	(-5%)	(20%)	(14%)	(20%)	(-10%)	(7%)	
	Old R. at Rock Slough	ALL	10	33	-78	-13	-42	-10	-20	-10	-2	-1	8	3	2	1	2	0	14	9	-13	5	-6	21	25	33	-8	6		
			(6%)	(25%)	(-41%)	(-11%)	(-24%)	(-7%)	(-15%)	(-8%)	(-3%)	(-2%)	(15%)	(6%)	(3%)	(1%)	(4%)	(1%)	(36%)	(19%)	(-13%)	(6%)	(-5%)	(21%)	(16%)	(23%)	(-8%)	(6%)		
	Western Delta	Sac. R. at Emmaton	ALL	-122	14	-60	33	16	-7	-18	-37	3	-19	15	0	24	9	54	29	88	49	122	109	176	130	153	120	38	36	
				(-21%)	(3%)	(-11%)	(7%)	(5%)	(-2%)	(-14%)	(-25%)	(3%)	(-20%)	(43%)	(0%)	(68%)	(18%)	(59%)	(25%)	(48%)	(22%)	(54%)	(46%)	(53%)	(34%)	(27%)	(20%)	(15%)	(14%)	
		SJR at Antioch	ALL	-413	35	-408	-26	-145	-52	-149	-156	-48	-87	32	-12	54	10	77	22	124	45	70	150	223	242	192	312	-33	40	
				(-28%)	(3%)	(-27%)	(-2%)	(-14%)	(-6%)	(-30%)	(-31%)	(-19%)	(-30%)	(27%)	(-7%)	(48%)	(7%)	(31%)	(7%)	(26%)	(8%)	(8%)	(19%)	(21%)	(23%)	(13%)	(23%)	(-4%)	(6%)	
Sac. R. at Mallard Island		ALL	-447	213	-429	123	-158	-12	-259	-247	-58	-127	148	31	217	87	263	106	295	108	265	373	426	433	361	641	52	144		
			(-14%)	(9%)	(-15%)	(5%)	(-7%)	(-1%)	(-20%)	(-20%)	(-7%)	(-14%)	(33%)	(5%)	(42%)	(14%)	(29%)	(10%)	(20%)	(6%)	(13%)	(19%)	(17%)	(18%)	(12%)	(24%)	(3%)	(9%)		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	4	5	5	5	7	7	4	4	0	-1	-1	-1	-2	-1	-1	0	0	1	2	2	3	4	5	2	2			
			(25%)	(29%)	(27%)	(30%)	(40%)	(41%)	(19%)	(20%)	(2%)	(-4%)	(-4%)	(-7%)	(-9%)	(-7%)	(-6%)	(-7%)	(-2%)	(-1%)	(6%)	(9%)	(13%)	(15%)	(25%)	(26%)	(11%)	(11%)		
	Contra Costa PP #1	ALL	26	48	-10	27	-65	-11	-52	-24	9	-4	0	8	0	3	-9	-9	9	6	-2	5	-21	10	9	24	-9	7		
			(16%)	(35%)	(-6%)	(22%)	(-36%)	(-9%)	(-28%)	(-15%)	(8%)	(-3%)	(1%)	(9%)	(0%)	(4%)	(-14%)	(-13%)	(20%)	(11%)	(-3%)	(6%)	(-15%)	(10%)	(7%)	(19%)	(-7%)	(7%)		
	Banks PP	ALL	-15	-3	-48	-14	-55	-29	-63	-49	-41	-39	-49	-48	-39	-38	-10	-10	-10	-16	-20	-14	-30	-9	-12	-1	-33	-22		
			(-13%)	(-3%)	(-37%)	(-15%)	(-38%)	(-24%)	(-46%)	(-39%)	(-40%)	(-39%)	(-56%)	(-55%)	(-47%)	(-46%)	(-14%)	(-13%)	(-16%)	(-23%)	(-28%)	(-21%)	(-29%)	(-11%)	(-11%)	(-1%)	(-32%)	(-25%)		
	Jones PP	ALL	-25	-18	-48	-18	-36	-13	-52	-35	-41	-39	-45	-43	-26	-26	-26	-26	-22	-35	-14	-15	-11	4	-26	-18	-31	-24		
			(-23%)	(-17%)	(-37%)	(-18%)	(-24%)	(-10%)	(-34%)	(-26%)	(-32%)	(-31%)	(-37%)	(-37%)	(-30%)	(-29%)	(-34%)	(-33%)	(-35%)	(-46%)	(-17%)	(-18%)	(-11%)	(4%)	(-24%)	(-18%)	(-28%)	(-23%)		
	NBA at Barker Slough PP	DROUGHT	6	7	8	9	16	16	13	13	8	8	4	4	1	0	1	-1	2	2	5	5	7	7	9	9	7	6		
			(35%)	(38%)	(46%)	(51%)	(92%)	(89%)	(72%)	(70%)	(42%)	(39%)	(21%)	(17%)	(7%)	(2%)	(4%)	(-6%)	(10%)	(12%)	(26%)	(28%)	(38%)	(38%)	(49%)	(49%)	(36%)	(34%)		
	Contra Costa PP #1	DROUGHT	27	32	-24	-9	-75	-20	-58	-61	-4	-9	7	-2	0	-5	1	-4	24	10	-16	-11	-54	4	14	33	-13	-4		
			(14%)	(17%)	(-13%)	(-5%)	(-33%)	(-11%)	(-28%)	(-29%)	(-4%)	(-8%)	(9%)	(-2%)	(-0%)	(-6%)	(2%)	(-6%)	(52%)	(16%)	(-12%)	(-9%)	(-24%)	(2%)	(8%)	(21%)	(-9%)	(-3%)		
Banks PP	DROUGHT	-2	2	-36	-11	-57	-31	-81	-63	-55	-49	-80	-77	-60	-58	-21	-21	14	3	-30	-19	-45	-7	5	14	-37	-26			
		(-1%)	(2%)	(-24%)	(-9%)	(-32%)	(-20%)	(-47%)	(-41%)	(-40%)	(-37%)	(-60%)	(-59%)	(-46%)	(-45%)	(-20%)	(-20%)	(21%)	(4%)	(-29%)	(-21%)	(-29%)	(-6%)	(3%)	(12%)	(-28%)	(-21%)			
Jones PP	DROUGHT	-23	-26	-37	-14	-35	-14	-59	-36	-53	-50	-61	-59	-30	-32	-47	-45	-14	-25	-37	-28	-21	11	8	13	-34	-25			
		(-17%)	(-19%)	(-25%)	(-11%)	(-19%)	(-9%)	(-31%)	(-21%)	(-28%)	(-27%)	(-31%)	(-31%)	(-23%)	(-23%)	(-41%)	(-40%)	(-22%)	(-34%)	(-34%)	(-28%)	(-14%)	(9%)	(6%)	(10%)	(-24%)	(-19%)			

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 4 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

1 **Table CI-26B. Period average change in chloride concentrations (mg/L) for Alternative 4 LLT Scenario H2 relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride**
 2 **relationship.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 4 LLT Scn H2	Delta Interior	Moke R. (SF) at Staten Island	ALL	1	1	1	1	1	1	2	1	2	2	2	2	2	1	2	2	2	2	2	2	1	1	1	1	2		
			DROUGHT	(7%)	(8%)	(8%)	(8%)	(5%)	(5%)	(3%)	(7%)	(5%)	(8%)	(9%)	(11%)	(10%)	(11%)	(8%)	(9%)	(14%)	(15%)	(11%)	(12%)	(10%)	(9%)	(9%)	(8%)	(8%)	(9%)	
		SJR at Buckley Cove	ALL	-3	1	-11	-2	-30	-3	-37	-8	-21	-4	-14	-3	-6	2	1	8	3	7	-5	10	-3	17	-5	8	-11	3	
			DROUGHT	(-3%)	(1%)	(-10%)	(-2%)	(-22%)	(-3%)	(-23%)	(-6%)	(-14%)	(-3%)	(-13%)	(-6%)	(-6%)	(2%)	(2%)	(12%)	(3%)	(7%)	(-5%)	(11%)	(-3%)	(20%)	(-5%)	(9%)	(-10%)	(3%)	
		Franks Tract	ALL	-7	32	-98	-18	-51	-14	-25	-15	0	-1	11	9	11	10	10	7	16	9	-29	-2	-16	16	19	29	-13	5	
			DROUGHT	(-4%)	(21%)	(-42%)	(-12%)	(-24%)	(-8%)	(-19%)	(-12%)	(1%)	(-2%)	(29%)	(22%)	(36%)	(30%)	(30%)	(21%)	(40%)	(18%)	(-22%)	(-2%)	(-10%)	(14%)	(10%)	(16%)	(-11%)	(5%)	
	Old R. at Rock Slough	ALL	10	33	-76	-12	-45	-12	-25	-16	0	0	9	5	8	7	7	5	17	12	-17	1	-13	14	19	27	-9	5		
		DROUGHT	(7%)	(25%)	(-41%)	(-10%)	(-25%)	(-8%)	(-19%)	(-13%)	(-0%)	(0%)	(19%)	(9%)	(16%)	(14%)	(14%)	(11%)	(44%)	(26%)	(-17%)	(1%)	(-10%)	(14%)	(12%)	(19%)	(-8%)	(6%)		
	Western Delta	Sac. R. at Emmaton	ALL	-130	7	-58	35	53	30	-25	-43	-1	-22	13	-2	22	7	49	23	89	51	147	134	186	139	166	132	43	41	
			DROUGHT	(-23%)	(2%)	(-11%)	(8%)	(17%)	(9%)	(-19%)	(-30%)	(-2%)	(-24%)	(37%)	(-4%)	(61%)	(13%)	(53%)	(20%)	(48%)	(23%)	(65%)	(56%)	(55%)	(36%)	(30%)	(22%)	(16%)	(16%)	
		SJR at Antioch	ALL	-418	29	-408	-26	-112	-18	-150	-156	-57	-96	25	-20	44	1	61	7	110	31	86	165	239	258	203	323	-31	42	
			DROUGHT	(-28%)	(3%)	(-27%)	(-2%)	(-11%)	(-2%)	(-30%)	(-31%)	(-22%)	(-33%)	(21%)	(-12%)	(39%)	(1%)	(24%)	(2%)	(23%)	(5%)	(10%)	(21%)	(23%)	(25%)	(14%)	(24%)	(-4%)	(6%)	
Sac. R. at Mallard Island		ALL	-471	188	-448	104	-108	38	-210	-197	-54	-123	127	9	167	37	183	26	257	70	301	409	451	457	383	663	48	140		
		DROUGHT	(-15%)	(8%)	(-15%)	(4%)	(-5%)	(2%)	(-17%)	(-16%)	(-7%)	(-14%)	(28%)	(2%)	(33%)	(6%)	(20%)	(2%)	(17%)	(4%)	(15%)	(21%)	(18%)	(19%)	(13%)	(25%)	(3%)	(8%)		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	5	5	5	5	7	7	5	5	1	-1	-1	-1	-2	-1	-1	0	0	1	2	3	3	4	5	2	2			
		DROUGHT	(29%)	(32%)	(29%)	(32%)	(41%)	(41%)	(23%)	(23%)	(4%)	(-3%)	(-3%)	(-6%)	(-8%)	(-6%)	(-6%)	(-6%)	(-1%)	(1%)	(8%)	(11%)	(16%)	(18%)	(26%)	(27%)	(12%)	(13%)		
	Contra Costa PP #1	ALL	21	43	-27	10	-63	-9	-47	-19	0	-13	-4	3	7	9	-2	-2	13	9	-4	3	-29	3	6	20	-11	5		
		DROUGHT	(13%)	(32%)	(-17%)	(8%)	(-35%)	(-7%)	(-26%)	(-12%)	(-0%)	(-10%)	(-4%)	(4%)	(9%)	(12%)	(-3%)	(-2%)	(27%)	(18%)	(-5%)	(4%)	(-21%)	(2%)	(4%)	(16%)	(-9%)	(5%)		
	Banks PP	ALL	-11	1	-48	-14	-57	-31	-64	-49	-41	-39	-36	-35	-44	-42	-22	-21	-17	-23	-15	-9	-26	-5	-12	-1	-32	-22		
		DROUGHT	(-10%)	(1%)	(-36%)	(-14%)	(-40%)	(-26%)	(-46%)	(-40%)	(-40%)	(-38%)	(-42%)	(-41%)	(-53%)	(-52%)	(-29%)	(-28%)	(-27%)	(-33%)	(-20%)	(-13%)	(-26%)	(-7%)	(-11%)	(-1%)	(-32%)	(-24%)		
	Jones PP	ALL	-30	-23	-53	-23	-53	-30	-59	-42	-55	-54	-60	-58	-33	-32	-19	-18	-8	-21	-19	-20	-18	-3	-26	-17	-36	-29		
		DROUGHT	(-28%)	(-23%)	(-41%)	(-23%)	(-35%)	(-24%)	(-39%)	(-31%)	(-43%)	(-43%)	(-50%)	(-50%)	(-37%)	(-37%)	(-24%)	(-24%)	(-12%)	(-27%)	(-23%)	(-24%)	(-18%)	(-4%)	(-24%)	(-18%)	(-33%)	(-28%)		

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 4 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

1 **Table CI-26C. Period average change in chloride concentrations (mg/L) for Alternative 4 LLT Scenario H3 relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride**
 2 **relationship.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT
Alt 4 Scn H3	Delta Interior	Moke R. (SF) at Staten Island	ALL	1	1	1	1	1	1	2	1	2	2	2	2	2	1	2	2	2	2	2	2	2	1	1	1	2		
			DROUGHT	1	1	1	1	0	1	0	1	0	0	1	2	1	1	1	2	3	3	2	2	2	2	1	1	1	1	
		SJR at Buckley Cove	ALL	-3	1	-11	-2	-31	-4	-37	-8	-20	-4	-19	-3	-6	2	1	8	3	6	-6	10	-3	17	-5	8	-11	3	
			DROUGHT	-5	4	-16	-1	-38	-5	-50	-10	-33	-8	-26	-6	-13	1	3	18	-8	25	-4	34	-4	47	-7	18	-17	10	
		Franks Tract	ALL	-57	-18	-116	-36	-82	-45	-48	-38	-7	-9	8	6	9	8	8	5	16	8	-24	3	-9	23	-13	-3	-26	-8	
			DROUGHT	-46	-27	-115	-47	-80	-46	-59	-32	-3	-19	14	8	12	11	17	8	40	14	-50	-12	-21	29	20	-7	-23	-10	
	Old R. at Rock Slough	ALL	-27	-4	-83	-18	-68	-35	-47	-38	-8	-7	6	1	3	2	2	1	14	8	-14	4	-7	20	0	8	-19	-5		
		DROUGHT	-15	-14	-83	-28	-64	-32	-55	-29	-10	-14	8	1	11	8	13	6	31	13	-34	-7	-19	24	27	12	-16	-5		
	Western Delta	Sac. R. at Emmaton	ALL	-233	-97	-152	-60	-47	-69	-35	-53	2	-19	18	3	25	10	53	28	89	51	129	116	189	143	-46	-79	-1	-2	
			DROUGHT	-313	-163	-196	-117	-83	-137	-33	-94	36	-26	25	7	37	18	137	70	202	90	305	246	240	145	14	-179	31	-12	
		SJR at Antioch	ALL	-699	-252	-632	-250	-319	-226	-193	-199	-50	-89	38	-6	55	11	76	22	125	46	77	156	235	254	-235	-115	-127	-54	
			DROUGHT	-786	-332	-705	-338	-456	-327	-240	-320	-4	-138	53	-2	72	18	184	61	274	91	207	230	294	282	0	-192	-92	-81	
Sac. R. at Mallard Island		ALL	-1037	-377	-843	-290	-430	-285	-284	-272	-43	-112	161	43	222	92	259	102	298	111	275	383	446	452	-325	-46	-108	-17		
		DROUGHT	-1173	-480	-1024	-399	-649	-448	-339	-417	84	-163	219	81	267	118	358	163	422	184	415	451	457	452	14	-155	-79	-51		
Major Diversions (Pumping Stations)		NBA at Barker Slough PP	ALL	3	3	3	4	5	5	2	2	-1	-2	-2	-2	-2	-1	-2	-1	0	1	1	2	3	4	4	1	1		
			DROUGHT	5	5	7	8	12	12	10	9	6	5	3	2	0	-1	0	-2	2	2	4	5	7	7	8	8	5	5	
		Contra Costa PP #1	ALL	-17	5	-44	-7	-78	-24	-68	-40	-11	-24	-6	1	-1	1	-8	-8	8	4	-1	6	-21	10	0	14	-21	-5	
			DROUGHT	-4	2	-42	-26	-91	-36	-76	-79	-16	-21	3	-7	6	1	5	-1	22	8	-14	-9	-55	3	14	33	-21	-11	
		Banks PP	ALL	-23	-11	-60	-26	-69	-43	-81	-66	-42	-40	-43	-42	-45	-43	-13	-12	-9	-15	-16	-10	-31	-10	-21	-10	-37	-27	
			DROUGHT	-5	-1	-52	-28	-88	-62	-111	-93	-52	-46	-85	-82	-75	-72	-19	-19	17	6	-19	-8	-57	-19	11	21	-43	-31	
Jones PP	ALL	-35	-28	-59	-29	-46	-23	-63	-46	-53	-51	-58	-56	-28	-28	-24	-24	-21	-34	-15	-16	-9	6	8	-24	-16	-36	-29		
	DROUGHT	-27	-29	-47	-24	-42	-21	-100	-77	-83	-80	-76	-74	-39	-40	-44	-42	-11	-22	-39	-30	-21	10	9	14	-41	-33			

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 4 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

1 **Table CI-26D. Period average change in chloride concentrations (mg/L) for Alternative 4 LLT Scenario H4 relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride**
 2 **relationship.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	Ex. Condi.	No Act. LLT	
Alt 4 Scn H4	Delta Interior	Moke. R. (SF) at Staten Island	ALL	1	1	1	1	1	1	2	1	2	2	2	2	2	1	2	2	2	2	2	2	1	1	1	1	2	
			DROUGHT	(7%)	(8%)	(8%)	(8%)	(4%)	(5%)	(5%)	(8%)	(5%)	(8%)	(9%)	(11%)	(10%)	(11%)	(8%)	(9%)	(14%)	(15%)	(12%)	(12%)	(10%)	(9%)	(7%)	(7%)	(8%)	(9%)
		SJR at Buckley Cove	ALL	-3	1	-11	-2	-31	-4	-38	-10	-21	-4	-18	-3	-6	2	1	8	3	7	-4	11	-3	17	-5	8	-12	2
			DROUGHT	(-3%)	(1%)	(-10%)	(-2%)	(-23%)	(-3%)	(-24%)	(-7%)	(-15%)	(-4%)	(-13%)	(-3%)	(-6%)	(2%)	(1%)	(11%)	(3%)	(7%)	(-4%)	(12%)	(-3%)	(20%)	(-5%)	(9%)	(-10%)	(2%)
		Franks Tract	ALL	-54	-15	-122	-42	-88	-51	-35	-25	1	0	12	10	12	10	10	8	17	9	-30	-4	-18	14	-12	-2	-26	-7
			DROUGHT	(-29%)	(-10%)	(-53%)	(-28%)	(-42%)	(-30%)	(-26%)	(-20%)	(2%)	(-1%)	(32%)	(25%)	(39%)	(32%)	(31%)	(22%)	(41%)	(19%)	(-23%)	(-3%)	(-12%)	(12%)	(-6%)	(-1%)	(-21%)	(-7%)
	Old R. at Rock Slough	ALL	-24	-1	-87	-22	-75	-42	-37	-28	1	2	11	7	9	8	7	6	19	13	-17	1	-15	11	0	8	-17	-3	
		DROUGHT	(-15%)	(-0%)	(-46%)	(-18%)	(-41%)	(-28%)	(-22%)	(1%)	(2%)	(23%)	(13%)	(18%)	(16%)	(15%)	(12%)	(47%)	(28%)	(-17%)	(1%)	(-12%)	(12%)	(-0%)	(5%)	(-16%)	(-3%)		
	Western Delta	Sac. R. at Emmaton	ALL	-253	-117	-181	-88	-24	-46	0	-19	11	-10	16	1	23	8	48	23	89	51	146	133	174	128	-50	-83	0	-2
			DROUGHT	(-44%)	(-27%)	(-33%)	(-19%)	(-8%)	(-14%)	(-0%)	(-13%)	(16%)	(-10%)	(45%)	(2%)	(64%)	(15%)	(53%)	(20%)	(48%)	(23%)	(65%)	(56%)	(52%)	(33%)	(-9%)	(-14%)	(-0%)	(-1%)
		SJR at Antioch	ALL	-724	-277	-696	-314	-280	-186	-114	-121	-25	-63	33	-11	48	4	61	6	110	31	80	159	237	256	-231	-111	-125	-52
			DROUGHT	(-49%)	(-27%)	(-47%)	(-28%)	(-27%)	(-20%)	(-23%)	(-24%)	(-10%)	(-22%)	(27%)	(-7%)	(42%)	(3%)	(24%)	(2%)	(23%)	(5%)	(9%)	(21%)	(23%)	(25%)	(-16%)	(-8%)	(-17%)	(-8%)
Sac. R. at Mallard Island		ALL	-1102	-442	-923	-371	-376	-230	-118	-106	21	-48	150	32	174	44	184	27	255	68	294	402	448	454	-322	-42	-110	-18	
		DROUGHT	(-36%)	(-18%)	(-32%)	(-16%)	(-17%)	(-11%)	(-9%)	(-8%)	(3%)	(-5%)	(34%)	(6%)	(34%)	(7%)	(20%)	(3%)	(17%)	(4%)	(14%)	(21%)	(18%)	(18%)	(-11%)	(-2%)	(-6%)	(-1%)	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	3	3	4	4	5	6	3	3	0	-2	-1	-2	-2	-1	-1	0	0	1	2	2	3	4	4	1	1		
		DROUGHT	(15%)	(18%)	(20%)	(23%)	(31%)	(32%)	(14%)	(15%)	(-1%)	(-7%)	(-6%)	(-8%)	(-10%)	(-8%)	(-7%)	(-7%)	(-2%)	(-0%)	(7%)	(10%)	(14%)	(16%)	(20%)	(22%)	(7%)	(8%)	
	Contra Costa PP #1	ALL	-13	9	-49	-12	-80	-26	-69	-41	6	-7	-1	6	6	8	-1	-1	16	13	-4	4	-32	0	-3	11	-19	-3	
		DROUGHT	(-8%)	(7%)	(-31%)	(-9%)	(-44%)	(-20%)	(-38%)	(-26%)	(5%)	(-6%)	(-1%)	(8%)	(7%)	(11%)	(-1%)	(-1%)	(34%)	(24%)	(-4%)	(5%)	(-22%)	(0%)	(-2%)	(9%)	(-15%)	(-3%)	
	Banks PP	ALL	-14	-2	-67	-33	-72	-45	-78	-64	-39	-37	-36	-34	-35	-33	-19	-19	-18	-24	-18	-12	-25	-4	-38	-26	-38	-28	
		DROUGHT	(-12%)	(-2%)	(-51%)	(-34%)	(-50%)	(-38%)	(-57%)	(-52%)	(-38%)	(-37%)	(-41%)	(-40%)	(-42%)	(-41%)	(-26%)	(-25%)	(-29%)	(-35%)	(-25%)	(-18%)	(-25%)	(-5%)	(-35%)	(-27%)	(-38%)	(-30%)	
	Jones PP	ALL	-5	-1	-53	-28	-94	-67	-104	-85	-40	-35	-70	-67	-67	-64	-58	-58	-7	-18	-27	-17	-35	3	-5	5	-47	-36	
		DROUGHT	(-4%)	(-1%)	(-35%)	(-22%)	(-52%)	(-43%)	(-60%)	(-56%)	(-29%)	(-26%)	(-53%)	(-51%)	(-52%)	(-51%)	(-55%)	(-55%)	(-9%)	(-22%)	(-27%)	(-18%)	(-23%)	(3%)	(-4%)	(4%)	(-35%)	(-29%)	
	NBA at Barker Slough PP	ALL	-37	-30	-57	-28	-49	-26	-76	-59	-60	-59	-59	-57	-35	-34	-18	-17	-9	-23	-16	-17	-17	-2	-23	-15	-38	-30	
		DROUGHT	(-34%)	(-29%)	(-44%)	(-28%)	(-33%)	(-21%)	(-50%)	(-44%)	(-47%)	(-47%)	(-49%)	(-49%)	(-40%)	(-39%)	(-23%)	(-23%)	(-15%)	(-30%)	(-20%)	(-21%)	(-17%)	(-3%)	(-22%)	(-15%)	(-35%)	(-30%)	
	Contra Costa PP #1	ALL	-31	-34	-51	-28	-56	-35	-114	-91	-102	-98	-88	-86	-55	-56	-27	-26	-2	-13	-19	-10	-26	6	9	14	-44	-36	
		DROUGHT	(-24%)	(-25%)	(-34%)	(-22%)	(-31%)	(-22%)	(-59%)	(-54%)	(-54%)	(-53%)	(-45%)	(-45%)	(-41%)	(-41%)	(-24%)	(-23%)	(-3%)	(-18%)	(-17%)	(-10%)	(-17%)	(5%)	(7%)	(11%)	(-31%)	(-26%)	

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 4 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

- 1 Table CI-27. Period Average chloride concentrations and frequency of exceedance of objectives for
 2 existing conditions, No Action LLT, and Alternative 4 LLT. Calculation of chloride concentrations was
 3 based on a mass balance approach.

Chloride Alt 4 LLT Scenarios	Location	Period ^a	Period Average Concentration mg/L						Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b					
			Ex. Cond.	No Act. LLT	H1	H2	H3	H4	Frequency of Criterion/Objective Exceedance (%)					
									Ex. Cond.	No Act. LLT	H1	H2	H3	H4
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	19.1	19.4	19.2	19.4	0	0	0	0	0	0
		DROUGHT	16.8	16.3	20.0	20.2	20.1	20.2	0	0	0	0	0	0
	SJR at Buckley Cove	ALL	82.9	77.2	79.4	79.5	79.5	79.5	0	0	0	0	0	0
		DROUGHT	86.5	76.5	80.4	80.4	80.4	80.6	0	0	0	0	0	0
	Franks Tract	ALL	173.8	146.4	157.0	152.7	133.9	132.3	34	22	26	25	19	19
		DROUGHT	212.8	190.9	189.3	187.6	173.8	173.4	47	35	35	38	30	33
Old R. at Rock Slough	ALL	152.0	130.5	139.8	136.8	121.8	120.9	28	17	18	18	15	15	
	DROUGHT	180.2	161.4	163.5	162.8	151.4	150.9	42	27	30	27	27	25	
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	419.8	427.4	364.7	365.4	44	44	50	53	44	47
		DROUGHT	516.4	559.3	571.5	569.4	539.5	541.0	55	60	67	70	63	65
	SJR at Antioch	ALL	1087.3	974.2	1027.1	1028.3	897.2	897.4	66	73	70	68	69	68
		DROUGHT	1400.6	1345.6	1307.3	1301.4	1234.8	1239.3	82	87	85	83	85	85
	Sac. R. at Mallard Island	ALL	2552.0	2411.9	2588.6	2582.2	2416.9	2411.9	85	86	88	86	88	86
		DROUGHT	3233.9	3123.1	3172.4	3162.3	3081.0	3085.8	100	100	100	100	100	100
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	21.8	22.8	19.9	20.3	0	0	0	0	0	0
		DROUGHT	17.7	17.7	31.1	32.4	28.5	29.4	0	0	0	0	0	0
	Contra Costa PP #1	ALL	146.5	126.9	140.8	135.1	121.5	120.4	24	14	18	16	13	12
		DROUGHT	176.5	161.3	158.8	158.2	146.2	145.7	37	22	27	28	22	22
	Banks PP	ALL	123.4	108.5	78.2	77.1	70.5	67.8	4	2	1	0	1	1
		DROUGHT	143.7	128.0	104.1	98.8	96.7	92.6	7	2	2	0	2	2
	Jones PP	ALL	116.9	103.4	74.9	69.1	68.7	66.6	1	1	0	0	0	0
		DROUGHT	132.9	118.9	98.6	90.3	92.2	91.4	0	0	0	0	0	0

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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- 1 **Table CI-28. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 4 LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride Alt 4 LLT Scenarios	Location	Period ^a	Period Average Concentration mg/L						Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b						
			Ex. Cond.	No Act. LLT	H1	H2	H3	H4	Frequency of Criterion/Objective Exceedance (%)						
									Ex. Cond.	No Act. LLT	H1	H2	H3	H4	
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18.5	18.3	19.9	19.9	19.9	19.9	0	0	0	0	0	0	
		DROUGHT	19.3	19.0	20.4	20.5	20.5	20.5	0	0	0	0	0	0	
	SJR at Buckley Cove	ALL	115.7	101.7	104.2	104.4	104.2	104.2	0	0	0	0	0	0	
		DROUGHT	154.9	128.5	138.2	138.4	138.2	138.5	0	0	0	0	0	0	
	Franks Tract	ALL	119.9	101.5	108.5	106.7	93.6	94.3	14	8	8	6	7	7	
		DROUGHT	152.8	140.0	141.1	140.6	130.1	131.3	22	15	18	13	15	13	
Old R. at Rock Slough	ALL	107.9	93.7	99.5	99.0	88.8	90.6	4	3	2	2	2	2		
	DROUGHT	135.9	125.2	128.1	129.2	120.1	122.1	7	5	3	2	3	2		
Western Delta	Sac. R. at Emmaton	ALL	258.0	259.7	295.6	300.6	257.4	258.0	36	32	45	43	36	36	
		DROUGHT	363.7	406.4	418.9	414.7	394.6	394.7	50	55	62	60	57	58	
	SJR at Antioch	ALL	756.6	683.7	723.9	725.2	629.8	631.5	61	65	67	66	65	63	
		DROUGHT	1001.9	990.0	967.8	958.3	909.5	913.0	80	82	83	83	82	82	
	Sac. R. at Mallard Island	ALL	1766.4	1674.5	1818.4	1814.5	1657.9	1656.8	77	83	84	83	84	83	
		DROUGHT	2345.9	2317.9	2365.8	2350.2	2266.9	2271.6	98	98	98	98	98	98	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	18.8	18.8	20.8	21.1	20.0	20.2	0	0	0	0	0	0	
		DROUGHT	18.7	18.9	25.4	25.7	23.9	24.3	0	0	0	0	0	0	
	Contra Costa PP #1	ALL	120.4	104.7	111.6	109.7	99.6	101.8	5	3	2	1	2	2	
		DROUGHT	142.8	133.1	129.6	131.2	122.0	124.1	8	7	3	2	3	3	
	Banks PP	ALL	101.6	91.1	68.7	69.1	64.5	63.4	1	1	0	0	0	0	
		DROUGHT	134.0	122.9	96.6	91.2	91.5	86.9	2	2	0	0	0	0	
	Jones PP	ALL	108.8	101.4	77.8	72.8	72.7	71.0	0	0	0	0	0	0	
		DROUGHT	144.7	136.0	110.7	100.3	103.3	100.3	0	0	0	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 **Table CI-29A. Alternative 4 Scenario H1 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance**
 2 **approach.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
			Delta Interior	Moke. R. (SF) at Staten Island	ALL	-1	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-3	-3	-2	-3	-3	-2	-2
DROUGHT	-1	-1			-1	-1	-1	-1	0	-1	0	0	-1	-1	0	-1	-1	-1	-3	-3	-4	-4	-3	-2	-2	-2	-1	-
SJR at Buckley Cove	ALL	1		0	0	0	1	-2	1	-2	1	-1	1	-1	2	-1	2	-1	4	-2	5	-2	6	-2	2	0	2	-1
	DROUGHT	1		-1	1	-1	3	-2	3	-2	2	-1	2	-2	3	-2	4	-2	7	-5	6	-4	10	-4	4	-1	4	-
Franks Tract	ALL	-		-100	-	-	-	-	21	25	-1	2	-6	-4	-5	-4	-5	-2	-9	-6	70	-5	69	-49	-	-	22	-10
	DROUGHT	-		-	-	-	-	-	73	23	-6	4	-4	-2	-3	-2	-6	-1	-19	-6	-	-	-	-100	-	-	63	-
Old R. at Rock Slough	ALL	-100		-100	-	31	-	28	20	24	1	2	-5	-3	-2	0	-1	0	-8	-6	27	-5	19	-29	-100	-100	12	-8
	DROUGHT	-		-	-	-	-	-	49	15	-1	3	-3	0	-2	0	-4	-1	-14	-5	-	28	-	-79	-	-	24	-
Western Delta	Sac. R. at Emmaton	ALL		-	-	-	-	-	-	19	82	-6	9	-7	-1	-14	-6	-52	-37	-100	-	-	-	-	-	-	-	-
		DROUGHT		-	-	-	-	-	-	-100	-	-43	3	-9	-2	-20	-10	-100	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-26	3	-53	-24	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-36	14	-100	-100	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-6	-6	-8	-8	-8	-8	-4	-4	-1	0	1	1	1	1	2	1	2	2	1	1	0	-1	-4	-4	-2	-2
		DROUGHT	-8	-9	-12	-13	-15	-15	-11	-10	-5	-5	-2	-2	-1	-1	0	1	1	0	-2	-3	-5	-5	-8	-8	-6	-
	Contra Costa PP #1	ALL	-100	-100	-	-90	-	8	65	29	-4	7	-5	-4	-4	-3	0	1	-6	-4	9	-2	70	-16	-56	-70	6	-11
		DROUGHT	-	-	-	-	-	-	-	-	1	9	-3	1	-1	1	-2	0	-12	-4	55	29	-	-7	-	-100	24	-
	Banks PP	ALL	27	6	-	29	-	48	57	51	22	25	23	25	22	23	11	12	13	14	28	12	57	15	31	9	36	21
		DROUGHT	9	-1	-	30	-	64	98	65	20	21	19	20	14	15	5	7	-3	0	65	34	-	29	6	-19	37	-
	Jones PP	ALL	42	21	-	28	58	25	28	24	17	18	19	20	20	21	21	22	18	20	28	13	23	-5	55	31	31	19
		DROUGHT	52	39	-	25	80	42	28	15	6	6	8	8	12	13	19	20	5	11	76	36	-	-7	2	-11	29	-

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).
 NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 **Table CI-29B. Alternative 4 Scenario H2 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance**
 2 **approach.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
			Delta Interior	Moke. R. (SF) at Staten Island	ALL	-1	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-3	-3	-3	-4	-3	-3	-2
DROUGHT	-1	-1			-1	-1	-1	-1	0	-1	0	0	-1	-1	-1	-1	-1	-1	-1	-3	-4	-4	-4	-3	-3	-2	-2	-1
SJR at Buckley Cove	ALL	1		0	0	0	1	-2	1	-2	1	-1	1	-1	2	-1	2	-1	4	-2	5	-2	6	-2	2	0	2	-1
	DROUGHT	1		-1	1	-1	3	-2	3	-2	2	-1	2	-2	3	-2	4	-2	6	-5	7	-3	10	-4	4	-1	4	-
Franks Tract	ALL	-		-100	-	-	-	-	28	32	-1	2	-6	-4	-6	-4	-5	-3	-9	-6	91	6	-	-23	-	-	28	-6
	DROUGHT	-		-	-	-	-	-	45	3	-4	5	-5	-2	-4	-3	-7	-2	-17	-4	-	-	-	-100	-	-	68	-
Old R. at Rock Slough	ALL	-100		-100	-	28	-	37	27	31	-1	1	-5	-3	-3	-2	-2	-1	-9	-7	37	2	45	-13	-100	-100	16	-5
	DROUGHT	-		-	-	-	-	-	32	2	-2	3	-4	-1	-5	-4	-5	-3	-13	-4	-	29	-	-100	-	-	25	-
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	27	94	-4	12	-6	0	-12	-4	-45	-28	-100	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-20	-	-35	18	-10	-3	-20	-11	-100	-	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-20	11	-42	-5	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-33	20	-100	-100	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-7	-7	-8	-8	-8	-8	-5	-5	-1	-1	0	1	1	1	1	1	2	2	1	0	-1	-1	-5	-5	-2	-3
		DROUGHT	-10	-10	-12	-13	-15	-15	-12	-12	-6	-6	-2	-2	-1	-1	0	1	0	0	-3	-3	-5	-5	-9	-9	-6	-
	Contra Costa PP #1	ALL	-100	-100	-	-42	-	5	61	26	1	12	-5	-3	-5	-4	-2	0	-7	-4	15	2	-	2	-32	-53	11	-7
		DROUGHT	-	-	-	-	-	-	-	-	0	7	-3	0	-4	-2	-4	-2	-9	-1	52	27	-	-69	-	-100	25	-
	Banks PP	ALL	22	2	-	25	-	53	60	54	23	26	20	21	24	25	13	14	16	18	29	12	60	17	39	15	37	22
		DROUGHT	37	24	-	42	-	-	73	44	18	19	14	15	20	22	15	16	4	8	64	33	-	9	44	9	42	-
	Jones PP	ALL	48	25	-	36	74	37	33	29	21	22	25	26	24	25	20	21	12	14	32	17	36	6	57	33	36	23
		DROUGHT	77	62	-	36	94	53	37	23	12	12	17	18	20	21	13	14	0	6	73	33	-	1	40	22	36	-

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 **Table CI-29C. Alternative 4 Scenario H3 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance**
 2 **approach.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
			Delta Interior	Moke. R. (SF) at Staten Island	ALL	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-3	-3	-3	-3	-3	-3	-2	-2
DROUGHT	-1	-1			-1	-1	-1	-1	0	-1	0	0	-1	-1	0	-1	-1	-1	-1	-3	-3	-4	-4	-3	-3	-2	-2	-1	-
SJR at Buckley Cove	ALL	1		0	0	0	1	-2	1	-2	1	-1	1	-1	2	-1	2	-1	4	-2	5	-2	5	-2	2	0	2	-1	
	DROUGHT	1		-1	1	-1	3	-2	3	-2	3	-2	2	-1	2	-2	3	-2	4	-2	7	-5	6	-4	10	-4	4	-1	4
Franks Tract	ALL	-		98	-	-	-	-	50	54	2	5	-5	-4	-5	-4	-5	-2	-9	-6	72	-5	79	-45	-	-	52	12	
	DROUGHT	-		-	-	-	-	-	-	57	1	11	-4	-1	-3	-2	-6	-1	-19	-6	-	-	-	-100	-	-	-	-	
Old R. at Rock Slough	ALL	-		15	-	76	-	-	49	54	3	5	-4	-2	-2	-1	-1	0	-7	-5	28	-5	22	-27	-	-13	31	7	
	DROUGHT	-		-	-	-	-	-	93	49	4	9	-2	1	-3	-1	-4	-1	-14	-5	-	27	-	-70	-	-	41	-	
Western Delta	Sac. R. at Emmaton	ALL		-	-	-	-	-	-	30	98	-7	8	-8	-2	-14	-7	-51	-36	-100	-	-	-	-	-	-	-	-	-
		DROUGHT		-	-	-	-	-	-	76	-	-35	17	-10	-4	-21	-12	-100	-	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-29	-2	-54	-24	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-41	5	-100	-100	-	-	-	-	-	-	-	-	-	-	-	-	
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-4	-4	-5	-6	-6	-6	-3	-3	0	1	1	1	1	1	2	2	3	2	2	1	0	-1	-4	-4	-1	-1	
		DROUGHT	-6	-7	-10	-11	-12	-12	-8	-8	-4	-4	-1	-1	0	0	1	2	1	0	-2	-3	-5	-5	-8	-8	-5	-	
	Contra Costa PP #1	ALL	-	-4	-	25	-	33	87	46	6	18	-4	-2	-4	-3	0	1	-5	-2	8	-4	70	-16	2	-29	24	4	
		DROUGHT	-	-	-	-	-	-	-	-	7	15	-1	2	-2	0	-2	0	-10	-2	52	27	-	1	-	-100	41	-	
	Banks PP	ALL	48	23	-	46	-	71	75	67	23	26	21	23	24	25	12	13	12	13	26	10	58	16	59	32	42	27	
		DROUGHT	26	15	-	69	-	-	-	91	20	21	20	22	19	20	5	6	-4	-1	59	29	-	46	-10	-32	44	-	
	Jones PP	ALL	61	37	-	43	77	40	35	30	20	21	24	25	21	21	20	21	17	19	29	14	21	-6	58	33	36	24	
		DROUGHT	69	55	-	42	-	59	51	36	16	16	12	12	15	15	18	19	5	10	77	37	-	-5	-1	-13	35	-	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 **Table CI-29D. Alternative 4 Scenario H4 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance**
 2 **approach.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
			Delta Interior	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-3	-3	-3	-4	-2	-2	-2	-2
DROUGHT	-1	-1			-1	-1	-1	-1	0	-1	0	0	-1	-1	-1	-1	-1	-1	-1	-3	-4	-4	-4	-3	-2	-2	-2	-1	-
SJR at Buckley Cove	ALL	1		0	0	0	1	-2	1	-2	1	-1	1	-1	2	-1	2	-1	4	-2	5	-3	5	-2	2	0	2	-1	
	DROUGHT	1		-1	1	-1	3	-2	3	-2	2	-1	2	-2	3	-2	4	-2	6	-5	6	-4	9	-4	4	-1	4	-	
Franks Tract	ALL	-		80	-	-	-	-	34	38	-2	1	-6	-5	-6	-4	-5	-3	-9	-6	96	9	-	-19	-	-	54	14	
	DROUGHT	-		-	-	-	-	-	72	23	-5	5	-5	-3	-4	-3	-6	-1	-17	-5	-	-	-	-100	-	-	-	-	
Old R. at Rock Slough	ALL	-		5	-	92	-	-	39	43	-1	0	-6	-4	-4	-2	-2	-1	-9	-7	38	3	51	-10	-	1	32	8	
	DROUGHT	-		-	-	-	-	-	77	36	-1	3	-5	-2	-5	-4	-5	-3	-13	-4	-	36	-	-78	-	-	42	-	
Western Delta	Sac. R. at Emmaton	ALL		-	-	-	-	-	-	-9	39	-9	6	-7	0	-12	-4	-44	-28	-100	-	-	-	-	-	-	-	-	-
		DROUGHT		-	-	-	-	-	-	-100	-	-43	3	-10	-3	-19	-9	-100	-	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-22	8	-42	-6	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-34	18	-100	-100	-	-	-	-	-	-	-	-	-	-	-	-	
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-3	-4	-6	-6	-6	-6	-3	-3	-1	0	1	1	1	1	2	2	2	2	1	0	-1	-1	-4	-4	-1	-2	
		DROUGHT	-6	-7	-11	-11	-13	-12	-10	-9	-5	-5	-2	-1	-1	0	0	2	1	0	-2	-3	-5	-5	-8	-8	-5	-	
	Contra Costa PP #1	ALL	-	-18	-	36	-	38	87	46	-2	9	-6	-4	-5	-4	-2	-1	-9	-6	15	2	-	6	23	-14	25	5	
		DROUGHT	-	-	-	-	-	-	-	-	-1	7	-4	-1	-4	-2	-4	-2	-12	-4	58	32	-	-8	-	-100	42	-	
	Banks PP	ALL	35	13	-	54	-	73	72	65	22	25	20	21	21	22	12	13	17	18	32	15	58	15	87	56	44	29	
		DROUGHT	23	12	-	67	-	-	-	87	16	17	16	18	17	19	16	17	4	7	66	35	-	17	30	-1	48	-	
	Jones PP	ALL	62	37	-	40	77	40	44	39	23	24	25	26	24	25	20	20	14	16	30	15	34	4	54	30	38	25	
		DROUGHT	72	58	-	52	-	64	59	43	21	21	15	16	20	20	13	14	2	8	53	18	-	-1	-1	-14	35	-	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 **Table CI-30A. Alternative 4 Scenario H1 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride**
 2 **relationship.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT		
			Alt 4 Scn H1	Delta Interior	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	0	0	0	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
DROUGHT	0	0			-1	-1	0	0	0	0	0	0	0	0	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	0	-1	
Delta Interior	SJR at Buckley Cove	ALL		2	-1	8	2	28	3	42	7	19	3	17	3	4	-1	-1	-5	-2	-4	4	-6	3	-10	3	-5	9	-2	
	DROUGHT	4		-3	14	0	45	4	-	13	100	14	75	10	15	-1	-2	-13	7	-16	3	-19	3	-26	6	-13	18	-8		
Delta Interior	Franks Tract	ALL		11	-32	-	19	-	15	17	8	0	1	-5	-4	-4	-3	-4	-2	-8	-4	19	-2	8	-19	-44	-52	9	-5	
	DROUGHT	69		-14	-	50	-	62	46	5	-7	2	-8	-5	-5	-5	-7	-3	-18	-7	-	16	74	-42	-99	-	12	-1		
Delta Interior	Old R. at Rock Slough	ALL		-10	-27	-	10	61	10	17	8	1	1	-4	-2	-1	0	-1	0	-7	-4	9	-3	5	-14	-26	-31	6	-4	
	DROUGHT	-12		-14	-	18	-	4	36	2	-1	2	-6	-2	-3	-1	-5	-2	-14	-6	39	7	29	-25	-38	-19	7	-2		
Western Delta	Sac. R. at Emmaton	ALL		-	-	-	-	-	-	15	36	-1	12	-7	0	-11	-4	-34	-21	-100	-100	-100	-100	-	-	-	-	-	-	
		DROUGHT		-	-	-	-	-	-	-46	-	-38	9	-11	-3	-16	-8	-100	-100	-100	-	-	-	-	-	-	-	-	-	
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-25	14	-39	-11	-	-	-	-	-	-	-	-	-	-	-	-		
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-58	16	-69	-37	-	-	-	-	-	-	-	-	-	-	-		
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-2	-2	-2	-2	-3	-3	-2	-2	0	0	0	1	1	1	1	1	0	0	0	-1	-1	-1	-2	-2	-1	-1		
		DROUGHT	-3	-3	-4	-4	-7	-7	-6	-6	-4	-3	-2	-2	-1	0	0	1	-1	-1	-2	-2	-3	-3	-4	-4	-3	-3		
	Contra Costa PP #1	ALL	-28	-42	11	-21	95	9	78	25	-6	3	0	-5	0	-2	5	5	-5	-3	2	-3	19	-7	-9	-19	7	-5		
		DROUGHT	-47	-52	40	11	-	26	-	-	3	7	-4	1	0	3	-1	2	-12	-5	13	9	-	-4	-18	-34	12	3		
	Banks PP	ALL	11	2	41	9	52	22	56	38	28	26	30	29	24	22	6	6	6	9	12	8	20	5	8	1	22	14		
		DROUGHT	2	-2	37	9	83	32	-	65	49	41	69	64	50	47	15	15	-8	-2	20	12	48	5	-4	-12	32	21		
	Jones PP	ALL	18	12	39	12	36	10	53	31	33	32	34	32	16	16	15	15	12	20	8	9	8	-2	18	12	22	16		
		DROUGHT	20	23	37	11	52	16	-	44	88	77	-	-	26	27	34	33	7	14	26	18	20	-8	-7	-11	32	22		

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 **Table CI-30B. Alternative 4 Scenario H2 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride**
 2 **relationship.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
			Alt 4 LLT Scn H2																										
Delta Interior	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
		DROUGHT	0	0	-1	-1	0	0	0	0	0	0	0	-1	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-1	-1
	SJR at Buckley Cove	ALL	2	-1	8	2	27	2	42	7	19	3	17	3	4	-1	-1	-5	-2	-4	4	-6	2	-10	3	-5	8	-2	
		DROUGHT	4	-3	14	0	43	2	-	12	99	14	74	9	15	-1	-2	-13	7	-17	4	-18	3	-26	6	-13	17	-8	
	Franks Tract	ALL	12	-32	-	18	-	17	22	12	0	1	-5	-4	-5	-4	-5	-3	-8	-4	24	1	16	-13	-32	-42	10	-3	
		DROUGHT	-	33	-	75	-	82	34	-3	-5	4	-8	-6	-8	-8	-9	-6	-18	-7	-	12	35	-55	-75	-	13	0	
Old R. at Rock Slough	ALL	-11	-28	-	9	65	12	22	13	0	0	-5	-3	-4	-3	-3	-3	-8	-6	12	-1	11	-9	-20	-26	6	-3		
	DROUGHT	11	9	-	29	-	19	27	-4	-2	1	-8	-4	-12	-10	-10	-7	-15	-7	39	7	14	-34	-32	-12	6	-3		
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	20	42	1	14	-6	1	-10	-3	-31	-17	-100	-100	-100	-100	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	5	-	-28	29	-12	-3	-16	-8	-98	-97	-100	-	-	-	-	-	-	-	-	-	
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-19	23	-32	-1	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-55	24	-58	-14	-	-	-	-	-	-	-	-	-	-	-	-	
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-2	-2	-2	-2	-3	-3	-2	-2	0	0	0	1	1	1	0	1	0	0	-1	-1	-1	-1	-2	-2	-1	-1	
		DROUGHT	-3	-3	-4	-4	-6	-6	-6	-6	-4	-3	-2	-1	-1	0	0	0	-1	-1	-2	-2	-3	-3	-4	-4	-3	-3	
	Contra Costa PP #1	ALL	-23	-38	29	-8	92	8	71	20	0	10	2	-2	-4	-5	1	1	-6	-5	3	-2	27	-2	-6	-17	8	-3	
		DROUGHT	-11	-20	43	14	-	38	-	-	2	5	-6	-1	-10	-8	-7	-5	-12	-5	12	8	-	-15	-25	-40	11	2	
	Banks PP	ALL	8	-1	40	9	54	23	57	39	28	26	22	21	26	25	12	12	9	13	8	5	18	3	8	1	22	14	
		DROUGHT	9	6	42	14	-	55	81	47	44	37	54	50	64	61	39	39	4	11	18	10	32	-6	7	-2	37	25	
	Jones PP	ALL	21	16	44	16	53	24	60	37	45	43	46	44	20	20	11	10	4	12	11	12	12	2	18	12	26	19	
		DROUGHT	32	35	47	20	67	27	-	62	-	-	-	-	48	49	21	19	-2	4	25	17	26	-4	10	5	42	31	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 Table CI-30C. Alternative 4 Scenario H3 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride
2 relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 4 Scn H3	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	0	0	0	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-1
		DROUGHT	0	-1	-1	-1	0	0	0	0	0	0	-1	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
	SJR at Buckley Cove	ALL	2	-1	8	2	28	3	42	7	19	3	17	3	4	-1	-1	-5	-2	-4	4	-6	2	-10	3	-5	9	-2
		DROUGHT	4	-3	14	0	46	4	-	13	100	14	75	10	15	-1	-2	-13	7	-16	3	-19	3	-26	6	-13	18	-8
	Franks Tract	ALL	93	18	-	36	-	58	41	30	4	5	-4	-3	-4	-3	-4	-3	-7	-4	20	-2	10	-18	21	4	20	5
		DROUGHT	-	71	-	97	-	-	84	33	2	12	-6	-4	-6	-5	-8	-4	-19	-8	-	15	83	-39	-100	-	23	9
Old R. at Rock Slough	ALL	28	3	-	15	98	35	41	30	4	4	-3	-1	-1	-1	-1	0	-7	-4	9	-3	6	-13	0	-8	13	3	
	DROUGHT	25	22	-	31	-	60	71	28	6	9	-4	-1	-6	-4	-6	-3	-15	-7	38	6	32	-23	-43	-25	14	4	
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	29	52	-1	12	-8	-1	-12	-5	-33	-21	-100	-100	-100	-100	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	58	-	-25	33	-12	-4	-17	-9	-100	-100	-100	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-29	7	-40	-12	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-61	6	-67	-34	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-1	-1	-1	-2	-2	-2	-1	-1	0	1	1	1	1	1	1	1	0	0	0	-1	-1	-1	-2	-2	0	-1
		DROUGHT	-2	-2	-3	-3	-5	-5	-4	-4	-2	-2	-1	-1	0	0	0	1	-1	-1	-2	-2	-3	-3	-3	-4	-2	-2
	Contra Costa PP #1	ALL	18	-5	49	6	-	20	-	42	8	18	4	0	1	-1	5	4	-4	-2	1	-4	19	-7	0	-11	16	4
		DROUGHT	8	-3	69	34	-	47	-	-	11	16	-1	4	-4	-1	-2	0	-11	-4	11	7	-	-3	-17	-34	19	9
	Banks PP	ALL	16	7	51	17	65	32	72	52	29	27	27	25	27	26	7	7	5	8	9	6	21	6	15	6	25	17
		DROUGHT	5	1	53	22	-	65	-	96	46	39	73	68	62	59	13	13	-10	-4	13	5	61	14	-9	-16	37	25
	Jones PP	ALL	25	19	49	19	46	19	64	40	43	41	44	42	18	17	14	14	11	20	9	10	6	-4	17	11	26	19
		DROUGHT	23	26	46	19	61	23	-	95	-	-	-	-	34	35	32	31	6	13	27	20	21	-8	-8	-11	39	29

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 Table CI-30D. Alternative 4 Scenario H4 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride
2 relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
			Alt 4 Scn H4																										
Delta Interior	Moke R. (SF) at Staten Island	ALL	-1	-1	-1	-1	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	-1	-1	
		DROUGHT	0	0	-1	-1	0	0	0	0	0	0	-1	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	-1	-1
	SJR at Buckley Cove	ALL	2	-1	8	1	28	3	44	8	20	4	17	3	4	-1	-1	-5	-2	-4	3	-7	2	-10	3	-5	9	-2	
		DROUGHT	4	-3	14	0	45	3	-	13	100	14	74	10	15	-1	-2	-12	7	-17	2	-20	2	-26	6	-13	17	-8	
	Franks Tract	ALL	88	15	-	43	-	66	30	20	-1	0	-6	-5	-5	-5	-5	-4	-8	-5	25	2	18	-11	20	3	20	5	
		DROUGHT	-	71	-	-	-	-	58	13	-5	5	-9	-7	-8	-8	-9	-6	-19	-7	-	18	70	-43	-100	-	22	8	
Old R. at Rock Slough	ALL	25	0	-	18	-	41	32	22	-1	-1	-6	-3	-4	-4	-4	-3	-9	-6	12	0	12	-8	0	-7	12	2		
	DROUGHT	25	23	-	34	-	96	60	21	0	2	-9	-5	-12	-10	-10	-7	-16	-8	41	9	29	-25	-40	-21	12	3		
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	0	19	-6	6	-7	0	-11	-4	-30	-17	-100	-100	-100	-100	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-48	-	-39	9	-12	-4	-15	-7	-97	-95	-100	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-25	13	-35	-4	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-59	13	-55	-8	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-1	-1	-2	-2	-2	-2	-1	-1	0	1	1	1	1	1	1	1	0	0	-1	-1	-1	-1	-2	-2	-1	-1	
		DROUGHT	-2	-2	-3	-4	-6	-5	-5	-5	-3	-3	-1	-1	0	0	0	1	-1	-1	-2	-2	-3	-3	-3	-3	-2	-2	
	Contra Costa PP #1	ALL	14	-8	53	9	-	21	-	43	-4	6	1	-4	-3	-5	1	0	-8	-6	2	-2	29	0	3	-9	14	2	
		DROUGHT	11	1	76	40	-	55	-	-	1	4	-8	-3	-10	-7	-8	-5	-14	-8	14	10	-	-4	-18	-35	17	8	
	Banks PP	ALL	10	1	57	22	67	34	70	50	27	25	22	21	21	20	11	11	10	13	10	7	17	2	26	17	26	17	
		DROUGHT	4	1	54	23	-	71	-	88	36	29	60	55	55	52	41	40	4	11	18	10	38	-2	4	-4	41	28	
	Jones PP	ALL	26	20	48	19	49	21	77	51	49	47	45	43	22	21	10	10	5	13	10	10	12	2	16	10	27	20	
		DROUGHT	27	30	51	23	83	40	-	-	-	-	-	-	47	49	20	18	1	7	13	6	25	-5	-7	-11	42	31	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 Table CI-31. Period average change in chloride concentrations (mg/L) for Alternative 5 LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 5 LLT	Moke. R. (SF) at Staten Island	ALL	3	3	3	2	1	1	0	1	0	1	2	2	2	2	2	3	5	6	4	5	5	5	4	4	3	3	
			(22%)	(24%)	(20%)	(19%)	(8%)	(9%)	(1%)	(6%)	(1%)	(6%)	(10%)	(13%)	(12%)	(14%)	(13%)	(17%)	(26%)	(33%)	(24%)	(30%)	(39%)	(38%)	(34%)	(33%)	(16%)	(19%)	
	SJR at Buckley Cove	ALL	-2	1	1	1	-3	3	-3	1	-3	1	-3	1	-4	1	-4	1	-7	3	-8	4	-8	5	-4	1	-4	2	
			(-2%)	(1%)	(1%)	(1%)	(-3%)	(5%)	(-4%)	(2%)	(-4%)	(1%)	(-3%)	(1%)	(-4%)	(1%)	(-5%)	(1%)	(-8%)	(4%)	(-9%)	(5%)	(-9%)	(6%)	(-4%)	(1%)	(-5%)	(2%)	
	Franks Tract	ALL	-80	-13	-155	-21	-94	-49	16	13	12	6	9	6	8	5	7	2	12	5	-32	14	-5	42	-17	-2	-27	1	
			(-27%)	(-6%)	(-41%)	(-8%)	(-32%)	(-19%)	(10%)	(8%)	(21%)	(10%)	(24%)	(15%)	(20%)	(11%)	(15%)	(4%)	(22%)	(8%)	(-17%)	(9%)	(-2%)	(23%)	(-6%)	(-1%)	(-15%)	(0%)	
	Old R. at Rock Slough	ALL	-49	-8	-112	-2	-84	-40	8	5	10	6	7	4	4	0	2	0	6	2	-21	12	-3	37	2	14	-19	2	
			(-21%)	(-4%)	(-36%)	(-1%)	(-33%)	(-19%)	(5%)	(3%)	(14%)	(9%)	(15%)	(7%)	(7%)	(1%)	(4%)	(-1%)	(12%)	(4%)	(-14%)	(10%)	(-1%)	(24%)	(1%)	(6%)	(-13%)	(2%)	
	Delta Interior	Sac. R. at Emmaton	ALL	-253	-50	-237	-103	31	-19	14	-20	16	-10	17	3	23	7	66	37	96	58	122	118	219	149	-56	-84	5	7
				(-30%)	(-8%)	(-27%)	(-14%)	(7%)	(-4%)	(9%)	(-11%)	(23%)	(-11%)	(59%)	(8%)	(61%)	(12%)	(55%)	(24%)	(43%)	(22%)	(37%)	(36%)	(46%)	(27%)	(-7%)	(-10%)	(1%)	(2%)
		SJR at Antioch	ALL	-801	-142	-902	-352	-181	-117	-22	-61	12	-40	43	5	48	6	81	27	136	68	52	209	245	253	-367	-153	-138	-25
				(-36%)	(-9%)	(-37%)	(-19%)	(-12%)	(-8%)	(-4%)	(-9%)	(5%)	(-13%)	(38%)	(3%)	(34%)	(4%)	(23%)	(7%)	(23%)	(10%)	(4%)	(19%)	(17%)	(17%)	(-17%)	(-8%)	(-13%)	(-3%)
Sac. R. at Mallard Island		ALL	-996	-185	-936	-312	-134	-71	-19	-29	87	5	147	66	192	106	283	165	285	169	238	470	406	404	-497	-51	-79	61	
			(-21%)	(-5%)	(-19%)	(-7%)	(-4%)	(-2%)	(-1%)	(-2%)	(9%)	(0%)	(32%)	(12%)	(26%)	(13%)	(20%)	(11%)	(15%)	(8%)	(8%)	(17%)	(12%)	(12%)	(-12%)	(-1%)	(-3%)	(3%)	
Major Diversions (Pumping Stations)		NBA at Barker Slough PP	ALL	10	12	16	17	14	14	7	7	1	-1	-2	-3	-3	-2	-4	-4	-5	-4	-2	0	1	8	9	3	4	
				(60%)	(74%)	(107%)	(117%)	(108%)	(107%)	(51%)	(50%)	(6%)	(-5%)	(-13%)	(-17%)	(-21%)	(-16%)	(-25%)	(-24%)	(-30%)	(-25%)	(-17%)	(-8%)	(-1%)	(5%)	(46%)	(50%)	(18%)	(22%)
		Contra Costa PP #1	ALL	-38	-5	-63	0	-85	-12	-26	-6	17	0	9	5	4	1	1	-1	5	-1	-9	6	-21	26	12	26	-16	3
				(-16%)	(-2%)	(-25%)	(-0%)	(-36%)	(-7%)	(-14%)	(-4%)	(21%)	(-0%)	(16%)	(8%)	(7%)	(2%)	(1%)	(-2%)	(8%)	(-1%)	(-7%)	(6%)	(-10%)	(16%)	(5%)	(13%)	(-11%)	(3%)
		Banks PP	ALL	-39	-22	-85	-26	-70	-35	-35	-31	-9	-13	-13	-15	-23	-25	-10	-11	-11	-13	-46	-25	-57	-20	-37	-20	-36	-21
				(-23%)	(-15%)	(-42%)	(-18%)	(-37%)	(-23%)	(-25%)	(-23%)	(-11%)	(-15%)	(-19%)	(-21%)	(-33%)	(-34%)	(-14%)	(-15%)	(-17%)	(-19%)	(-44%)	(-29%)	(-38%)	(-18%)	(-22%)	(-13%)	(-29%)	(-19%)
	Jones PP	ALL	-28	-11	-84	-30	-58	-33	-37	-32	-10	-12	-15	-17	-12	-13	-18	-19	-13	-17	-27	-8	-16	15	-42	-24	-30	-16	
			(-19%)	(-8%)	(-45%)	(-23%)	(-38%)	(-25%)	(-32%)	(-29%)	(-12%)	(-14%)	(-20%)	(-22%)	(-15%)	(-16%)	(-22%)	(-23%)	(-20%)	(-23%)	(-24%)	(-9%)	(-11%)	(13%)	(-27%)	(-18%)	(-26%)	(-16%)	
		DROUGHT	ALL	-26	-19	-84	-36	-58	-38	-80	-66	-10	-10	-16	-17	-7	-8	-19	-21	-2	-12	-41	-12	-46	8	-7	3	-31	-17
				(-14%)	(-11%)	(-42%)	(-24%)	(-33%)	(-24%)	(-60%)	(-56%)	(-12%)	(-12%)	(-20%)	(-21%)	(-9%)	(-10%)	(-25%)	(-27%)	(-4%)	(-20%)	(-27%)	(-10%)	(-22%)	(5%)	(-4%)	(2%)	(-23%)	(-14%)

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3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

1 Table CI-32. Period average change in chloride concentrations (mg/L) for Alternative 5 LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 5 LLT	Delta Interior	Moke. R. (SF) at Staten Island	ALL	1	1	1	1	0	1	0	1	0	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	
				(6%)	(6%)	(6%)	(6%)	(2%)	(3%)	(0%)	(3%)	(1%)	(4%)	(5%)	(7%)	(7%)	(7%)	(7%)	(8%)	(11%)	(12%)	(7%)	(8%)	(9%)	(8%)	(8%)	(7%)	(5%)	(7%)	
		SJR at Buckley Cove	ALL	-4	1	-11	-2	-35	-7	-44	-15	-30	-13	-27	-12	-6	2	2	10	0	3	-10	5	-6	14	-5	8	-15	-1	
				(-4%)	(1%)	(-10%)	(-2%)	(-25%)	(-6%)	(-27%)	(-12%)	(-21%)	(-10%)	(-20%)	(-10%)	(-6%)	(2%)	(3%)	(13%)	(-0%)	(4%)	(-9%)	(5%)	(-6%)	(16%)	(-5%)	(9%)	(-13%)	(-1%)	
		Franks Tract	ALL	-50	-11	-91	-11	-73	-36	-3	7	5	4	8	6	4	3	4	2	12	4	-18	8	-2	30	-10	0	-18	0	
				(-27%)	(-7%)	(-40%)	(-7%)	(-35%)	(-21%)	(-2%)	(6%)	(9%)	(6%)	(21%)	(14%)	(14%)	(9%)	(14%)	(5%)	(28%)	(8%)	(-14%)	(8%)	(-1%)	(25%)	(-5%)	(-0%)	(-15%)	(0%)	
	Old R. at Rock Slough	ALL	-29	-6	-60	4	-64	-31	-8	1	3	4	4	0	-2	-3	0	-2	8	2	-11	7	-1	26	3	11	-13	1		
			(-19%)	(-5%)	(-32%)	(3%)	(-35%)	(-21%)	(-6%)	(1%)	(4%)	(5%)	(9%)	(-0%)	(-5%)	(-6%)	(-1%)	(-3%)	(20%)	(5%)	(-11%)	(9%)	(-1%)	(26%)	(2%)	(8%)	(-12%)	(1%)		
	Western Delta	Sac. R. at Enmaton	ALL	-182	-45	-167	-74	-5	-28	1	-18	7	-14	18	3	19	4	52	26	92	53	99	86	167	120	-21	-54	7	5	
					(-32%)	(-10%)	(-30%)	(-16%)	(-2%)	(-8%)	(1%)	(-12%)	(9%)	(-16%)	(51%)	(6%)	(55%)	(9%)	(57%)	(23%)	(50%)	(24%)	(44%)	(36%)	(50%)	(31%)	(-4%)	(-9%)	(3%)	(2%)
			DROUGHT	-262	-112	-241	-163	43	-11	-1	-63	18	-44	22	5	31	12	123	55	189	76	261	202	245	150	51	-142	40	-3	
					(-34%)	(-18%)	(-31%)	(-23%)	(9%)	(-2%)	(-0%)	(-25%)	(16%)	(-26%)	(51%)	(8%)	(86%)	(22%)	(104%)	(30%)	(77%)	(21%)	(79%)	(52%)	(55%)	(28%)	(6%)	(-14%)	(11%)	(-1%)
SJR at Antioch			ALL	-561	-114	-603	-222	-203	-110	-50	-56	-9	-48	48	3	47	3	74	20	143	64	73	152	203	222	-214	-94	-88	-15	
				(-38%)	(-11%)	(-40%)	(-20%)	(-20%)	(-12%)	(-10%)	(-11%)	(-4%)	(-16%)	(40%)	(2%)	(42%)	(2%)	(30%)	(6%)	(30%)	(11%)	(9%)	(20%)	(19%)	(22%)	(-15%)	(-7%)	(-12%)	(-2%)	
DROUGHT		-653	-199	-800	-432	-203	-74	-110	-190	-20	-154	54	-1	66	12	163	41	255	72	182	206	269	258	12	-179	-65	-53			
			(-36%)	(-14%)	(-42%)	(-28%)	(-14%)	(-6%)	(-15%)	(-24%)	(-5%)	(-29%)	(33%)	(-1%)	(46%)	(6%)	(43%)	(8%)	(37%)	(8%)	(15%)	(17%)	(21%)	(20%)	(1%)	(-9%)	(-7%)	(-5%)		
Sac. R. at Mallard Island		ALL	-859	-199	-806	-254	-255	-109	-54	-42	32	-37	177	59	195	65	267	110	339	152	259	367	401	407	-306	-26	-51	41		
			(-28%)	(-8%)	(-28%)	(-11%)	(-11%)	(-5%)	(-4%)	(-3%)	(4%)	(-4%)	(40%)	(10%)	(38%)	(10%)	(29%)	(10%)	(23%)	(9%)	(13%)	(19%)	(16%)	(16%)	(-10%)	(-1%)	(-3%)	(2%)		
DROUGHT		-1056	-363	-1119	-495	-301	-101	-164	-241	48	-199	199	61	248	99	338	143	402	164	369	405	423	417	44	-125	-48	-20			
			(-28%)	(-12%)	(-30%)	(-16%)	(-10%)	(-3%)	(-8%)	(-12%)	(3%)	(-12%)	(30%)	(8%)	(34%)	(11%)	(24%)	(9%)	(19%)	(7%)	(13%)	(15%)	(15%)	(14%)	(1%)	(-3%)	(-2%)	(-1%)		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	3	4	5	5	5	5	2	3	-1	-2	-2	-2	-2	-2	-2	-1	0	1	1	2	2	4	4	1	1			
				(20%)	(23%)	(27%)	(30%)	(30%)	(30%)	(12%)	(13%)	(-3%)	(-9%)	(-8%)	(-10%)	(-12%)	(-9%)	(-8%)	(-9%)	(-3%)	(-2%)	(4%)	(7%)	(11%)	(12%)	(22%)	(23%)	(7%)	(7%)	
		DROUGHT	7	7	10	11	13	13	11	11	6	6	3	2	1	0	0	-2	1	2	4	4	6	6	9	9	6	6		
				(39%)	(41%)	(57%)	(63%)	(76%)	(73%)	(63%)	(61%)	(31%)	(28%)	(13%)	(9%)	(3%)	(-2%)	(-0%)	(-9%)	(8%)	(9%)	(22%)	(24%)	(33%)	(33%)	(50%)	(50%)	(32%)	(30%)	
		Contra Costa PP #1	ALL	-25	-3	-37	0	-66	-12	-42	-13	11	-2	-9	-1	-11	-8	-5	-5	4	0	-3	4	-14	18	5	19	-16	0	
				(-16%)	(-2%)	(-23%)	(0%)	(-36%)	(-9%)	(-23%)	(-9%)	(10%)	(-1%)	(-10%)	(-2%)	(-14%)	(-11%)	(-7%)	(-7%)	(7%)	(-0%)	(-4%)	(5%)	(-10%)	(16%)	(3%)	(15%)	(-13%)	(-0%)	
	DROUGHT	-12	-6	-19	-4	-87	-32	-50	-54	17	12	1	-8	-9	-14	-6	-11	15	1	-10	-5	-51	7	12	31	-17	-7			
			(-6%)	(-3%)	(-10%)	(-2%)	(-38%)	(-18%)	(-24%)	(-25%)	(15%)	(10%)	(1%)	(-9%)	(-13%)	(-18%)	(-10%)	(-18%)	(33%)	(1%)	(-7%)	(-4%)	(-23%)	(4%)	(7%)	(20%)	(-12%)	(-5%)		
	Banks PP	ALL	-22	-10	-50	-16	-52	-25	-45	-30	-14	-11	-18	-17	-32	-30	-11	-11	-6	-12	-28	-22	-33	-12	-18	-7	-27	-17		
			(-20%)	(-10%)	(-38%)	(-16%)	(-36%)	(-21%)	(-32%)	(-24%)	(-13%)	(-11%)	(-21%)	(-19%)	(-39%)	(-37%)	(-15%)	(-15%)	(-9%)	(-17%)	(-38%)	(-32%)	(-32%)	(-14%)	(-17%)	(-7%)	(-27%)	(-18%)		
	DROUGHT	-11	-7	-58	-34	-63	-37	-67	-49	1	7	-34	-31	-49	-46	-20	-19	7	-4	-44	-33	-62	-24	-6	4	-32	-20			
			(-8%)	(-5%)	(-39%)	(-27%)	(-35%)	(-24%)	(-39%)	(-32%)	(1%)	(5%)	(-26%)	(-24%)	(-38%)	(-36%)	(-18%)	(-18%)	(10%)	(-5%)	(-43%)	(-36%)	(-40%)	(-20%)	(-4%)	(3%)	(-24%)	(-17%)		
Jones PP	ALL	-11	-4	-47	-18	-42	-19	-57	-40	-19	-18	-32	-30	-15	-14	-18	-17	-4	-17	-8	-9	-6	9	-21	-12	-23	-15			
		(-10%)	(-4%)	(-36%)	(-18%)	(-28%)	(-15%)	(-38%)	(-30%)	(-15%)	(-14%)	(-26%)	(-25%)	(-16%)	(-16%)	(-23%)	(-23%)	(-6%)	(-22%)	(-9%)	(-11%)	(-6%)	(10%)	(-19%)	(-12%)	(-21%)	(-15%)			
DROUGHT	-5	-8	-42	-19	-51	-30	-120	-97	-36	-32	-54	-51	-14	-15	-33	-32	-2	-13	-14	-5	-22	10	0	5	-30	-22				
		(-4%)	(-6%)	(-28%)	(-15%)	(-28%)	(-18%)	(-63%)	(-58%)	(-19%)	(-17%)	(-28%)	(-27%)	(-10%)	(-11%)	(-25%)	(-28%)	(-3%)	(-18%)	(-13%)	(-5%)	(-15%)	(9%)	(-0%)	(4%)	(-21%)	(-16%)			

2

3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

- 1 **Table CI-33. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 5 LLT. Calculation of chloride concentrations was**
 3 **based on a mass balance approach.**

Chloride Alt 5 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
						Frequency of Criterion/Objective Exceedance (%)		
			Ex. Cond.	No Act. LLT	Alt 5 LLT	Ex. Cond.	No Act. LLT	Alt 5 LLT
Delta Interior	Moke R. (SF) at Staten Island	ALL	15.7	15.3	18.3	0	0	0
		DROUGHT	16.8	16.3	19.7	0	0	0
	SJR at Buckley Cove	ALL	82.9	77.2	79.0	0	0	0
		DROUGHT	86.5	76.5	80.2	0	0	0
	Franks Tract	ALL	173.8	146.4	147.1	34	22	23
		DROUGHT	212.8	190.9	182.9	47	35	35
Old R. at Rock Slough	ALL	152.0	130.5	132.9	28	17	17	
	DROUGHT	180.2	161.4	158.7	42	27	28	
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	373.8	44	44	46
		DROUGHT	516.4	559.3	553.8	55	60	63
	SJR at Antioch	ALL	1087.3	974.2	949.4	66	73	72
		DROUGHT	1400.6	1345.6	1272.7	82	87	85
Sac. R. at Mallard Island	ALL	2552.0	2411.9	2473.3	85	86	87	
	DROUGHT	3233.9	3123.1	3115.1	100	100	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	20.2	0	0	0
		DROUGHT	17.7	17.7	30.3	0	0	0
	Contra Costa PP #1	ALL	146.5	126.9	130.1	24	14	18
		DROUGHT	176.5	161.3	155.9	37	22	30
	Banks PP	ALL	123.4	108.5	87.5	4	2	1
		DROUGHT	143.7	128.0	105.5	7	2	2
	Jones PP	ALL	116.9	103.4	87.0	1	1	0
		DROUGHT	132.9	118.9	102.0	0	0	0

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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5

1 **Table CI-34. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 5 LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride	Alt 5 LLT	Location	Period ^a	Period Average Concentration (mg/L)			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
				Ex. Cond.	No Act. LLT	Alt 5 LLT	Frequency of Criterion/Objective Exceedance (%)		
							Ex. Cond.	No Act. LLT	Alt 5 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18	18	19	0	0	0	
		DROUGHT	19	19	20	0	0	0	
	SJR at Buckley Cove	ALL	116	102	101	0	0	0	
		DROUGHT	155	128	134	0	0	0	
	Franks Tract	ALL	120	102	102	14	8	8	
		DROUGHT	153	140	135	22	15	17	
Old R. at Rock Slough	ALL	108	94	95	4	3	3		
	DROUGHT	136	125	123	7	5	3		
Western Delta	Sac. R. at Emmaton	ALL	258	260	265	36	32	37	
		DROUGHT	364	406	404	50	55	53	
	SJR at Antioch	ALL	757	684	669	61	65	66	
		DROUGHT	1002	990	937	80	82	78	
	Sac. R. at Mallard Island	ALL	1766	1674	1716	77	83	84	
		DROUGHT	2346	2318	2298	98	98	98	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	19	19	20	0	0	0	
		DROUGHT	19	19	25	0	0	0	
	Contra Costa PP #1	ALL	120	105	105	5	3	2	
		DROUGHT	143	133	126	8	7	3	
	Banks PP	ALL	102	91	74	1	1	0	
		DROUGHT	134	123	102	2	2	0	
	Jones PP	ALL	109	101	86	0	0	0	
		DROUGHT	145	136	114	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

4

1 Table CI-35. Alternative 5 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 5 LLT	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	0	-1	0	-1	0	0	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2	-2	-1	-1	
		DROUGHT	-1	-1	-1	-1	-1	-1	0	0	0	0	0	-1	0	-1	-1	-1	-1	-3	-3	-4	-4	-3	-3	-2	-2	-1	-1
	SJR at Buckley Cove	ALL	1	0	0	-1	2	-2	2	-1	2	0	1	0	2	-1	2	0	4	-2	5	-2	5	-3	2	-1	2	-1	
		DROUGHT	1	-1	1	-1	3	-2	4	-2	2	-1	2	-1	4	-1	4	-1	8	-4	6	-5	7	-6	4	-1	4	-2	
	Franks Tract	ALL	-	52	-	-	-	-	-17	-14	-6	-3	-4	-3	-4	-2	-3	-1	-6	-3	56	-13	22	-63	-	-	35	-1	
		DROUGHT	-	-	-	-	-	-	-40	-58	-9	0	-4	-2	-2	-1	-4	1	-16	-2	-	-	-	-	-	-	80	14	
	Old R. at Rock Slough	ALL	-	15	-	4	-	-	-8	-5	-5	-3	-4	-2	-2	0	-1	0	-3	-1	22	-9	4	-38	-36	-76	20	-2	
		DROUGHT	-	-	-	-	-	-	-22	-40	-8	-4	-3	0	0	1	-2	1	-11	-2	-	15	-	-74	-	-	31	3	
	Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	-14	31	-9	6	-8	-2	-11	-3	-51	-37	-	-	-	-	-	-	-	-	-	-
			DROUGHT	-	-	-	-	-	-	-49	-	-22	41	-10	-3	-19	-9	-100	-	-	-	-	-	-	-	-	-	-	-
SJR at Antioch		ALL	-	-	-	-	-	-	-	-	-	-	-	-31	-5	-45	-10	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-45	-2	-100	-100	-	-	-	-	-	-	-	-	-	-	-	-
Sac. R. at Mallard Island		ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-4	-5	-7	-7	-6	-6	-3	-3	0	0	1	1	1	1	2	2	3	2	2	1	0	0	-4	-4	-1	-2	
		DROUGHT	-8	-9	-13	-14	-13	-13	-10	-9	-5	-4	-1	-1	0	0	0	2	1	0	-2	-3	-4	-4	-9	-9	-5	-5	
	Contra Costa PP #1	ALL	-	11	-	1	-	14	36	6	-10	0	-4	-2	-2	-1	0	1	-2	0	7	-4	46	-28	-36	-56	16	-3	
		DROUGHT	-	-	-	-	-	-	-	-	-13	-7	-3	1	0	2	0	2	-9	0	34	12	-	-32	-	-100	28	6	
	Banks PP	ALL	46	22	-	24	-	37	32	27	5	8	7	8	13	14	6	6	6	7	31	15	57	15	45	20	28	15	
		DROUGHT	48	34	-	75	-	80	78	49	-2	-1	5	6	9	10	2	4	-2	1	72	40	-	48	35	3	36	18	
	Jones PP	ALL	29	9	-	25	61	27	27	23	6	7	9	10	7	8	11	11	7	9	19	5	15	-11	44	22	22	11	
		DROUGHT	36	25	-	37	78	40	68	50	6	6	9	10	4	5	11	12	1	6	42	10	-	-8	9	-4	26	13	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:

-- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.

-- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-36. Alternative 5 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
			Alt 5 LLT	Moke. R. (SF) at Staten Island	ALL	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
DROUGHT	0	0			-1	-1	0	0	0	0	0	0	0	0	-1	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1
SJR at Buckley Cove	ALL	3		0	8	1	31	5	50	13	28	11	25	10	4	-1	-1	-5	0	-2	7	-3	4	-9	4	-5	11	0	
	DROUGHT	5		-2	14	0	49	6	-	25	-	41	-	36	14	-2	-4	-14	8	-16	7	-16	5	-24	6	-13	22	-5	
Franks Tract	ALL	81		11	-	11	-	46	3	-6	-3	-2	-4	-3	-2	-1	-2	-1	-6	-2	15	-6	2	-23	18	0	14	0	
	DROUGHT	-		48	-	90	-	-	-1	-29	-8	1	-5	-3	-2	-1	-4	0	-15	-3	-	9	78	-41	-94	-	18	4	
Old R. at Rock Slough	ALL	30		5	97	-3	92	30	7	-1	-2	-2	-2	0	1	2	0	1	-4	-1	7	-4	1	-17	-3	-10	9	-1	
	DROUGHT	25		22	-	22	-	75	-2	-27	-7	-5	-2	2	3	4	-1	2	-10	-2	35	4	32	-24	-36	-16	11	2	
Western Delta	Sac. R. at Emmaton	ALL		-	-	-	-	-	-	-1	18	-4	9	-8	-1	-9	-2	-32	-20	100	100	100	100	-	-	-	-	-	-
		DROUGHT		-	-	-	-	-	-	2	-	-12	56	-11	-3	-15	-6	-93	-86	100	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	-37	-4	-34	-3	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-62	4	-62	-23	-	-	-	-	-	-	-	-	-	-	-	-	
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-2	-2	-2	-2	-2	-2	-1	-1	0	1	1	1	1	1	1	0	0	0	-1	-1	-1	-2	-2	-1	-1		
		DROUGHT	-3	-3	-4	-5	-6	-6	-5	-5	-3	-2	-1	-1	0	0	0	1	-1	-1	-2	-2	-3	-3	-4	-4	-3	-2	
	Contra Costa PP #1	ALL	27	3	40	0	96	10	63	14	-8	1	5	1	6	5	3	3	-2	0	2	-3	13	-13	-5	-16	12	0	
		DROUGHT	21	10	32	5	-	41	-	-	-12	-9	-1	5	5	9	3	6	-7	0	8	4	-	-8	-15	-32	16	6	
	Banks PP	ALL	16	7	42	10	49	19	40	24	9	8	11	10	19	18	6	6	3	6	16	12	22	7	13	4	18	10	
		DROUGHT	10	6	59	27	91	39	86	50	-1	-6	29	26	40	38	14	14	-4	2	29	21	66	18	5	-3	27	16	
	Jones PP	ALL	8	3	39	12	42	15	58	35	16	14	24	23	9	9	10	10	2	10	5	5	4	-5	14	8	16	10	
		DROUGHT	5	7	42	16	75	33	-	-	59	50	96	88	12	13	24	23	1	8	10	3	21	-7	0	-4	29	19	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-37. Period average change in chloride concentrations (mg/L) for Alternative 6A LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 6 LLT	Delta Interior	Moke R. (SF) at Staten Island	ALL	5	5	5	5	3	3	3	4	3	4	4	4	4	4	3	4	8	9	13	14	11	11	7	7	6	6	
				(44%)	(46%)	(42%)	(40%)	(24%)	(26%)	(14%)	(20%)	(14%)	(19%)	(23%)	(26%)	(23%)	(26%)	(20%)	(24%)	(42%)	(50%)	(74%)	(83%)	(81%)	(80%)	(56%)	(55%)	(37%)	(40%)	
			DROUGHT	5	5	5	5	3	4	2	3	1	2	3	4	2	3	3	4	9	10	15	15	11	10	7	8	6	6	
			DROUGHT	(40%)	(41%)	(40%)	(38%)	(27%)	(29%)	(11%)	(15%)	(3%)	(8%)	(15%)	(22%)	(10%)	(17%)	(16%)	(23%)	(50%)	(56%)	(87%)	(88%)	(76%)	(70%)	(54%)	(57%)	(33%)	(37%)	
			ALL	-2	0	0	0	-1	5	-2	2	-3	1	-2	1	-3	1	-4	1	-7	3	-8	5	-9	4	-4	1	-4	2	
			DROUGHT	(-2%)	(0%)	(-0%)	(0%)	(-1%)	(7%)	(-3%)	(3%)	(-3%)	(2%)	(-3%)	(2%)	(-4%)	(1%)	(-4%)	(1%)	(-8%)	(4%)	(-9%)	(6%)	(-10%)	(5%)	(-5%)	(1%)	(-4%)	(3%)	
	Western Delta	Sac. R. at Emmaton	ALL	-478	-274	-529	-396	-246	-295	-72	-106	-17	-43	8	-6	20	4	47	18	72	35	285	282	110	40	-336	-364	-95	-92	
				(-56%)	(-43%)	(-59%)	(-52%)	(-56%)	(-61%)	(-48%)	(-57%)	(-25%)	(-46%)	(28%)	(-13%)	(53%)	(7%)	(39%)	(12%)	(33%)	(13%)	(87%)	(85%)	(23%)	(7%)	(-41%)	(-43%)	(-26%)	(-25%)	
			DROUGHT	-629	-390	-701	-588	-310	-404	-67	-149	-13	-76	13	-1	28	7	102	30	142	41	474	419	258	141	-310	-558	-84	-127	
			DROUGHT	(-55%)	(-43%)	(-56%)	(-52%)	(-45%)	(-51%)	(-30%)	(-49%)	(-12%)	(-45%)	(30%)	(-2%)	(57%)	(11%)	(57%)	(12%)	(47%)	(10%)	(101%)	(80%)	(43%)	(20%)	(-28%)	(-41%)	(-16%)	(-23%)	
			ALL	-1413	-755	-1665	-1115	-1009	-945	-397	-436	-122	-175	-5	-43	23	-19	20	-35	33	-35	28	185	-217	-210	-1081	-867	-484	-371	
			DROUGHT	(-64%)	(-49%)	(-68%)	(-59%)	(-69%)	(-67%)	(-65%)	(-67%)	(-46%)	(-55%)	(-5%)	(-29%)	(16%)	(-10%)	(6%)	(-8%)	(6%)	(-5%)	(2%)	(17%)	(-15%)	(-14%)	(-51%)	(-45%)	(-45%)	(-38%)	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	9	11	12	13	11	11	4	4	-1	-3	-3	-4	-4	-3	-4	-4	-6	-5	-3	-1	4	6	11	11	3	3		
			(55%)	(68%)	(83%)	(92%)	(84%)	(83%)	(31%)	(30%)	(-5%)	(-15%)	(-17%)	(-21%)	(-24%)	(-19%)	(-27%)	(-27%)	(-31%)	(-4%)	(21%)	(29%)	(58%)	(63%)	(15%)	(18%)				
		DROUGHT	18	20	25	27	23	22	16	15	7	7	2	1	0	-1	-2	-5	-3	-2	4	6	16	16	26	25	11	11		
		DROUGHT	(87%)	(107%)	(154%)	(182%)	(186%)	(168%)	(125%)	(117%)	(51%)	(45%)	(11%)	(5%)	(-1%)	(-6%)	(-12%)	(-25%)	(-16%)	(-12%)	(18%)	(27%)	(70%)	(70%)	(116%)	(116%)	(62%)	(62%)		
	Contra Costa PP #1	ALL	-148	-114	-158	-96	-149	-76	-89	-69	14	-4	37	33	34	31	23	21	23	17	-35	-20	-97	-50	-110	-96	-55	-35		
			(-61%)	(-55%)	(-64%)	(-51%)	(-63%)	(-46%)	(-49%)	(-43%)	(17%)	(-4%)	(70%)	(59%)	(63%)	(55%)	(37%)	(32%)	(40%)	(28%)	(-28%)	(-18%)	(-48%)	(-32%)	(-51%)	(-47%)	(-37%)	(-28%)		
		DROUGHT	-198	-185	-208	-179	-214	-144	-131	-149	5	-6	43	36	43	39	43	38	23	6	-92	-79	-181	-92	-129	-99	-83	-68		
		DROUGHT	(-67%)	(-66%)	(-69%)	(-66%)	(-71%)	(-62%)	(-60%)	(-63%)	(7%)	(-6%)	(95%)	(69%)	(105%)	(86%)	(112%)	(89%)	(53%)	(9%)	(-50%)	(-47%)	(-58%)	(-41%)	(-51%)	(-44%)	(-47%)	(-42%)		
	Banks PP	ALL	-159	-142	-196	-137	-183	-148	-132	-128	-75	-79	-61	-64	-64	-66	-66	-68	-60	-62	-98	-77	-143	-107	-162	-145	-117	-102		
			(-96%)	(-96%)	(-97%)	(-95%)	(-96%)	(-96%)	(-95%)	(-95%)	(-95%)	(-92%)	(-92%)	(-90%)	(-91%)	(-91%)	(-91%)	(-91%)	(-91%)	(-90%)	(-90%)	(-94%)	(-92%)	(-95%)	(-94%)	(-96%)	(-96%)	(-95%)	(-94%)	
		DROUGHT	-191	-186	-219	-173	-219	-185	-162	-146	-85	-86	-60	-62	-58	-61	-53	-55	-45	-52	-139	-114	-220	-157	-193	-178	-137	-121		
		DROUGHT	(-97%)	(-97%)	(-97%)	(-96%)	(-97%)	(-97%)	(-96%)	(-95%)	(-93%)	(-93%)	(-90%)	(-90%)	(-90%)	(-90%)	(-89%)	(-89%)	(-87%)	(-88%)	(-95%)	(-94%)	(-97%)	(-96%)	(-97%)	(-96%)	(-96%)	(-95%)	(-94%)	
Jones PP	ALL	-145	-128	-179	-124	-148	-123	-108	-103	-74	-76	-70	-71	-74	-75	-75	-75	-61	-64	-105	-86	-135	-104	-148	-131	-110	-97			
		(-96%)	(-95%)	(-96%)	(-95%)	(-96%)	(-95%)	(-94%)	(-94%)	(-92%)	(-92%)	(-91%)	(-91%)	(-92%)	(-92%)	(-92%)	(-92%)	(-90%)	(-90%)	(-94%)	(-93%)	(-95%)	(-94%)	(-96%)	(-95%)	(-94%)	(-93%)			
	DROUGHT	-172	-166	-195	-146	-169	-149	-125	-112	-78	-78	-71	-72	-72	-72	-70	-72	-45	-55	-146	-118	-198	-145	-172	-161	-126	-112			
	DROUGHT	(-96%)	(-96%)	(-97%)	(-96%)	(-96%)	(-96%)	(-95%)	(-94%)	(-92%)	(-92%)	(-91%)	(-91%)	(-92%)	(-92%)	(-91%)	(-91%)	(-87%)	(-89%)	(-96%)	(-95%)	(-97%)	(-96%)	(-96%)	(-96%)	(-95%)	(-94%)			

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3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

1 Table CI-38. Period average change in chloride concentrations (mg/L) for Alternative 6A LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 6 LLT	Delta Interior	Moke. R. (SF) at Staten Island	ALL	2	2	2	2	2	2	2	3	2	3	3	3	2	2	2	2	3	3	3	3	3	3	2	2	2	2
			DROUGHT	(11%)	(12%)	(13%)	(13%)	(9%)	(10%)	(9%)	(12%)	(9%)	(13%)	(12%)	(14%)	(12%)	(13%)	(10%)	(11%)	(16%)	(17%)	(19%)	(19%)	(17%)	(16%)	(12%)	(12%)	(12%)	(13%)
		SJR at Buckley Cove	ALL	-5	0	-12	-3	-22	5	-37	-9	-24	-8	-23	-8	-5	3	3	10	1	4	-1	14	-1	19	-5	8	-11	3
			DROUGHT	(-5%)	(0%)	(-11%)	(-3%)	(-16%)	(5%)	(-23%)	(-6%)	(-17%)	(-6%)	(-17%)	(-6%)	(-5%)	(4%)	(4%)	(14%)	(1%)	(5%)	(-1%)	(15%)	(-1%)	(22%)	(-5%)	(9%)	(-10%)	(3%)
		Franks Tract	ALL	-129	-90	-171	-91	-153	-116	-66	-56	16	14	33	31	31	29	22	19	14	6	-51	-25	-62	-30	-115	-105	-53	-34
			DROUGHT	(-69%)	(-60%)	(-74%)	(-60%)	(-73%)	(-67%)	(-49%)	(-45%)	(26%)	(23%)	(88%)	(78%)	(101%)	(91%)	(65%)	(54%)	(33%)	(12%)	(-40%)	(-24%)	(-41%)	(-25%)	(-60%)	(-58%)	(-44%)	(-34%)
	Old R. at Rock Slough	ALL	-63	-40	-92	-28	-68	-36	9	19	64	65	77	73	55	54	36	35	38	32	-17	1	-32	-6	-59	-51	-4	10	
		DROUGHT	(-41%)	(-31%)	(-49%)	(-23%)	(-38%)	(-24%)	(7%)	(15%)	(89%)	(90%)	(157%)	(136%)	(112%)	(108%)	(77%)	(73%)	(96%)	(71%)	(-17%)	(1%)	(-26%)	(-6%)	(-39%)	(-35%)	(-4%)	(11%)	
	Western Delta	Sac. R. at Emmaton	ALL	-345	-208	-353	-260	-192	-215	-65	-84	-20	-41	7	-8	18	3	37	12	64	25	215	202	92	46	-232	-265	-64	-66
			DROUGHT	(-60%)	(-48%)	(-64%)	(-57%)	(-62%)	(-65%)	(-51%)	(-57%)	(-28%)	(-44%)	(21%)	(-16%)	(50%)	(5%)	(41%)	(10%)	(35%)	(11%)	(96%)	(85%)	(28%)	(12%)	(-41%)	(-45%)	(-25%)	(-25%)
		SJR at Antioch	ALL	-1001	-554	-1080	-698	-751	-658	-342	-348	-124	-162	-10	-54	25	-19	27	-28	44	-35	64	143	-120	-102	-750	-629	-335	-262
			DROUGHT	(-67%)	(-53%)	(-72%)	(-63%)	(-74%)	(-71%)	(-69%)	(-69%)	(-49%)	(-55%)	(-8%)	(-33%)	(22%)	(-12%)	(11%)	(-9%)	(9%)	(-6%)	(8%)	(19%)	(-11%)	(-10%)	(-51%)	(-47%)	(-44%)	(-38%)
Sac. R. at Mallard Island		ALL	-1382	-722	-1420	-868	-1145	-999	-604	-592	-274	-342	-17	-135	102	-28	162	4	199	13	301	409	41	47	-845	-566	-407	-315	
		DROUGHT	(-45%)	(-30%)	(-48%)	(-37%)	(-51%)	(-48%)	(-48%)	(-47%)	(-34%)	(-39%)	(-4%)	(-24%)	(20%)	(-4%)	(18%)	(0%)	(13%)	(1%)	(15%)	(21%)	(2%)	(2%)	(-28%)	(-21%)	(-23%)	(-19%)	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	3	4	3	3	3	3	0	1	-2	-3	-2	-3	-3	-2	-2	-2	-1	0	1	2	4	4	5	5	1	1	
		DROUGHT	(18%)	(21%)	(17%)	(20%)	(18%)	(18%)	(2%)	(3%)	(-9%)	(-14%)	(-11%)	(-14%)	(-13%)	(-11%)	(-9%)	(-9%)	(-3%)	(-2%)	(7%)	(10%)	(22%)	(24%)	(28%)	(29%)	(5%)	(5%)	
	Contra Costa PP#1	ALL	-56	-34	-50	-13	-60	-6	-16	12	74	61	75	82	70	73	41	42	40	36	5	12	-38	-7	-35	-21	4	20	
		DROUGHT	(-35%)	(-25%)	(-31%)	(-11%)	(-33%)	(-5%)	(-9%)	(8%)	(68%)	(51%)	(83%)	(99%)	(89%)	(95%)	(61%)	(62%)	(83%)	(70%)	(6%)	(16%)	(-27%)	(-6%)	(-25%)	(-16%)	(3%)	(19%)	
	Banks PP	ALL	-98	-86	-117	-83	-129	-103	-123	-109	-88	-86	-73	-72	-69	-67	-61	-60	-49	-54	-59	-53	-87	-66	-94	-82	-87	-77	
		DROUGHT	(-87%)	(-86%)	(-89%)	(-85%)	(-90%)	(-88%)	(-89%)	(-88%)	(-86%)	(-85%)	(-83%)	(-83%)	(-83%)	(-82%)	(-81%)	(-81%)	(-77%)	(-79%)	(-80%)	(-79%)	(-86%)	(-82%)	(-87%)	(-85%)	(-86%)	(-84%)	
	Jones PP	ALL	-95	-88	-115	-85	-136	-113	-137	-120	-113	-111	-105	-103	-74	-73	-62	-62	-49	-62	-68	-69	-87	-72	-93	-85	-94	-87	
		DROUGHT	(-87%)	(-86%)	(-89%)	(-86%)	(-90%)	(-89%)	(-90%)	(-89%)	(-89%)	(-88%)	(-88%)	(-88%)	(-84%)	(-84%)	(-81%)	(-81%)	(-77%)	(-81%)	(-83%)	(-83%)	(-86%)	(-83%)	(-87%)	(-86%)	(-87%)	(-86%)	

2 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

- 1 Table CI-39. Period Average chloride concentrations and frequency of exceedance of objectives for
 2 existing conditions, No Action LLT, and Alternative 6A LLT. Calculation of chloride concentrations was
 3 based on a mass balance approach.

Chloride Alt 6 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
			Ex. Cond.	No Act. LLT	Alt 6 LLT	Frequency of Criterion/Objective Exceedance (%)		
						Ex. Cond.	No Act. LLT	Alt 6 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	21.5	0	0	0
		DROUGHT	16.8	16.3	22.3	0	0	0
	SJR at Buckley Cove	ALL	82.9	77.2	79.2	0	0	0
		DROUGHT	86.5	76.5	80.1	0	0	0
	Franks Tract	ALL	173.8	146.4	74.9	34	22	1
		DROUGHT	212.8	190.9	85.7	47	35	2
Old R. at Rock Slough	ALL	152.0	130.5	87.0	28	17	0	
	DROUGHT	180.2	161.4	90.5	42	27	0	
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	274.4	44	44	38
		DROUGHT	516.4	559.3	431.9	55	60	58
	SJR at Antioch	ALL	1087.3	974.2	603.4	66	73	57
		DROUGHT	1400.6	1345.6	896.7	82	87	73
Sac. R. at Mallard Island	ALL	2552.0	2411.9	2100.6	85	86	86	
	DROUGHT	3233.9	3123.1	2745.9	100	100	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	19.7	0	0	0
		DROUGHT	17.7	17.7	28.6	0	0	0
	Contra Costa PP #1	ALL	146.5	126.9	91.8	24	14	0
		DROUGHT	176.5	161.3	93.5	37	22	0
	Banks PP	ALL	123.4	108.5	6.8	4	2	0
		DROUGHT	143.7	128.0	6.8	7	2	0
	Jones PP	ALL	116.9	103.4	6.8	1	1	0
		DROUGHT	132.9	118.9	6.8	0	0	0

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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5

- 1 **Table CI-40. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 6A LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride	Location	Period ^a	Period Average Concentration (mg/L)			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b			
			Ex. Cond.	No Act. LLT	Alt 6 LLT	Frequency of Criterion/Objective Exceedance (%)			
						Ex. Cond.	No Act. LLT	Alt 6 LLT	
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18	18	21	0	0	0	
		DROUGHT	19	19	21	0	0	0	
	SJR at Buckley Cove	ALL	116	102	105	0	0	0	
		DROUGHT	155	128	139	0	0	0	
	Franks Tract	ALL	120	102	67	14	8	0	
		DROUGHT	153	140	84	22	15	0	
	Old R. at Rock Slough	ALL	108	94	104	4	3	0	
		DROUGHT	136	125	129	7	5	0	
	Western Delta	Sac. R. at Emmaton	ALL	258	260	194	36	32	27
			DROUGHT	364	406	311	50	55	50
SJR at Antioch		ALL	757	684	422	61	65	51	
		DROUGHT	1002	990	650	80	82	68	
Sac. R. at Mallard Island		ALL	1766	1674	1360	77	83	82	
		DROUGHT	2346	2318	1910	98	98	98	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	19	19	20	0	0	0	
		DROUGHT	19	19	24	0	0	0	
	Contra Costa PP #1	ALL	120	105	125	5	3	1	
		DROUGHT	143	133	144	8	7	0	
	Banks PP	ALL	102	91	14	1	1	0	
		DROUGHT	134	123	14	2	2	0	
	Jones PP	ALL	109	101	14	0	0	0	
		DROUGHT	145	136	14	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

4

1 Table CI-41. Alternative 6A use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 6 LLT	Moke. R. (SF) at Staten Island	ALL	-2	-2	-2	-2	-1	-1	-1	-2	-1	-2	-2	-2	-2	-2	-1	-2	-3	-4	-6	-6	-5	-5	-3	-3	-2	-3
		DROUGHT	-2	-2	-2	-2	-1	-2	-1	-1	0	-1	-1	-2	-1	-1	-1	-2	-4	-4	-6	-6	-5	-4	-3	-3	-2	-3
	SJR at Buckley Cove	ALL	1	0	0	0	1	-3	1	-1	2	-1	1	-1	2	-1	2	-1	4	-2	5	-3	6	-2	2	0	2	-1
		DROUGHT	1	-1	1	-1	2	-3	3	-2	2	-1	2	-1	4	-2	4	-2	7	-4	6	-4	10	-3	4	-1	4	-2
	Franks Tract	ALL	-	-	-	-	-	-	-	-	0	3	-10	-9	-10	-8	-7	-4	-5	-1	-	44	-	93	-	-	-	69
		DROUGHT	-	-	-	-	-	-	-	-	8	19	-8	-6	-8	-7	-6	-1	-4	11	-	-	-	-	-	-	-	-
Old R. at Rock Slough	ALL	-	-	-	-	-	-	70	75	-10	-8	-17	-16	-14	-12	-11	-10	-10	-8	65	23	-	44	-	-	66	36	
	DROUGHT	-	-	-	-	-	-	-	-	-7	-2	-21	-18	-19	-18	-18	-15	-8	1	-	-	-	-	-	-	-	80	
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	74	-	9	28	-4	3	-10	-2	-36	-18	100	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	9	98	-6	0	-14	-4	100	-	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	4	44	-21	29	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	15	-	-37	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-4	-5	-5	-6	-5	-5	-2	-2	0	1	1	2	2	1	2	2	3	2	1	0	-2	-2	-5	-5	-1	-1
		DROUGHT	-8	-9	-11	-11	-10	-9	-7	-6	-3	-3	-1	0	0	0	1	2	1	1	-2	-3	-7	-7	-11	-11	-5	-5
	Contra Costa PP #1	ALL	-	-	-	-	-	88	-	76	-8	2	-19	-17	-17	-16	-12	-11	-12	-9	28	14	-	54	-	-	53	29
		DROUGHT	-	-	-	-	-	-	-	-	-3	4	-21	-18	-21	-19	-20	-18	-11	-3	-	97	-	-	-	-	-	76
	Banks PP	ALL	-	-	-	-	-	-	-	-	45	48	34	35	36	37	37	38	33	34	68	47	-	78	-	-	92	72
		DROUGHT	-	-	-	-	-	-	-	-	54	55	33	34	31	33	28	29	23	27	-	89	-	-	-	-	-	99
	Jones PP	ALL	-	-	-	-	-	-	80	73	44	45	40	41	44	45	44	45	34	36	76	55	-	75	-	-	83	66
		DROUGHT	-	-	-	-	-	-	85	47	47	41	42	42	42	41	42	23	29	-	94	-	-	-	-	-	-	86

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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3

1 **Table CI-42. Alternative 6A use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride relationship.**

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
			Alt 6 LLT	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
DROUGHT	-1	-1			-1	-1	-1	-1	-1	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1
SJR at Buckley Cove	ALL	3		0	9	2	20	-4	42	7	23	6	21	6	3	-2	-2	-6	0	-3	1	-9	1	-11	3	-5	8	-2	
	DROUGHT	5		-2	15	1	34	-4	-	14	-	26	98	24	12	-3	-4	-15	6	-18	-3	-24	-1	-29	6	-13	17	-9	
Franks Tract	ALL	-		89	-	92	-	-	57	44	-8	-8	-15	-15	-14	-14	-10	-9	-7	-3	42	17	64	23	-	-	41	23	
	DROUGHT	-		-	-	-	-	-	-	81	-4	5	-22	-20	-21	-20	-16	-13	-12	0	-	85	-	51	-	-	71	51	
Old R. at Rock Slough	ALL	66		34	-	22	99	35	-8	-15	-36	-36	-39	-37	-28	-27	-18	-17	-18	-16	12	-1	26	4	61	49	3	-6	
	DROUGHT	-		-	-	54	-	-	12	-16	-58	-57	-69	-68	-55	-54	-38	-36	-21	-14	87	44	-	35	-	-	6	-3	
Western Delta	Sac. R. at Emmaton	ALL		-	-	-	-	-	-	54	82	11	26	-3	4	-8	-1	-23	-9	-98	-96	-	100	100	-	-	-	-	-
		DROUGHT		-	-	-	-	-	-	-	-	11	98	-6	3	-13	-4	-68	-35	100	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL		-	-	-	-	-	-	-	-	-	-	8	63	-18	20	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT		-	-	-	-	-	-	-	-	-	-	10	-	-33	35	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-1	-2	-1	-1	-1	-1	0	0	1	1	1	1	1	1	1	1	0	0	-1	-1	-2	-2	-2	-2	0	0	
		DROUGHT	-3	-3	-3	-3	-4	-3	-3	-3	-2	-1	0	0	0	1	0	1	0	-1	-2	-2	-4	-4	-5	-5	-2	-2	
	Contra Costa PP #1	ALL	62	30	55	10	88	5	24	-13	-52	-48	-47	-49	-41	-42	-23	-23	-20	-18	-3	-7	35	5	33	17	-3	-14	
		DROUGHT	-	-	-	67	-	50	85	-	-64	-63	-80	-78	-71	-70	-48	-46	-25	-20	33	28	-	60	74	39	-1	-9	
	Banks PP	ALL	71	57	99	54	-	78	-	86	60	57	45	44	41	40	35	34	26	30	33	29	58	39	66	54	59	48	
		DROUGHT	-	-	-	91	-	-	-	-	-	-	-	96	100	96	68	68	36	45	58	48	-	77	-	87	-	85	
	Jones PP	ALL	68	60	95	57	-	92	-	-	92	90	80	78	46	45	36	36	26	36	40	41	58	44	65	56	67	58	
		DROUGHT	-	-	-	91	-	-	-	-	-	-	-	-	-	-	72	70	26	34	65	55	-	76	-	93	-	-	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-44. Period average change in chloride concentrations (mg/L) for Alternative 7 LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 7 LLT	Delta Interior	Moke R. (SF) at Staten Island	ALL	2	2	2	2	1	2	2	2	2	2	3	2	2	2	2	2	2	2	1	1	1	1	1	1	2	2	
				(11%)	(11%)	(12%)	(12%)	(8%)	(9%)	(7%)	(11%)	(7%)	(10%)	(11%)	(12%)	(11%)	(12%)	(9%)	(10%)	(13%)	(14%)	(7%)	(8%)	(8%)	(7%)	(8%)	(7%)	(8%)	(9%)	(10%)
		SJR at Buckley Cove	ALL	-6	-1	-13	-4	-23	5	-38	-9	-25	-8	-23	-8	-5	3	2	10	0	4	-17	-2	-16	4	-12	1	-15	-1	
				(-6%)	(-1%)	(-12%)	(-4%)	(-16%)	(4%)	(-23%)	(-7%)	(-17%)	(-6%)	(-17%)	(-7%)	(-5%)	(3%)	(3%)	(13%)	(0%)	(4%)	(-16%)	(-2%)	(-15%)	(5%)	(-12%)	(1%)	(-13%)	(-1%)	
		Franks Tract	ALL	-43	-4	-146	-66	-146	-109	-68	-58	11	9	32	30	30	29	20	18	5	-3	-40	-13	11	43	-7	3	-28	-10	
				(-23%)	(-2%)	(-63%)	(-43%)	(-70%)	(-63%)	(-51%)	(-47%)	(17%)	(14%)	(85%)	(75%)	(98%)	(89%)	(62%)	(50%)	(13%)	(-5%)	(-31%)	(-13%)	(7%)	(36%)	(-4%)	(2%)	(-24%)	(-10%)	
	Old R. at Rock Slough	ALL	-26	-3	-84	-20	-67	-34	4	14	66	66	78	74	54	54	35	33	35	30	-29	-11	10	36	2	10	7	21		
			(-17%)	(-3%)	(-45%)	(-16%)	(-37%)	(-23%)	(3%)	(11%)	(91%)	(93%)	(159%)	(138%)	(110%)	(107%)	(74%)	(70%)	(89%)	(65%)	(-28%)	(-13%)	(8%)	(36%)	(1%)	(7%)	(6%)	(22%)		
	Western Delta	Sac. R. at Emmaton	ALL	-196	-60	-335	-243	-188	-211	-67	-86	-21	-43	5	-10	15	0	12	-13	-24	-63	83	70	110	63	-21	-54	-52	-54	
				(-34%)	(-14%)	(-61%)	(-53%)	(-61%)	(-64%)	(-52%)	(-58%)	(-30%)	(-46%)	(14%)	(-20%)	(43%)	(0%)	(13%)	(-11%)	(-13%)	(-28%)	(37%)	(29%)	(33%)	(16%)	(-4%)	(-9%)	(-20%)	(-21%)	
		SJR at Antioch	ALL	-707	-260	-1043	-661	-746	-653	-344	-351	-129	-168	-16	-60	18	-25	-10	-65	-102	-181	36	115	191	210	-201	-81	-254	-182	
				(-48%)	(-25%)	(-70%)	(-59%)	(-73%)	(-70%)	(-69%)	(-70%)	(-51%)	(-57%)	(-13%)	(-37%)	(16%)	(-16%)	(-4%)	(-21%)	(-21%)	(-32%)	(4%)	(15%)	(18%)	(20%)	(-14%)	(-6%)	(-34%)	(-27%)	
		Sac. R. at Mallard Island	ALL	-1024	-364	-1358	-806	-1141	-995	-604	-592	-283	-352	-33	-151	83	-47	99	-58	-34	-220	190	298	364	370	-299	-19	-337	-245	
				(-33%)	(-15%)	(-46%)	(-34%)	(-51%)	(-48%)	(-47%)	(-35%)	(-40%)	(-7%)	(-27%)	(16%)	(-7%)	(11%)	(-5%)	(-2%)	(-13%)	(9%)	(15%)	(15%)	(15%)	(15%)	(-10%)	(-1%)	(-19%)	(-15%)	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	1	2	2	3	3	3	0	0	-2	-3	-2	-3	-3	-2	-2	-2	-1	-1	-1	0	0	0	1	1	0	0		
			(7%)	(10%)	(14%)	(16%)	(16%)	(16%)	(2%)	(2%)	(-8%)	(-14%)	(-11%)	(-13%)	(-13%)	(-11%)	(-9%)	(-9%)	(-5%)	(-4%)	(-3%)	(-1%)	(1%)	(3%)	(5%)	(6%)	(-1%)	(-1%)		
	Contra Costa PP #1	ALL	-8	14	-40	-3	-57	-3	-16	12	74	61	81	88	72	75	42	42	39	35	-13	-6	-5	26	9	23	15	30		
			(-5%)	(10%)	(-25%)	(-2%)	(-31%)	(-2%)	(-9%)	(8%)	(68%)	(50%)	(89%)	(106%)	(91%)	(98%)	(62%)	(62%)	(81%)	(68%)	(-15%)	(-7%)	(-4%)	(24%)	(6%)	(18%)	(12%)	(29%)		
	Banks PP	ALL	-98	-86	-117	-83	-129	-103	-103	-88	-79	-77	-61	-59	-69	-67	-61	-60	-48	-54	-15	-9	-9	12	-20	-9	-62	-52		
			(-87%)	(-86%)	(-89%)	(-85%)	(-90%)	(-87%)	(-75%)	(-72%)	(-77%)	(-77%)	(-69%)	(-69%)	(-83%)	(-82%)	(-81%)	(-81%)	(-76%)	(-78%)	(-21%)	(-14%)	(-9%)	(15%)	(-19%)	(-10%)	(-61%)	(-57%)		
	Jones PP	ALL	-95	-88	-115	-85	-134	-112	-120	-103	-103	-101	-101	-99	-74	-73	-62	-62	-49	-62	-3	-4	-3	12	-23	-15	-74	-66		
			(-87%)	(-86%)	(-89%)	(-86%)	(-90%)	(-88%)	(-79%)	(-77%)	(-81%)	(-81%)	(-84%)	(-84%)	(-84%)	(-84%)	(-81%)	(-81%)	(-77%)	(-81%)	(-4%)	(-5%)	(-3%)	(14%)	(-22%)	(-15%)	(-68%)	(-65%)		
	Major Diversions (Pumping Stations)	Jones PP	DROUGHT	-119	-121	-135	-112	-168	-147	-177	-154	-175	-171	-179	-177	-120	-121	-99	-97	-48	-59	-23	-14	-12	20	-4	1	-105	-96	
				(-89%)	(-89%)	(-90%)	(-89%)	(-92%)	(-91%)	(-92%)	(-91%)	(-92%)	(-92%)	(-92%)	(-92%)	(-92%)	(-89%)	(-89%)	(-87%)	(-87%)	(-77%)	(-80%)	(-22%)	(-14%)	(-8%)	(17%)	(-3%)	(1%)	(-72%)	(-71%)

2 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

1 **Table CI-45. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 7 LLT. Calculation of chloride concentrations was**
 3 **based on a mass balance approach.**

Chloride Alt 7 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b			
			Ex. Cond.	No Act. LLT	Alt 7 LLT	Frequency of Criterion/Objective Exceedance (%)			
						Ex. Cond.	No Act. LLT	Alt 7 LLT	
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	19.6	0	0	0	
		DROUGHT	16.8	16.3	20.5	0	0	0	
	SJR at Buckley Cove	ALL	82.9	77.2	79.6	0	0	0	
		DROUGHT	86.5	76.5	82.9	0	0	0	
	Franks Tract	ALL	173.8	146.4	120.3	34	22	16	
		DROUGHT	212.8	190.9	144.8	47	35	25	
	Old R. at Rock Slough	ALL	152.0	130.5	118.3	28	17	11	
		DROUGHT	180.2	161.4	139.6	42	27	18	
	Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	296.2	44	44	37
			DROUGHT	516.4	559.3	439.1	55	60	58
SJR at Antioch		ALL	1087.3	974.2	726.6	66	73	60	
		DROUGHT	1400.6	1345.6	996.4	82	87	75	
Sac. R. at Mallard Island		ALL	2552.0	2411.9	2179.5	85	86	86	
		DROUGHT	3233.9	3123.1	2791.2	100	100	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	16.6	0	0	0	
		DROUGHT	17.7	17.7	22.7	0	0	0	
	Contra Costa PP #1	ALL	146.5	126.9	126.7	24	14	12	
		DROUGHT	176.5	161.3	146.6	37	22	18	
	Banks PP	ALL	123.4	108.5	43.5	4	2	1	
		DROUGHT	143.7	128.0	59.3	7	2	2	
	Jones PP	ALL	116.9	103.4	34.7	1	1	1	
		DROUGHT	132.9	118.9	39.7	0	0	2	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

4

5

- 1 **Table CI-46. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 7 LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride	Location	Period ^a	Period Average Concentration (mg/L)			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b			
			Ex. Cond.	No Act. LLT	Alt 7 LLT	Frequency of Criterion/Objective Exceedance (%)			
						Ex. Cond.	No Act. LLT	Alt 7 LLT	
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18	18	20	0	0	0	
		DROUGHT	19	19	21	0	0	0	
	SJR at Buckley Cove	ALL	116	102	101	0	0	0	
		DROUGHT	155	128	134	0	0	0	
	Franks Tract	ALL	120	102	92	14	8	4	
		DROUGHT	153	140	119	22	15	8	
	Old R. at Rock Slough	ALL	108	94	114	4	3	1	
		DROUGHT	136	125	152	7	5	2	
	Western Delta	Sac. R. at Emmaton	ALL	258	260	206	36	32	31
			DROUGHT	364	406	312	50	55	50
SJR at Antioch		ALL	757	684	502	61	65	52	
		DROUGHT	1002	990	715	80	82	67	
Sac. R. at Mallard Island		ALL	1766	1674	1430	77	83	81	
		DROUGHT	2346	2318	1944	98	98	98	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	19	19	19	0	0	0	
		DROUGHT	19	19	21	0	0	0	
	Contra Costa PP #1	ALL	120	105	135	5	3	1	
		DROUGHT	143	133	166	8	7	2	
	Banks PP	ALL	102	91	39	1	1	0	
		DROUGHT	134	123	50	2	2	0	
	Jones PP	ALL	109	101	35	0	0	0	
		DROUGHT	145	136	40	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 Table CI-47. Alternative 7 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 7 LLT	Moke. R. (SF) at Staten Island	ALL	-2	-2	-2	-2	-1	-1	-1	-2	-1	-1	-1	-2	-1	-1	-1	-1	-3	-3	-2	-2	-2	-2	-2	-2	-2	-2
		DROUGHT	-2	-2	-2	-2	-1	-1	-1	-1	0	-1	-1	-2	-1	-1	-1	-1	-1	-3	-4	-3	-3	-2	-2	-2	-2	-2
	SJR at Buckley Cove	ALL	1	0	0	0	0	-3	1	-1	2	-1	1	-1	2	-1	2	-1	4	-2	7	-1	1	-6	2	-1	2	-1
		DROUGHT	1	-1	1	-1	2	-3	3	-2	2	-1	2	-1	4	-2	4	-2	7	-4	8	-3	-7	-19	0	-4	2	-4
	Franks Tract	ALL	-	-1	-	-	-	-	-	-	2	5	-9	-8	-9	-8	-6	-4	0	3	-	16	-98	-99	-	-	70	25
		DROUGHT	-	-	-	-	-	-	-	-	7	18	-8	-6	-8	-7	-5	0	3	20	-	-	-	-	-	-	-	78
Old R. at Rock Slough	ALL	-	40	-	-	-	-	69	74	-9	-7	-17	-16	-14	-12	-11	-10	-9	-7	49	11	-30	-58	22	-55	34	10	
	DROUGHT	-	-	-	-	-	-	-	-	-8	-3	-21	-18	-20	-18	-18	-16	-6	3	-	82	-	-100	-	-	58	25	
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	76	-	10	29	-2	4	-8	-1	-15	10	73	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	11	-	-3	4	-11	-1	-78	-	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	8	50	-15	39	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	26	-	-11	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-1	-2	-4	-5	-4	-4	-2	-2	0	1	1	2	2	1	2	2	3	4	3	2	2	0	0	0	0	
		DROUGHT	-3	-4	-9	-9	-9	-9	-6	-6	-3	-3	-1	0	0	0	1	2	3	2	3	2	1	1	-1	-1	-2	-2
	Contra Costa PP #1	ALL	-	-35	-	86	-	73	-	71	-8	2	-19	-18	-17	-16	-13	-12	-11	-8	24	11	4	-49	-63	-74	19	0
		DROUGHT	-	-	-	-	-	-	-	-	-5	2	-22	-19	-21	-19	-21	-19	-10	-2	87	56	-	-100	-	-100	41	17
	Banks PP	ALL	-	-	-	-	-	-	100	91	39	42	26	27	36	37	37	39	31	32	27	11	19	-13	51	26	63	46
		DROUGHT	-	-	-	-	-	-	-	-	55	56	33	34	34	35	30	32	26	30	74	41	-	-39	-19	-38	79	56
	Jones PP	ALL	-	-	-	-	-	94	68	62	35	37	36	38	44	45	44	45	33	36	21	7	13	-12	59	34	62	47
		DROUGHT	-	-	-	-	-	-	85	47	47	41	42	42	42	41	42	23	29	65	28	67	-24	38	21	80	60	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

2

3

1 Table CI-48. Alternative 7 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
			Alt 7 LLT																									
Delta Interior	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	0	-1	-1
		DROUGHT	-1	-1	-1	-1	-1	-1	-1	-1	0	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-1	-1
	SJR at Buckley Cove	ALL	4	1	9	3	20	-3	43	8	23	7	21	7	3	-2	-1	-5	0	-3	12	1	11	-2	9	-1	11	0
		DROUGHT	6	-1	15	2	35	-4	-	15	-	28	99	25	13	-3	-4	-14	6	-17	14	-10	16	-17	17	-3	22	-4
	Franks Tract	ALL	69	3	-	66	-	-	59	46	-6	-5	-15	-14	-14	-13	-9	-8	-2	1	33	9	-11	-33	12	-4	22	7
		DROUGHT	-	63	-	-	-	-	-	77	-5	5	-21	-19	-20	-20	-15	-12	-6	7	-	55	-40	-80	-97	-	35	19
	Old R. at Rock Slough	ALL	28	3	-	15	96	33	-4	-11	-37	-37	-39	-38	-27	-27	-17	-17	-17	-14	19	6	-8	-24	-2	-9	-5	-13
		DROUGHT	44	42	-	38	-	-	11	-17	-57	-56	-68	-67	-54	-53	-38	-35	-20	-12	68	29	-13	-50	-36	-17	-14	-21
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	55	83	12	27	-2	5	-7	0	-8	10	38	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	13	-	-4	5	-10	-1	-40	24	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	12	70	-13	27	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	21	-	-21	60	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-1	-1	-1	-1	-1	-1	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
		DROUGHT	-1	-1	-2	-3	-3	-3	-3	-3	-2	-1	-1	0	0	1	0	1	0	0	0	-1	-1	-1	-1	-1	-1	-1
	Contra Costa PP #1	ALL	9	-13	44	2	83	2	24	-13	-52	-48	-50	-53	-42	-43	-23	-23	-19	-18	8	3	5	-19	-8	-19	-11	-21
		DROUGHT	17	6	85	47	-	43	81	97	-63	-62	-81	-79	-68	-67	-46	-45	-25	-19	26	22	75	-43	-35	-48	-21	-28
	Banks PP	ALL	71	57	99	54	-	77	92	70	54	51	37	36	41	40	35	34	26	30	9	5	6	-7	14	6	42	33
		DROUGHT	-	-	-	94	-	-	-	-	-	-	-	98	-	98	72	72	38	47	26	17	13	-20	-5	-13	73	57
	Jones PP	ALL	68	60	95	57	-	91	-	90	84	82	77	75	46	45	36	36	26	36	2	2	2	-8	16	10	52	44
		DROUGHT	-	-	-	91	-	-	-	-	-	-	-	-	-	-	72	70	26	34	16	9	12	-15	3	-1	100	84

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-49. Period average change in chloride concentrations (mg/L) for Alternative 8 LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 8 LLT	Delta Interior	Moke R. (SF) at Staten Island	ALL	5	5	4	4	3	3	2	3	2	3	3	3	3	3	2	3	7	8	8	9	6	6	4	4	4	4
				(43%)	(45%)	(35%)	(33%)	(22%)	(23%)	(10%)	(16%)	(9%)	(14%)	(16%)	(19%)	(16%)	(19%)	(15%)	(18%)	(36%)	(44%)	(45%)	(52%)	(41%)	(41%)	(36%)	(36%)	(26%)	(29%)
		SJR at Buckley Cove	ALL	-2	0	0	0	-1	5	-2	2	-3	1	-2	1	-3	1	-4	1	-7	3	-11	2	-12	1	-5	0	-4	1
				(-3%)	(0%)	(-0%)	(0%)	(-1%)	(7%)	(-3%)	(3%)	(-4%)	(1%)	(-3%)	(2%)	(-4%)	(1%)	(-4%)	(1%)	(-8%)	(4%)	(-12%)	(2%)	(-13%)	(1%)	(-6%)	(-0%)	(-5%)	(2%)
		Franks Tract	ALL	-69	-2	-251	-117	-223	-177	-99	-102	-4	-10	19	15	19	16	10	6	-2	-9	-99	-53	-29	18	-17	-2	-62	-35
				(-24%)	(-1%)	(-66%)	(-47%)	(-75%)	(-70%)	(-63%)	(-64%)	(-6%)	(-15%)	(49%)	(37%)	(49%)	(38%)	(23%)	(12%)	(-3%)	(-14%)	(-52%)	(-36%)	(-12%)	(10%)	(-6%)	(-1%)	(-36%)	(-24%)
	Old R. at Rock Slough	ALL	-66	-24	-198	-88	-167	-123	-67	-70	16	12	35	31	27	23	21	18	15	11	-75	-42	-29	11	-10	1	-42	-20	
			(-27%)	(-12%)	(-64%)	(-44%)	(-65%)	(-58%)	(-44%)	(-45%)	(24%)	(18%)	(72%)	(60%)	(50%)	(42%)	(36%)	(30%)	(29%)	(20%)	(-50%)	(-36%)	(-15%)	(7%)	(-4%)	(0%)	(-27%)	(-15%)	
	Western Delta	Sac. R. at Enmaton	ALL	-226	-23	-468	-334	-235	-285	-76	-110	-23	-49	-2	-16	3	-13	-18	-48	-29	-67	193	189	246	176	8	-20	-52	-50
				(-27%)	(-4%)	(-53%)	(-44%)	(-54%)	(-59%)	(-50%)	(-59%)	(-34%)	(-52%)	(-8%)	(-37%)	(9%)	(-24%)	(-15%)	(-32%)	(-13%)	(-26%)	(59%)	(57%)	(52%)	(32%)	(1%)	(-2%)	(-14%)	(-14%)
		SJR at Antioch	ALL	-976	-317	-1574	-1023	-995	-931	-405	-444	-139	-191	-30	-68	-20	-62	-90	-144	-134	-202	31	189	352	359	-291	-78	-356	-243
				(-44%)	(-20%)	(-64%)	(-54%)	(-68%)	(-66%)	(-67%)	(-69%)	(-52%)	(-60%)	(-27%)	(-45%)	(-14%)	(-34%)	(-25%)	(-35%)	(-23%)	(-31%)	(3%)	(17%)	(24%)	(24%)	(-14%)	(-4%)	(-33%)	(-25%)
Sac. R. at Mallard Island		ALL	-1162	-352	-1649	-1025	-1197	-1134	-579	-588	-268	-350	-67	-148	-33	-120	-51	-169	-49	-165	295	526	508	506	-414	33	-389	-249	
			(-25%)	(-9%)	(-34%)	(-24%)	(-36%)	(-35%)	(-35%)	(-35%)	(-28%)	(-34%)	(-15%)	(-28%)	(-4%)	(-14%)	(-4%)	(-11%)	(-3%)	(-8%)	(10%)	(19%)	(15%)	(15%)	(-10%)	(1%)	(-15%)	(-10%)	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	5	6	12	13	12	12	6	6	0	-2	-2	-3	-3	-2	-4	-4	-7	-6	-8	-6	-5	-3	1	2	0	1	
			(29%)	(40%)	(81%)	(90%)	(89%)	(89%)	(39%)	(38%)	(0%)	(-10%)	(-15%)	(-19%)	(-21%)	(-16%)	(-24%)	(-24%)	(-37%)	(-32%)	(-36%)	(-29%)	(-23%)	(-18%)	(6%)	(10%)	(3%)	(6%)	
	Contra Costa PP #1	ALL	-22	12	-118	-55	-139	-65	-86	-66	13	-4	38	34	34	32	23	21	20	14	-50	-35	-61	-14	-10	5	-30	-10	
			(-9%)	(6%)	(-47%)	(-30%)	(-58%)	(-40%)	(-48%)	(-42%)	(17%)	(-4%)	(71%)	(59%)	(64%)	(56%)	(37%)	(32%)	(35%)	(24%)	(-40%)	(-32%)	(-30%)	(-9%)	(-4%)	(2%)	(-20%)	(-8%)	
	Banks PP	ALL	-159	-142	-196	-137	-178	-143	-119	-114	-63	-67	-50	-53	-64	-66	-66	-68	-57	-58	-26	-5	-52	-16	-71	-54	-88	-73	
			(-96%)	(-96%)	(-97%)	(-95%)	(-94%)	(-93%)	(-85%)	(-85%)	(-77%)	(-78%)	(-74%)	(-75%)	(-91%)	(-91%)	(-91%)	(-91%)	(-85%)	(-85%)	(-25%)	(-6%)	(-35%)	(-14%)	(-42%)	(-36%)	(-71%)	(-67%)	
	Jones PP	ALL	-145	-127	-179	-124	-142	-116	-89	-84	-62	-64	-63	-64	-74	-75	-75	-76	-61	-64	-41	-22	-37	-6	-63	-46	-86	-72	
			(-96%)	(-95%)	(-96%)	(-95%)	(-92%)	(-90%)	(-77%)	(-76%)	(-77%)	(-78%)	(-82%)	(-83%)	(-92%)	(-92%)	(-92%)	(-92%)	(-90%)	(-90%)	(-37%)	(-24%)	(-26%)	(-5%)	(-41%)	(-33%)	(-73%)	(-70%)	
	Major Diversions (Pumping Stations)	Jones PP	DROUGHT	-172	-166	-195	-146	-169	-149	-125	-112	-78	-78	-70	-71	-72	-72	-70	-72	-45	-55	-85	-57	-67	-13	-40	-30	-99	-85
				(-96%)	(-96%)	(-97%)	(-96%)	(-96%)	(-96%)	(-95%)	(-94%)	(-92%)	(-92%)	(-90%)	(-90%)	(-92%)	(-92%)	(-91%)	(-91%)	(-87%)	(-85%)	(-55%)	(-45%)	(-32%)	(-9%)	(-23%)	(-18%)	(-75%)	(-72%)

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3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

- 1 **Table CI-51. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 8 LLT. Calculation of chloride concentrations was**
 3 **based on a mass balance approach.**

Chloride Alt 8 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
			Ex. Cond.	No Act. LLT	Alt 8 LLT	Frequency of Criterion/Objective Exceedance (%)		
						Ex. Cond.	No Act._LLT	Alt 8 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	19.8	0	0	0
		DROUGHT	16.8	16.3	20.7	0	0	0
	SJR at Buckley Cove	ALL	82.9	77.2	78.6	0	0	0
		DROUGHT	86.5	76.5	78.7	0	0	0
	Franks Tract	ALL	173.8	146.4	111.7	34	22	14
		DROUGHT	212.8	190.9	136.2	47	35	22
Old R. at Rock Slough	ALL	152.0	130.5	110.5	28	17	7	
	DROUGHT	180.2	161.4	129.9	42	27	13	
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	316.7	44	44	35
		DROUGHT	516.4	559.3	464.0	55	60	50
	SJR at Antioch	ALL	1087.3	974.2	731.4	66	73	58
		DROUGHT	1400.6	1345.6	999.3	82	87	68
Sac. R. at Mallard Island	ALL	2552.0	2411.9	2163.1	85	86	86	
	DROUGHT	3233.9	3123.1	2753.1	100	100	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	17.6	0	0	0
		DROUGHT	17.7	17.7	25.1	0	0	0
	Contra Costa PP #1	ALL	146.5	126.9	116.7	24	14	9
		DROUGHT	176.5	161.3	132.5	37	22	15
	Banks PP	ALL	123.4	108.5	35.4	4	2	0
		DROUGHT	143.7	128.0	45.2	7	2	0
	Jones PP	ALL	116.9	103.4	31.0	1	1	0
		DROUGHT	132.9	118.9	33.9	0	0	0

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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- 1 **Table CI-52. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 8 LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride	Alt 8 LLT	Location	Period ^a	Period Average Concentration (mg/L)			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
				Ex. Cond.	No Act. LLT	Alt 8 LLT	Frequency of Criterion/Objective Exceedance (%)		
							Ex. Cond.	No Act. LLT	Alt 8 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18	18	20	0	0	0	
		DROUGHT	19	19	21	0	0	0	
	SJR at Buckley Cove	ALL	116	102	103	0	0	0	
		DROUGHT	155	128	135	0	0	0	
	Franks Tract	ALL	120	102	86	14	8	4	
		DROUGHT	153	140	112	22	15	7	
Old R. at Rock Slough	ALL	108	94	110	4	3	0		
	DROUGHT	136	125	145	7	5	0		
Western Delta	Sac. R. at Emmaton	ALL	258	260	220	36	32	30	
		DROUGHT	364	406	327	50	55	43	
	SJR at Antioch	ALL	757	684	506	61	65	49	
		DROUGHT	1002	990	710	80	82	60	
	Sac. R. at Mallard Island	ALL	1766	1674	1412	77	83	78	
DROUGHT		2346	2318	1889	98	98	92		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	19	19	19	0	0	0	
		DROUGHT	19	19	23	0	0	0	
	Contra Costa PP #1	ALL	120	105	130	5	3	1	
		DROUGHT	143	133	156	8	7	0	
	Banks PP	ALL	102	91	37	1	1	0	
		DROUGHT	134	123	47	2	2	0	
	Jones PP	ALL	109	101	34	0	0	0	
		DROUGHT	145	136	35	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

1 Table CI-53. Alternative 8 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change	
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Alt 8 LLT	Moke. R. (SF) at Staten Island	ALL	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-3	-3	-4	-4	-2	-2	-2	-2	-2	-2
		DROUGHT	-2	-2	-2	-2	-1	-1	-1	-1	0	0	-1	-1	0	-1	-1	-1	-1	-3	-4	-4	-4	-3	-2	-2	-2	-2
	SJR at Buckley Cove	ALL	1	0	0	0	1	-3	1	-1	2	-1	1	-1	2	-1	2	-1	4	-2	7	-1	8	0	3	0	3	-1
		DROUGHT	2	0	1	0	3	-3	4	-2	2	-1	2	-1	4	-2	4	-1	7	-4	10	0	15	0	5	0	5	-1
	Franks Tract	ALL	-	8	-	-	-	-	-	-	2	5	-9	-7	-9	-7	-5	-3	1	5	-	51	-	-27	-	-	81	33
		DROUGHT	-	-	-	-	-	-	-	-	7	18	-7	-5	-7	-6	-3	2	7	24	-	-	-	-	-	-	-	93
Old R. at Rock Slough	ALL	-	46	-	-	-	-	69	75	-9	-7	-17	-16	-14	-12	-11	-10	-8	-6	77	32	49	-11	-	-5	42	17	
	DROUGHT	-	-	-	-	-	-	-	-	-7	-3	-20	-18	-19	-18	-18	-15	-4	5	-	-	-	-65	-	-	72	36	
Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	78	-	13	31	1	8	-2	7	14	48	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	19	-	7	15	3	15	41	-	-	-	-	-	-	-	-	-	-	-
	SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	22	69	18	93	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sac. R. at Mallard Island	ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-2	-3	-5	-5	-5	-5	-2	-2	0	1	1	1	1	1	2	2	3	3	3	3	2	1	-1	-1	0	0
		DROUGHT	-4	-5	-11	-12	-12	-12	-8	-8	-4	-4	-1	-1	0	0	0	2	2	2	2	2	2	1	1	-2	-2	-3
	Contra Costa PP #1	ALL	-	-29	-	88	-	76	-	73	-8	3	-19	-17	-17	-16	-12	-11	-10	-8	39	25	-	15	29	-10	29	8
		DROUGHT	-	-	-	-	-	-	-	-	-4	3	-22	-19	-21	-19	-20	-18	-9	0	-	-	-	77	-	100	60	32
	Banks PP	ALL	-	-	-	-	-	-	-	99	38	41	28	29	36	37	38	39	31	32	18	3	52	11	87	55	69	52
		DROUGHT	-	-	-	-	-	-	-	-	54	55	33	34	34	35	31	32	25	29	33	8	-	49	97	50	93	68
	Jones PP	ALL	-	-	-	-	-	96	66	60	37	38	36	37	44	45	44	45	34	36	30	14	34	4	66	41	64	49
		DROUGHT	-	-	-	-	-	-	-	85	47	47	41	42	42	42	41	42	23	29	88	45	-	13	57	37	85	65

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-54. Alternative 8 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT		
Alt 8 LLT	Moke. R. (SF) at Staten Island	ALL	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
		DROUGHT	-1	-1	-1	-1	-1	-1	0	-1	0	0	0	0	-1	0	-1	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
	SJR at Buckley Cove	ALL	3	0	9	2	20	-4	42	7	23	6	21	6	3	-2	-2	-5	0	-3	7	-3	9	-4	6	-3	10	-1	-1	
		DROUGHT	5	-2	15	1	34	-4	-	14	-	27	98	25	12	-3	-4	-15	6	-17	10	-13	20	-14	12	-8	21	-5	-5	
	Franks Tract	ALL	68	3	-	65	-	-	58	46	-5	-5	-14	-14	-13	-12	-8	-7	-1	2	51	24	20	-10	18	1	26	10	10	
		DROUGHT	-	53	-	-	-	-	-	75	-5	5	-20	-18	-18	-18	-13	-9	-3	11	-	-	-	-27	-81	-	42	25	25	
	Old R. at Rock Slough	ALL	28	3	-	16	96	33	-4	-11	-37	-37	-39	-38	-27	-27	-17	-16	-16	-14	29	15	15	-6	2	-6	-2	-11	-11	
		DROUGHT	43	40	-	38	-	-	11	-16	-57	-56	-68	-67	-53	-53	-36	-34	-18	-10	-	56	54	-11	-28	-6	-8	-8	-16	
	Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	55	83	13	29	1	8	-2	5	10	31	57	-	-	-	-	-	-	-	-	-	-
			DROUGHT	-	-	-	-	-	-	-	-	18	-	5	15	1	11	12	-	-	-	-	-	-	-	-	-	-	-	-
		SJR at Antioch	ALL	-	-	-	-	-	-	-	-	-	-	25	90	8	57	-	-	-	-	-	-	-	-	-	-	-	-	-
			DROUGHT	-	-	-	-	-	-	-	-	-	-	74	-	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sac. R. at Mallard Island		ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-1	-1	-1	-2	-2	-2	-1	-1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	-1	-1	0	0	
		DROUGHT	-2	-2	-4	-4	-5	-5	-4	-4	-2	-2	-1	-1	0	0	0	1	0	0	0	-1	-1	-1	-2	-2	-2	-2	-2	
	Contra Costa PP #1	ALL	6	-15	43	2	83	2	23	-14	-53	-48	-50	-52	-42	-43	-22	-22	-19	-17	14	9	37	7	5	-7	-8	-18	-18	
		DROUGHT	16	5	87	48	-	44	82	98	-63	-62	-80	-79	-67	-66	-44	-43	-23	-17	47	42	-	24	-7	-25	-12	-20	-20	
	Banks PP	ALL	71	57	99	54	-	77	99	76	54	52	39	38	41	40	35	34	26	30	-6	-9	11	-3	25	16	44	34	34	
		DROUGHT	-	-	-	91	-	-	-	-	-	99	-	96	-	98	72	72	36	45	-19	-24	47	4	21	11	75	60	60	
	Jones PP	ALL	68	60	95	57	-	91	-	88	85	82	77	74	46	45	36	36	26	36	3	3	10	0	21	15	53	46	46	
		DROUGHT	-	-	-	91	-	-	-	-	-	-	-	-	-	-	72	70	26	34	23	16	39	6	19	15	-	88	88	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 Table CI-56. Period average change in chloride concentrations (mg/L) for Alternative 9 LLT relative to existing conditions and the No Action Alternative LLT. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT		
Alt 9 LLT	Delta Interior	Moke R. (SF) at Staten Island	ALL	0	0	0	0	0	0	-2	-1	-2	-1	-1	0	-1	-1	0	0	0	1	0	0	0	0	0	0	0	0	0
			DROUGHT	0	0	0	0	0	1	-2	-2	-4	-3	-3	-2	-2	-1	-1	0	0	0	0	0	0	1	1	0	1	-1	0
		SJR at Buckley Cove	ALL	-28	-24	-23	-14	-45	-18	-73	-44	-70	-54	-79	-64	-55	-47	-45	-38	-62	-58	-57	-42	-49	-29	-44	-30	-52	-38	
			DROUGHT	-29	-20	-11	5	-21	12	-71	-31	-105	-80	-128	-108	-105	-92	-87	-72	-88	-54	-46	-9	-43	7	-63	-38	-66	-40	
		Franks Tract	ALL	-31	8	-54	26	-34	3	26	37	66	65	70	68	56	54	36	33	44	36	2	29	-10	22	-40	-29	11	29	
			DROUGHT	-7	13	-2	66	3	36	55	83	114	98	122	116	93	92	67	58	71	45	-17	22	-10	40	-13	-40	40	52	
	Old R. at Rock Slough	ALL	-60	-37	-85	-21	-45	-12	8	17	63	64	77	73	41	40	28	27	61	55	25	43	-6	21	-56	-48	4	19		
		DROUGHT	-73	-72	-90	-35	-67	-36	11	36	107	102	134	127	89	86	72	65	73	55	-14	13	-31	12	-63	-77	12	23		
	Western Delta	Sac. R. at Emmaton	ALL	29	165	67	159	133	110	99	80	62	41	30	15	29	14	35	10	38	-1	139	126	112	65	14	-19	65	64	
			DROUGHT	121	272	198	276	259	205	197	135	146	84	48	30	43	24	114	47	142	30	294	235	112	17	123	-70	150	107	
		SJR at Antioch	ALL	-437	10	-376	5	-149	-55	-53	-59	-6	-45	17	-27	19	-25	-20	-75	-22	-101	-102	-23	-191	-172	-394	-274	-143	-70	
			DROUGHT	-326	128	-243	125	-11	119	60	-20	80	-54	46	-10	32	-22	45	-77	59	-124	-35	-11	-259	-270	-197	-388	-62	-50	
Sac. R. at Mallard Island		ALL	-514	146	-376	176	14	160	117	129	117	48	126	8	149	19	136	-21	147	-40	232	340	207	214	-298	-19	5	97		
		DROUGHT	-406	288	-290	334	137	337	293	216	351	104	201	63	184	35	187	-8	230	-7	362	398	128	123	44	-126	118	146		
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	1	2	4	5	8	8	6	6	2	1	0	0	-1	-1	-1	-1	0	0	0	1	1	1	2	2	2	2		
		DROUGHT	3	4	12	13	22	21	20	19	14	14	8	7	3	2	2	0	2	3	4	4	4	4	4	5	5	8	8	
	Contra Costa PP #1	ALL	-56	-34	-55	-17	-65	-11	-33	-5	67	54	76	83	71	74	35	35	54	51	39	47	-3	28	-29	-14	9	24		
		DROUGHT	-73	-68	-66	-50	-92	-37	-48	-51	82	77	132	123	137	132	96	90	76	62	6	11	-57	0	-37	-18	13	23		
	Banks PP	ALL	-13	-1	-1	33	-15	11	-31	-16	-26	-24	-22	-20	-40	-38	-42	-42	-30	-35	-22	-16	-34	-13	-28	-17	-25	-14		
		DROUGHT	0	4	44	68	34	60	-1	17	-24	-18	-41	-37	-75	-72	-73	-73	-30	-41	-20	-10	-62	-23	-39	-30	-24	-13		
	Jones PP	ALL	-84	-77	-106	-76	-126	-103	-126	-109	-100	-98	-89	-87	-63	-62	-52	-52	-38	-51	-53	-55	-74	-59	-80	-72	-83	-75		
		DROUGHT	-109	-111	-125	-102	-158	-137	-167	-144	-165	-161	-170	-167	-110	-111	-89	-87	-38	-49	-83	-74	-123	-91	-109	-104	-120	-112		

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3 ^a ALL: Water years 1976-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index)

- 1 Table CI-57. Period Average chloride concentrations and frequency of exceedance of objectives for
 2 existing conditions, No Action LLT, and Alternative 9 LLT. Calculation of chloride concentrations was
 3 based on a mass balance approach.

Chloride Alt 9 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
			Ex. Cond.	No Act. LLT	Alt 9 LLT	Frequency of Criterion/Objective Exceedance (%)		
						Ex. Cond.	No Act. LLT	Alt 9 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	15.7	15.3	15.4	0	0	0
		DROUGHT	16.8	16.3	16.2	0	0	0
	SJR at Buckley Cove	ALL	82.9	77.2	77.4	0	0	2
		DROUGHT	86.5	76.5	96.9	0	0	5
	Franks Tract	ALL	173.8	146.4	141.3	34	22	16
		DROUGHT	212.8	190.9	201.9	47	35	37
Old R. at Rock Slough	ALL	152.0	130.5	91.8	28	17	0	
	DROUGHT	180.2	161.4	104.5	42	27	0	
Western Delta	Sac. R. at Emmaton	ALL	368.9	366.5	445.1	44	44	49
		DROUGHT	516.4	559.3	680.4	55	60	67
	SJR at Antioch	ALL	1087.3	974.2	846.8	66	73	68
		DROUGHT	1400.6	1345.6	1229.9	82	87	80
Sac. R. at Mallard Island	ALL	2552.0	2411.9	2501.7	85	86	86	
	DROUGHT	3233.9	3123.1	3223.7	100	100	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	17.1	16.6	19.7	0	0	0
		DROUGHT	17.7	17.7	30.9	0	0	0
	Contra Costa PP #1	ALL	146.5	126.9	94.5	24	14	0
		DROUGHT	176.5	161.3	103.3	37	22	0
	Banks PP	ALL	123.4	108.5	97.7	4	2	9
		DROUGHT	143.7	128.0	129.1	7	2	17
	Jones PP	ALL	116.9	103.4	98.1	1	1	9
		DROUGHT	132.9	118.9	129.1	0	0	17

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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- 1 **Table CI-58. Period Average chloride concentrations and frequency of exceedance of objectives for**
 2 **existing conditions, No Action LLT, and Alternative 9 LLT. Calculation of chloride concentrations was**
 3 **based on EC-chloride relationship.**

Chloride	Alt 9 LLT	Location	Period ^a	Period Average Concentration (mg/L)			Lowest Applicable Human Health Criterion/Objective (250 mg/L) ^b		
				Ex. Cond.	No Act. LLT	Alt 9 LLT	Frequency of Criterion/Objective Exceedance (%)		
							Ex. Cond.	No Act. LLT	Alt 9 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	18	18	18	0	0	0	
		DROUGHT	19	19	19	0	0	0	
	SJR at Buckley Cove	ALL	116	102	63	0	0	2	
		DROUGHT	155	128	89	0	0	5	
	Franks Tract	ALL	120	102	131	14	8	10	
		DROUGHT	153	140	192	22	15	28	
Old R. at Rock Slough	ALL	108	94	112	4	3	0		
	DROUGHT	136	125	148	7	5	0		
Western Delta	Sac. R. at Emmaton	ALL	258	260	323	36	32	43	
		DROUGHT	364	406	513	50	55	62	
	SJR at Antioch	ALL	757	684	614	61	65	57	
		DROUGHT	1002	990	940	80	82	77	
	Sac. R. at Mallard Island	ALL	1766	1674	1771	77	83	83	
		DROUGHT	2346	2318	2464	98	98	100	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	19	19	21	0	0	0	
		DROUGHT	19	19	27	0	0	0	
	Contra Costa PP #1	ALL	120	105	129	5	3	0	
		DROUGHT	143	133	156	8	7	0	
	Banks PP	ALL	102	91	77	1	1	4	
		DROUGHT	134	123	110	2	2	12	
	Jones PP	ALL	109	101	26	0	0	0	
		DROUGHT	145	136	24	0	0	0	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

^b State secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

4

1 Table CI-59. Alternative 9 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on a mass balance approach.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change		
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	
Alt 9 LLT	Moke. R. (SF) at Staten Island	ALL	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	-1	-1	0	0	0	0
		DROUGHT	-1	-1	0	0	-1	-1	1	1	3	2	2	1	1	1	1	1	1	0	-1	-1	-1	-1	-1	-1	-1	-1	0
	SJR at Buckley Cove	ALL	-11	-12	-29	-29	-23	-26	-5	-7	8	6	14	12	20	17	24	21	25	18	15	6	8	0	-3	-5	3	0	
		DROUGHT	-29	-30	-61	-61	-57	-59	-28	-32	3	-1	19	15	28	21	34	27	30	16	2	-7	-7	-18	-8	-13	-6	-12	
	Franks Tract	ALL	-	93	-	-	-	-	29	33	-15	-12	-16	-15	-16	-15	-15	-13	-18	-15	57	-13	-	2	-	-	43	5	
		DROUGHT	-	-	-	-	-	-	22	-13	-25	-17	-22	-20	-19	-18	-21	-17	-30	-18	-	-	100	-	100	-	-	29	-19
	Old R. at Rock Slough	ALL	-	-	-	-	-	-	66	71	-9	-7	-17	-15	-14	-13	-13	-12	-17	-15	31	-2	-	34	-	-	61	32	
		DROUGHT	-	-	-	-	-	-	-	96	-8	-4	-20	-18	-22	-21	-23	-21	-22	-13	-	38	-	92	-	-	-	64	
	Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	-	100	100	-28	-17	-10	-4	-15	-8	-38	-20	100	-	-	-	-	-	-	-	-
			DROUGHT	-	-	-	-	-	-	-	100	-	-85	-72	-17	-11	-23	-14	100	-	-	-	-	-	-	-	-	-	-
SJR at Antioch		ALL	-	-	-	-	-	-	-	-	-	-	0	39	-5	55	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-4	72	-3	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sac. R. at Mallard Island		ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-1	-2	-6	-6	-7	-7	-5	-5	-1	-1	0	1	1	1	1	1	2	2	2	1	1	0	-1	-1	-1	-1	
		DROUGHT	-4	-5	-14	-14	-18	-18	-13	-13	-7	-7	-3	-3	-2	-1	-1	1	1	0	-1	-2	-2	-2	-4	-4	-6	-6	
	Contra Costa PP #1	ALL	-	-	-	-	-	-	84	-	75	-7	3	-18	-16	-17	-16	-13	-12	-16	-14	13	1	-	37	-	-	50	26
		DROUGHT	-	-	-	-	-	-	-	-	-6	1	-21	-19	-23	-21	-24	-22	-21	-13	84	53	-	-	-	-	-	99	65
	Banks PP	ALL	25	5	5	-53	35	-14	24	18	8	10	5	7	14	15	18	19	14	15	23	7	54	13	55	29	20	8	
		DROUGHT	3	-7	-100	-100	-100	-100	-1	-18	4	5	6	7	15	17	18	20	8	11	35	10	-	38	-	66	14	-1	
	Jones PP	ALL	7	-9	-25	-59	-15	-33	1	-3	5	6	9	10	20	20	24	24	15	17	32	16	42	11	33	12	14	4	
		DROUGHT	-24	-30	-100	-100	-100	-100	-32	-39	0	-1	13	14	24	25	30	31	7	13	46	13	-	20	52	33	3	-8	

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

2

3

1 Table CI-60. Alternative 9 use of assimilative capacity available under existing conditions and No Action LLT relative to the 250 mg/L secondary MCL. Calculation of chloride concentrations was based on EC-chloride relationship.

Chloride	Location	Period ^a	OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		Annual Avg. Change			
			Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT		
			Alt 9 LLT																											
Delta Interior	Moke. R. (SF) at Staten Island	ALL	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		DROUGHT	0	0	0	0	0	0	1	1	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SJR at Buckley Cove	ALL	19	15	16	9	41	13	83	38	66	44	71	51	37	30	26	21	41	38	40	27	34	18	30	19	39	26	39	26
		DROUGHT	22	14	10	-4	26	-10	-	39	-	-	-	-	-	93	69	51	74	36	34	5	33	-4	54	27	70	33	70	33
	Franks Tract	ALL	51	-8	-	-27	81	-4	-23	-29	-35	-35	-33	-32	-26	-25	-16	-15	-21	-18	-2	-19	11	-17	67	42	-8	-20	-8	-20
		DROUGHT	33	-32	-	-100	-	-100	-79	-85	-64	-61	-58	-57	-42	-42	-30	-28	-34	-25	44	-29	40	-53	78	-	-41	-48	-41	-48
	Old R. at Rock Slough	ALL	62	31	-	16	64	12	-7	-14	-36	-36	-39	-37	-21	-20	-14	-13	-29	-27	-17	-26	5	-14	58	46	-3	-12	-3	-12
		DROUGHT	-	-	-	39	-	67	-14	-35	-66	-65	-72	-71	-46	-45	-35	-32	-35	-28	16	-11	52	-12	-	-	-11	-19	-11	-19
	Western Delta	Sac. R. at Emmaton	ALL	-	-	-	-	-	-	-81	-77	-35	-26	-14	-8	-14	-7	-22	-7	-58	4	-	-	-	-	-	-	-	-	-
			DROUGHT	-	-	-	-	-	-	-100	-	-100	-100	-23	-16	-20	-12	-87	-73	-100	-	-	-	-	-	-	-	-	-	-
SJR at Antioch		ALL	-	-	-	-	-	-	-	-	-	-	-13	32	-14	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-52	30	-30	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sac. R. at Mallard Island		ALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		DROUGHT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	-1	-1	-2	-2	-3	-4	-2	-2	-1	0	0	0	1	0	0	0	0	0	0	0	0	-1	-1	-1	-1	-1	-1	
		DROUGHT	-1	-2	-5	-5	-9	-9	-8	-8	-6	-6	-3	-3	-1	-1	-1	0	-1	-1	-2	-2	-2	-2	-2	-2	-2	-4	-3	-4
	Contra Costa PP #1	ALL	61	30	60	14	95	9	50	5	-47	-42	-48	-50	-42	-43	-19	-19	-27	-26	-24	-27	3	-20	27	12	-7	-17	-7	-17
		DROUGHT	-	-	-	65	-	48	-	-	-58	-57	-78	-76	-78	-78	-50	-49	-37	-33	-5	-8	-	-1	47	18	-12	-19	-12	-19
	Banks PP	ALL	9	1	1	-22	14	-9	28	13	18	16	13	12	24	22	24	24	16	19	12	9	23	7	20	11	17	9	17	9
		DROUGHT	0	-4	-44	-56	-49	-63	1	-18	22	16	35	31	62	59	51	51	17	25	14	6	65	17	34	23	21	10	21	10
	Jones PP	ALL	60	52	88	51	-	84	-	95	81	79	68	66	39	38	30	30	20	29	32	33	50	36	56	48	59	51	59	51
		DROUGHT	93	98	-	82	-	-	-	-	-	-	-	-	95	97	65	63	20	28	58	49	-	68	93	85	-	98	-	98

^a ALL: Water years 1975-1991 represent the 16-year period modeled using DSM2. DROUGHT: Represents a 5 consecutive year (water years 1987-1991) drought period consisting of dry and critical water year types (as defined by the Sacramento Valley 40-30-30 water year hydrologic classification index).

NOTES:
 -- Positive values indicate that implementation of the Alternative increases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality improves under the Alternative, relative to Existing Conditions or the No Action Alternative). Negative values indicate that implementation of the Alternative decreases assimilative capacity available under Existing Conditions or the No Action Alternative (i.e., water quality degradation occurs under the Alternative, relative to Existing Conditions or the No Action Alternative). Values of -100% represent instances where all available assimilative capacity is used under the Alternative, and therefore concentrations are at or above the criteria.
 -- Regulatory objective is the state secondary maximum contaminant level (MCL) incorporated by reference in the Region 2 and 5 Basin Plans.

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1 **Table CI-61. Monthly Martinez Chloride Concentrations ($\mu\text{g/L}$) Used in Assessment**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean (mg/L)	6502	5026	3757	4575	5254	5162	6661	6994	7966	8492	9414	8025
Minimum (mg/L)	8	27	11	8	8	188	938	3810	3000	2200	4990	219
Maximum (mg/L)	12200	12300	11200	11200	9710	9970	10800	10500	11000	11100	12500	12600
75th Percentile (mg/L)	9855	8520	6375	6900	7868	7915	8505	8635	9670	9975	11000	10900
99th Percentile (mg/L)	12125	12125	11075	11070	9643	9805	10644	10474	10922	11074	12370	12574
Data Source	BDAT	BDAT	BDAT	BDAT	BDAT	BDAT	BDAT	BDAT	BDAT	BDAT	BDAT	BDAT
Station(s)	Suisun Bay at Bulls Head near Martinez											
Date Range	1980 - 2007											
ND Replaced with RL	No											
Data Omitted	None											
No. of Data Points	26	26	26	27	26	26	27	27	27	27	27	27

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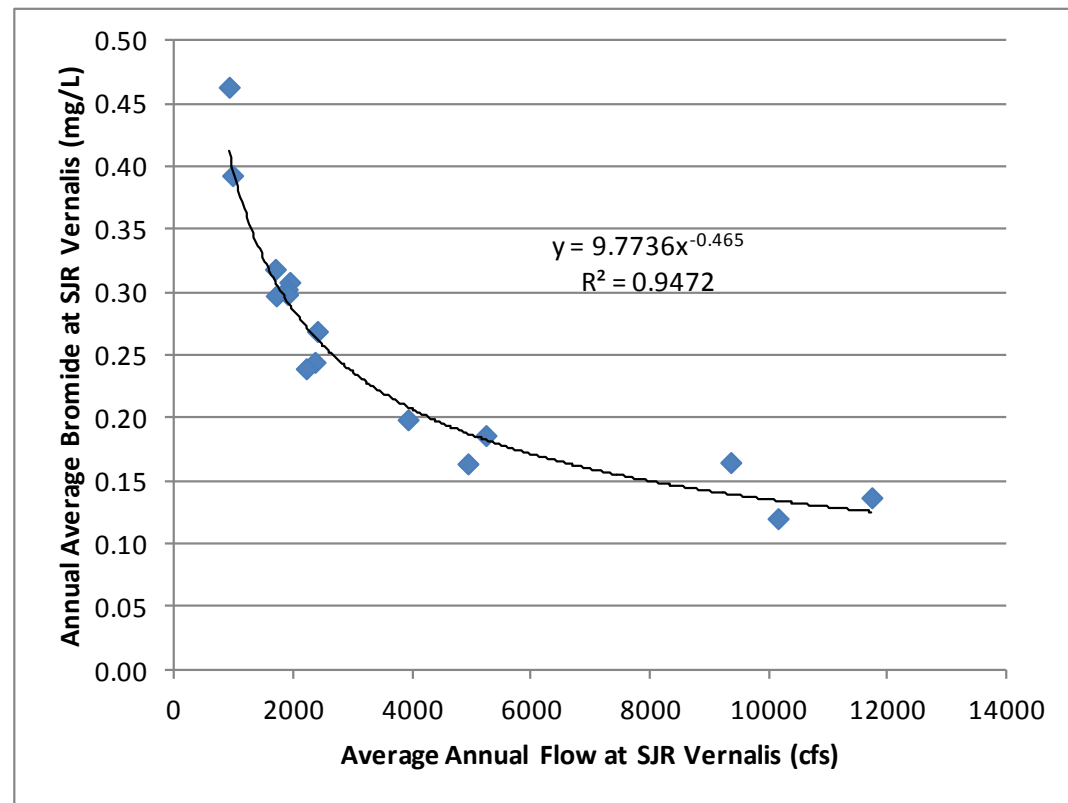
1 **Table CI-62. Flow-Chloride Concentration Regression for San Joaquin River at Vernalis – Data Used in Assessment and Results**

Baselines Flows (Average all Years)			$Cl^- = B_1(\text{annual flow}^{B_2})$	
EC	NT	LLT	B_1	B_2
4237	4187	3987	3357.2	-0.473

Baselines Concentrations (Average All Years)		
EC	NT	LLT
64.622	64.986	66.508

Alternative	Flow (cfs)		Concentration (mg/L)	% Change in Flow		Change in Concentration (mg/L)		% Change in Concentration	
	LLT	LLT	LLT	Alt - EC	Alt - LLT	Alt - EC	Alt - LLT	Alt - EC	Alt - LLT
NA	3987	67	-5.9%		1.9		2.9%		
1	3994	66	-5.7%	0.2%	1.8	-0.1	2.8%	-0.1%	
2	3985	67	-5.9%	-0.1%	1.9	0.0	2.9%	0.0%	
3	3993	66	-5.8%	0.2%	1.8	0.0	2.8%	-0.1%	
4 H1	3988	66	-5.9%	0.0%	1.9	0.0	2.9%	0.0%	
4 H2	3991	66	-5.8%	0.1%	1.9	0.0	2.9%	0.0%	
4 H3	3987	67	-5.9%	0.0%	1.9	0.0	2.9%	0.0%	
4 H4	3992	66	-5.8%	0.1%	1.8	0.0	2.9%	-0.1%	
5	3990	66	-5.8%	0.1%	1.9	0.0	2.9%	0.0%	
6	3989	66	-5.9%	0.1%	1.9	0.0	2.9%	0.0%	
7	3987	67	-5.9%	0.0%	1.9	0.0	2.9%	0.0%	
8	3989	66	-5.9%	0.1%	1.9	0.0	2.9%	0.0%	
9	3992	66	-5.8%	0.1%	1.8	0.0	2.9%	-0.1%	

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- 1 **Table CI-63. Number of days Bay-Delta Water Quality Control Plan 250 mg/L objective exceeded at**
 2 **Contra Costa Canal Pumping Plant #1 for existing conditions, No Action Alternative LLT, and**
 3 **Alternatives 1–9**

Scenario	# of Days Standards are applicable	# of Days Violated	% of Days Violated
Ex. Cond.	5842	369	6.32
No Act. NT	5842	273	4.67
No Act. LLT	5842	268	4.59
Alt 1 LLT	5842	194	3.32
Alt 2 LLT	5842	190	3.25
Alt 3 LLT	5842	225	3.85
Alt 4 LLT Scn H1	5842	214	3.66
Alt 4 LLT Scn H2	5842	172	2.94
Alt 4 LLT Scn H3	5842	167	2.86
Alt 4 LLT Scn H4	5842	151	2.58
Alt 5 LLT	5842	171	2.93
Alt 6 LLT	5842	0	0.00
Alt 7 LLT	5842	53	0.91
Alt 8 LLT	5842	40	0.68
Alt 9 LLT	5842	18	0.31

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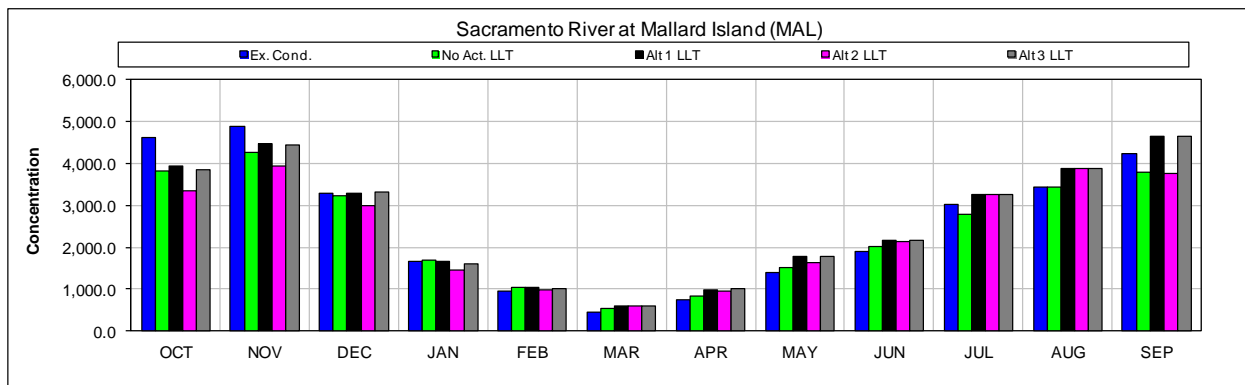
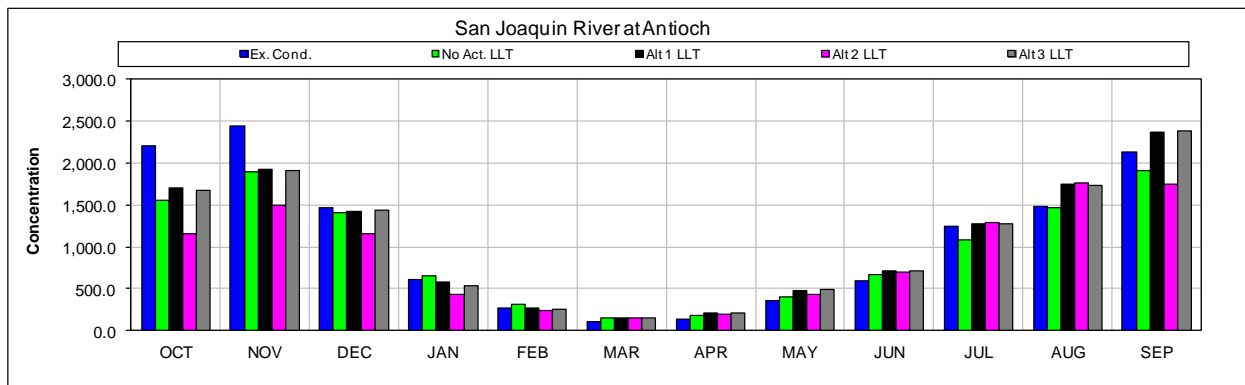
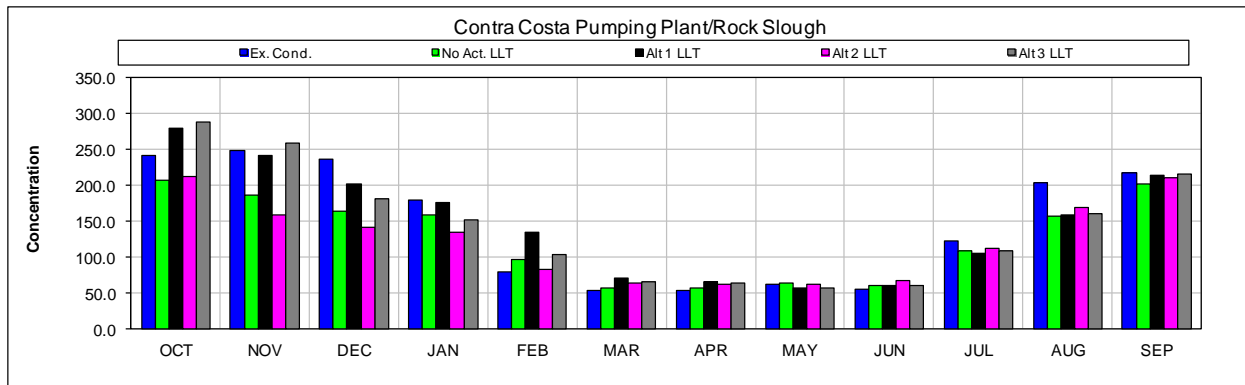
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- 1 **Table CI-64. Number of years Bay-Delta Water Quality Control Plan 150 mg/L objective exceeded**
 2 **Contra Costa Canal Pumping Plant #1 for existing conditions, No Action Alternative LLT, and**
 3 **Alternatives 1–9.**

Scenario	Total number of Years	# of Years when standards are violated	% of Years when standards are violated
Ex. Cond.	16	1	6.25
No Act. NT	16	0	0.00
No Act. LLT	16	1	6.25
Alt 1 LLT	16	2	12.50
Alt 2 LLT	16	3	18.75
Alt 3 LLT	16	2	12.50
Alt 4 LLT Scn H1	16	2	12.50
Alt 4 LLT Scn H2	16	2	12.50
Alt 4 LLT Scn H3	16	2	12.50
Alt 4 LLT Scn H4	16	2	12.50
Alt 5 LLT	16	2	12.50
Alt 6 LLT	16	2	12.50
Alt 7 LLT	16	4	25.00
Alt 8 LLT	16	3	18.75
Alt 9 LLT	16	3	18.75

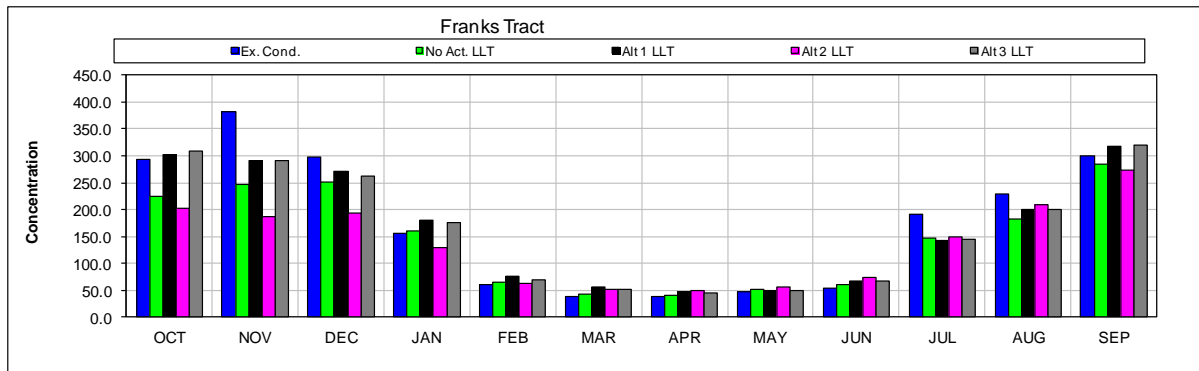
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1 **Figure CI-1. Long-term average estimated chloride concentrations at Contra Costa Pumping Plant, San**
 2 **Joaquin River at Antioch, and Sacramento River at Mallard Island for existing conditions, No Action**
 3 **LLT, and Alternatives 1–3 (mg/L).**

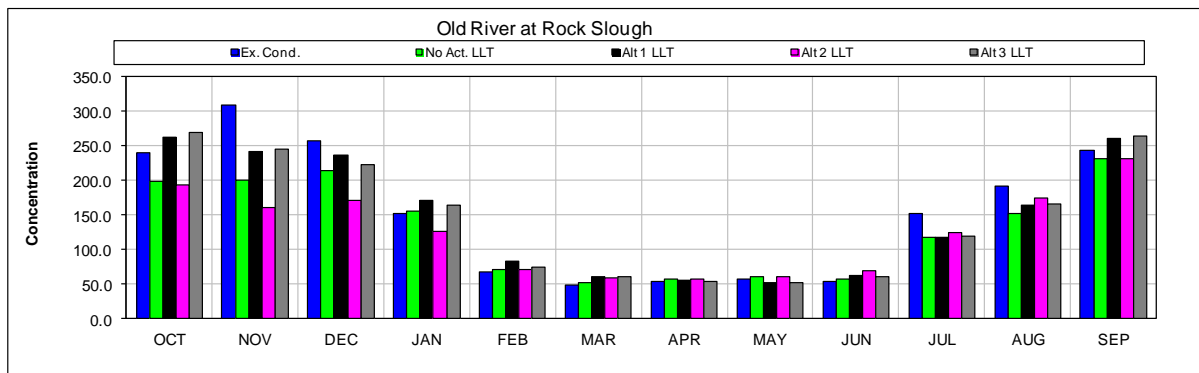


1 **Figure CI-2. Long-term average estimated chloride concentrations at Franks Tract, Old River at Rock**
 2 **Slough, Banks Pumping Plant, and Old River at Tracy Road for existing conditions and No Action LLT,**
 3 **and Alternatives 1–3 (mg/L).**

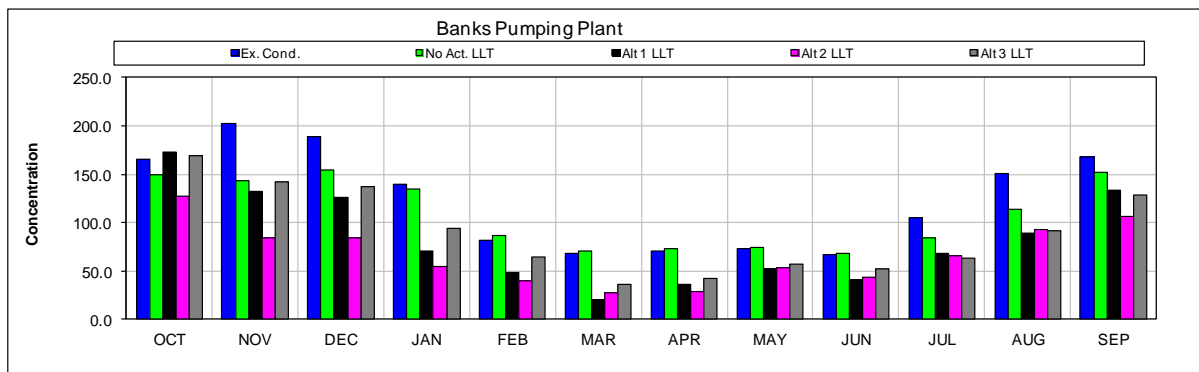
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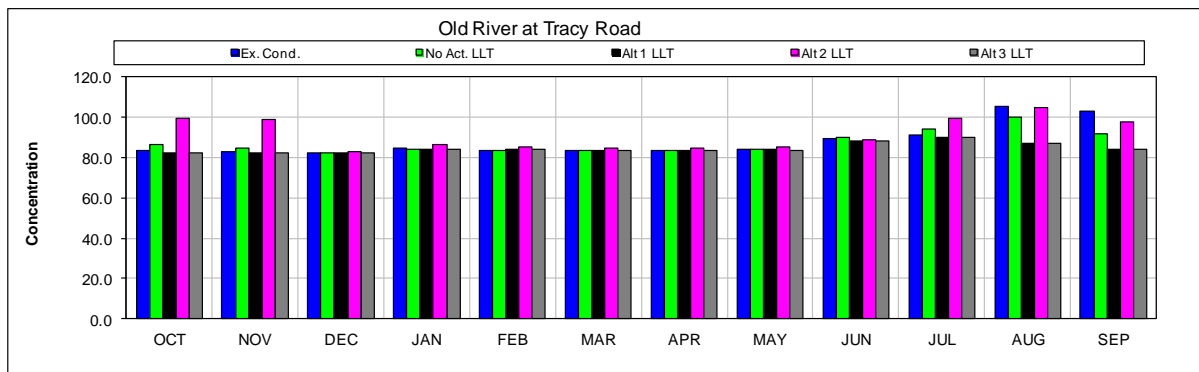
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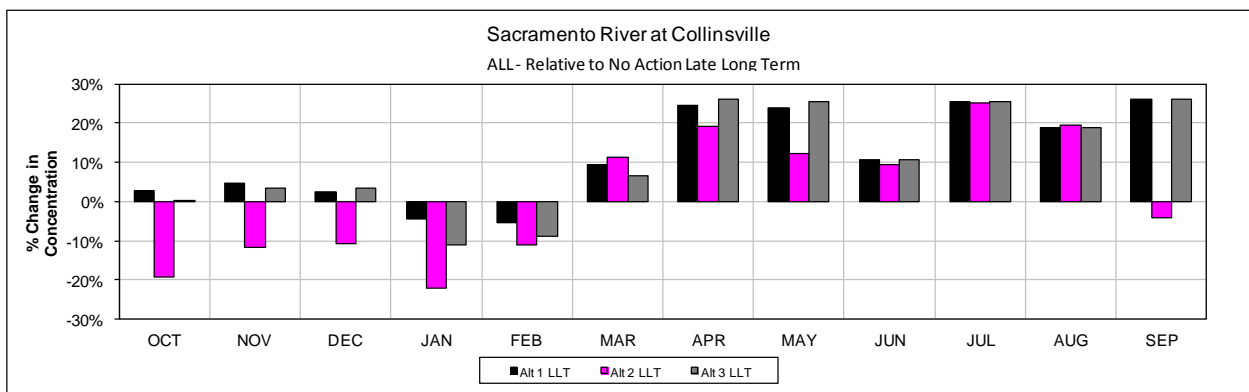
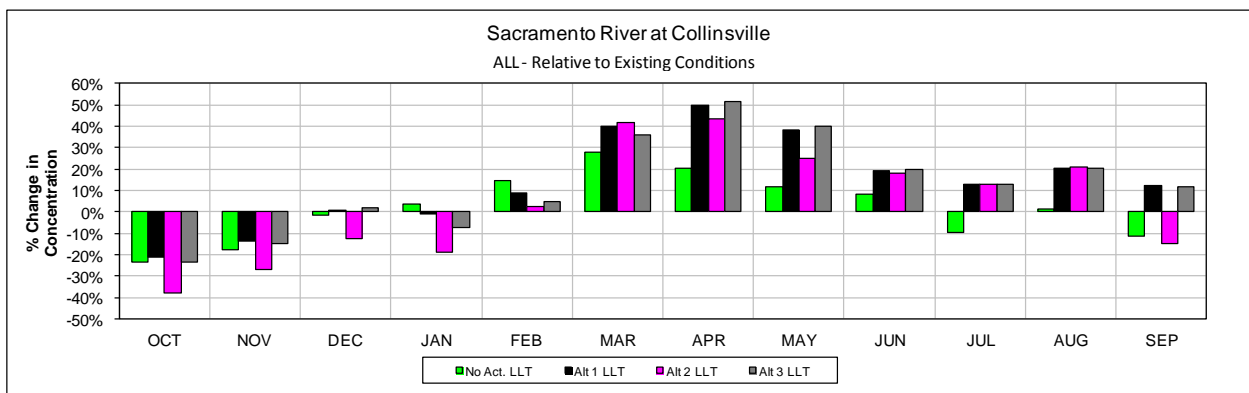
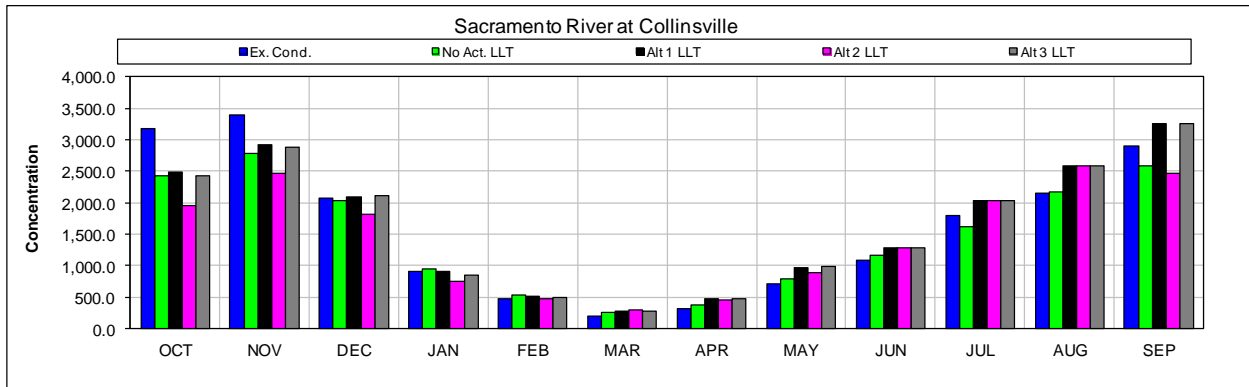
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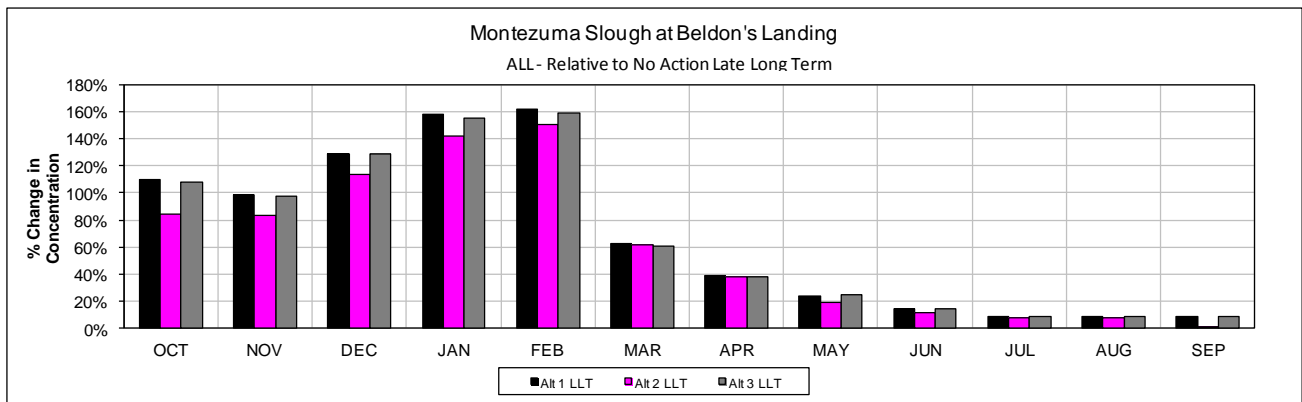
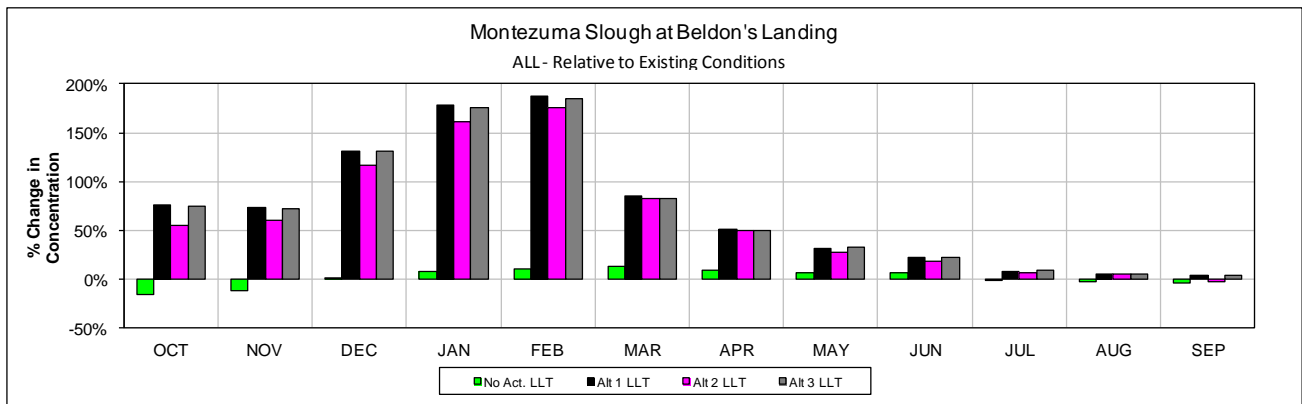
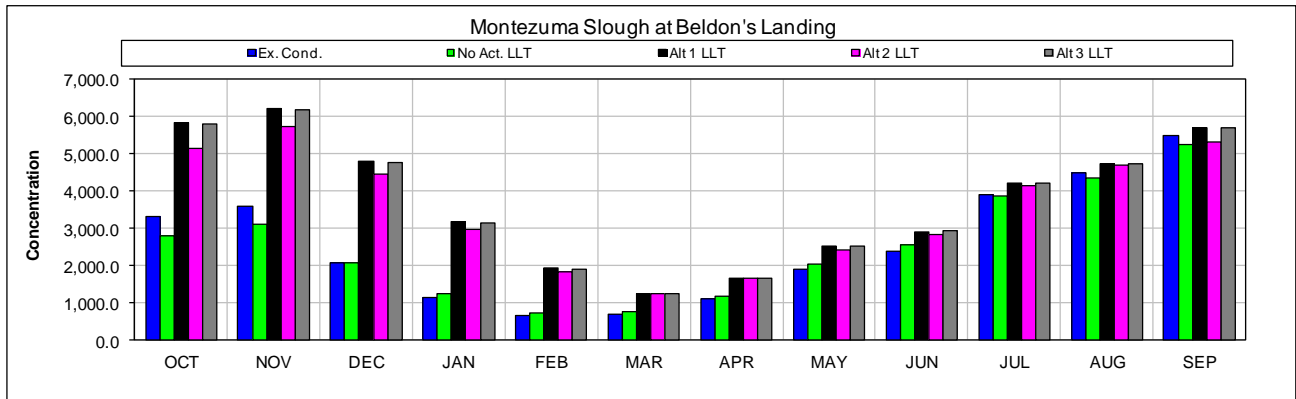


1 **Figure CI-3. Long-term average estimated chloride concentrations at Sacramento River at Collinsville,**
 2 **and change relative to existing conditions and No Action LLT, for Alternatives 1–3 (mg/L).**

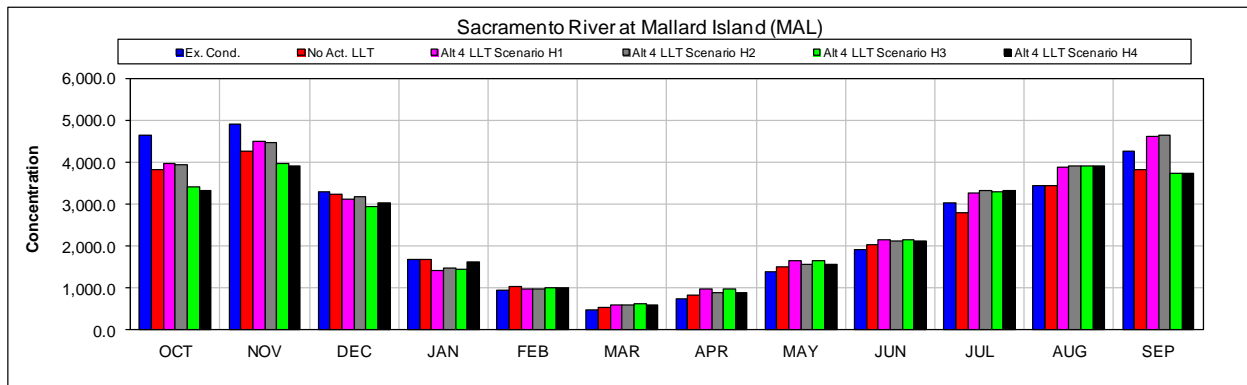
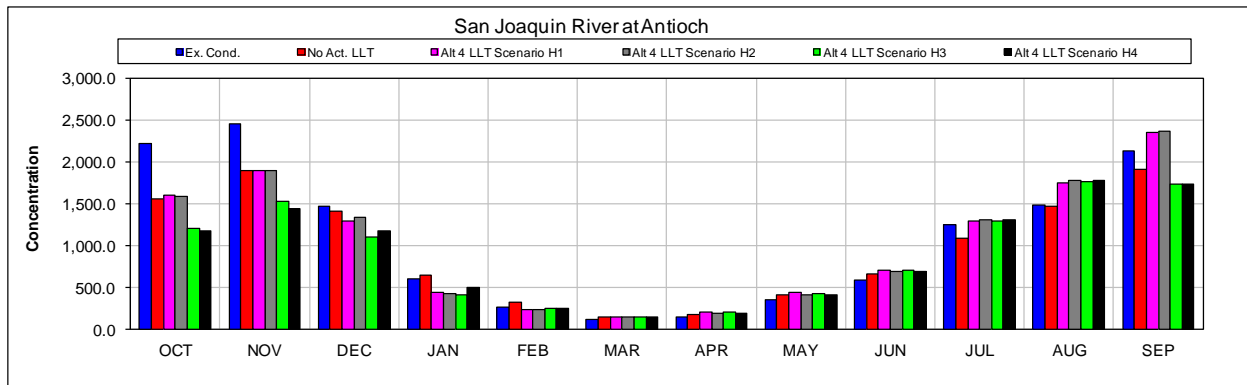
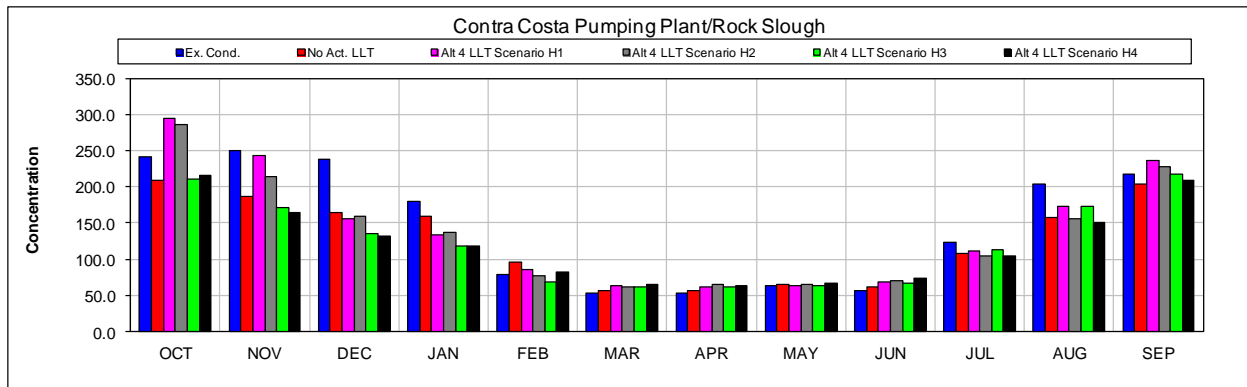


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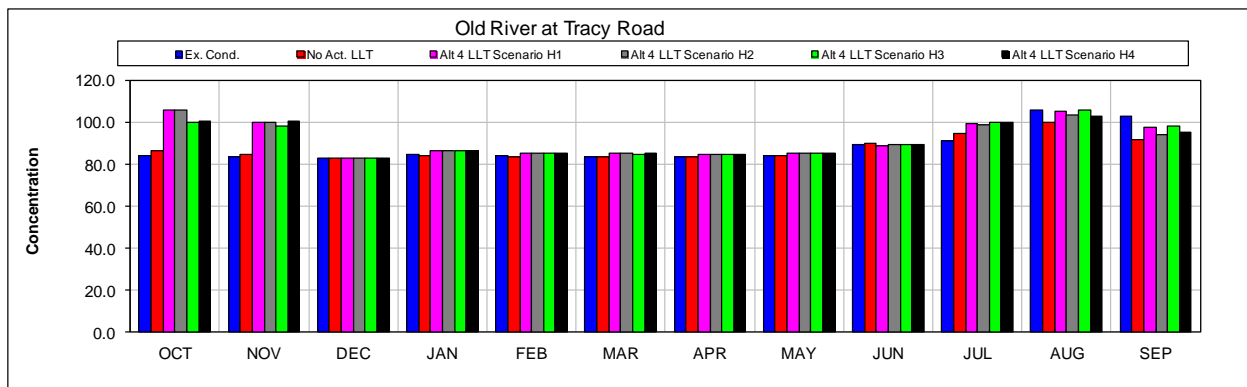
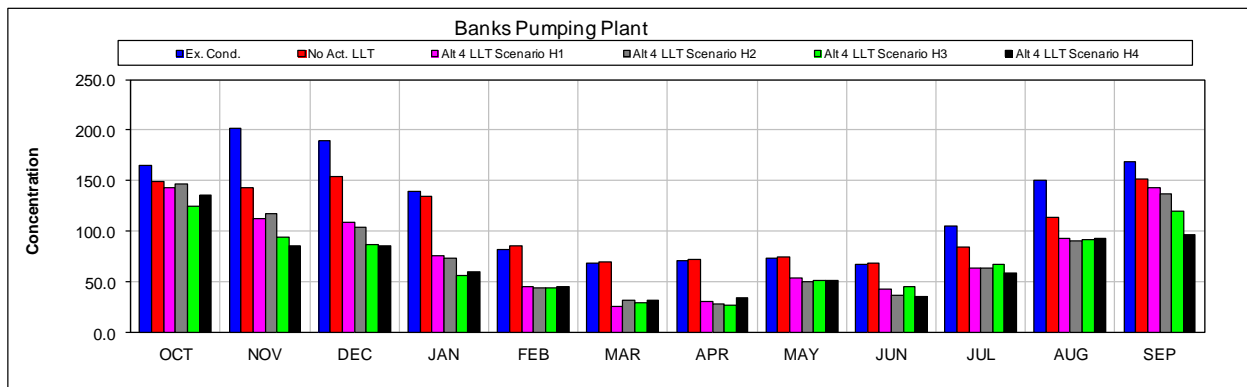
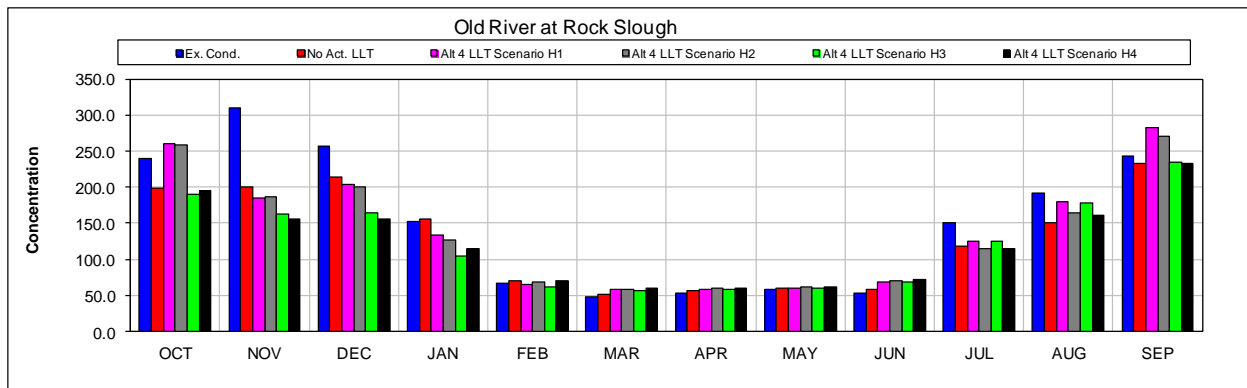
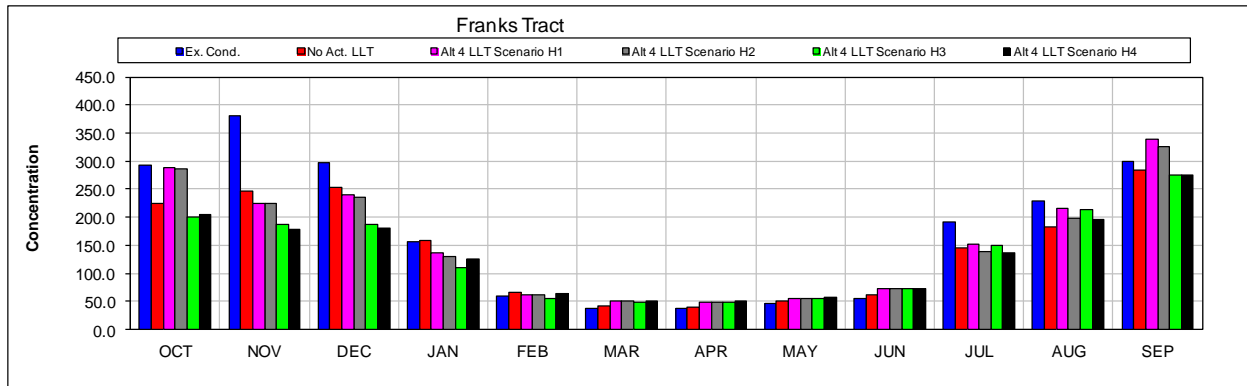
1 **Figure CI-4. Long-term average estimated chloride concentrations at Montezuma Slough at Beldon's**
 2 **Landing, and change relative to existing conditions and No Action LLT, for Alternatives 1–3 (mg/L).**



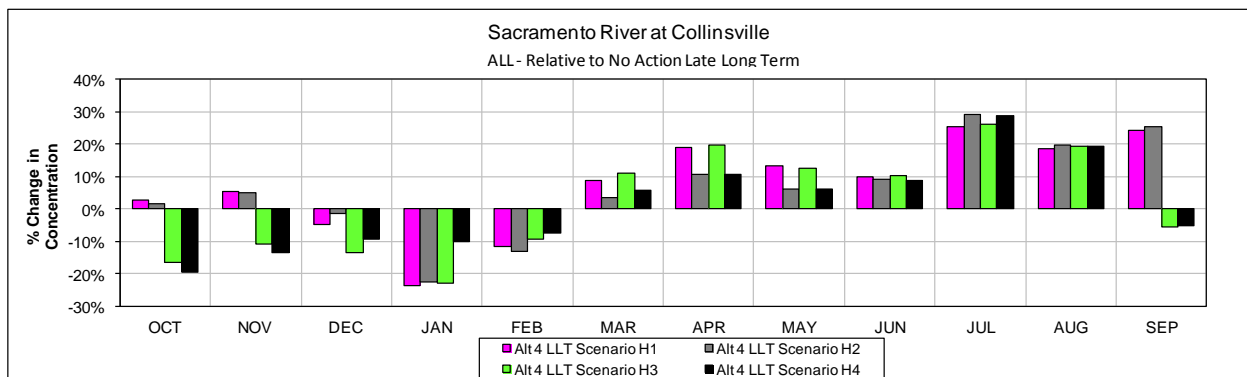
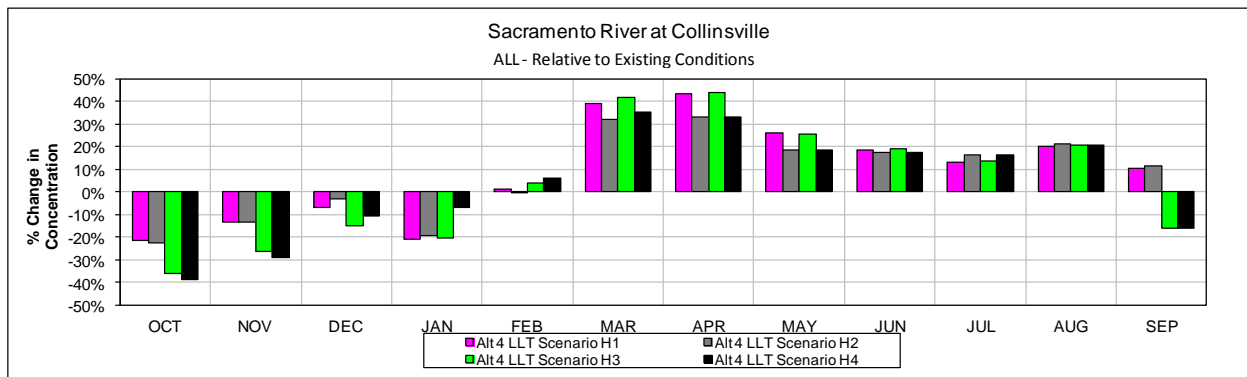
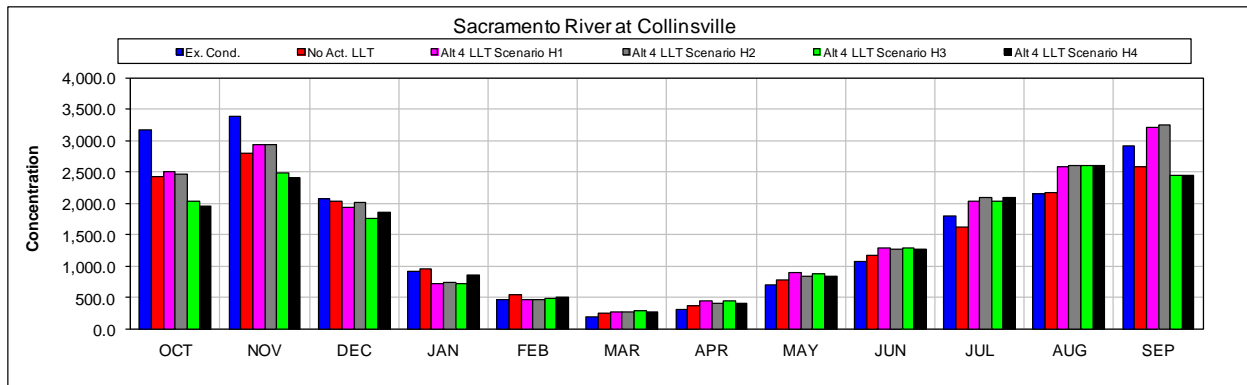
1 **Figure CI-5. Long-term average estimated chloride concentrations at Contra Costa Pumping Plant, San**
 2 **Joaquin River at Antioch, and Sacramento River at Mallard Island for existing conditions, No Action**
 3 **LLT, and Alternative 4 Scenarios H1–H4 (mg/L).**



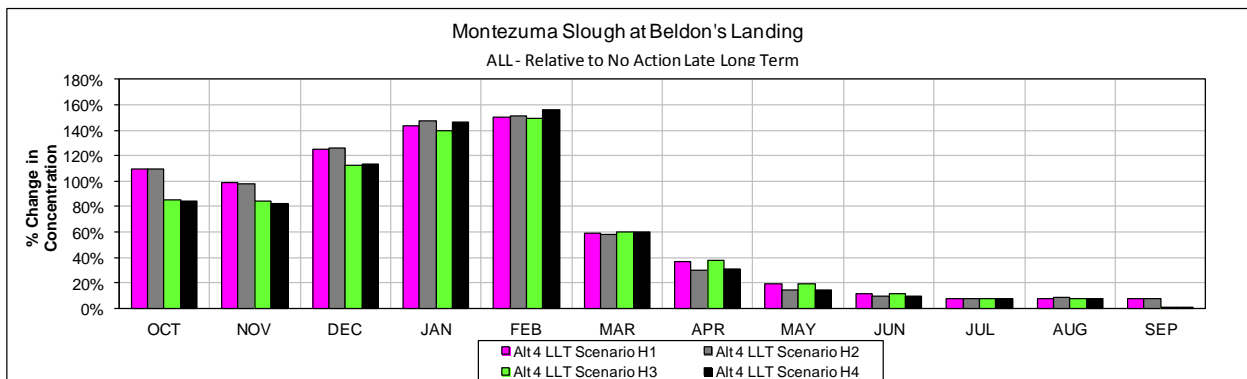
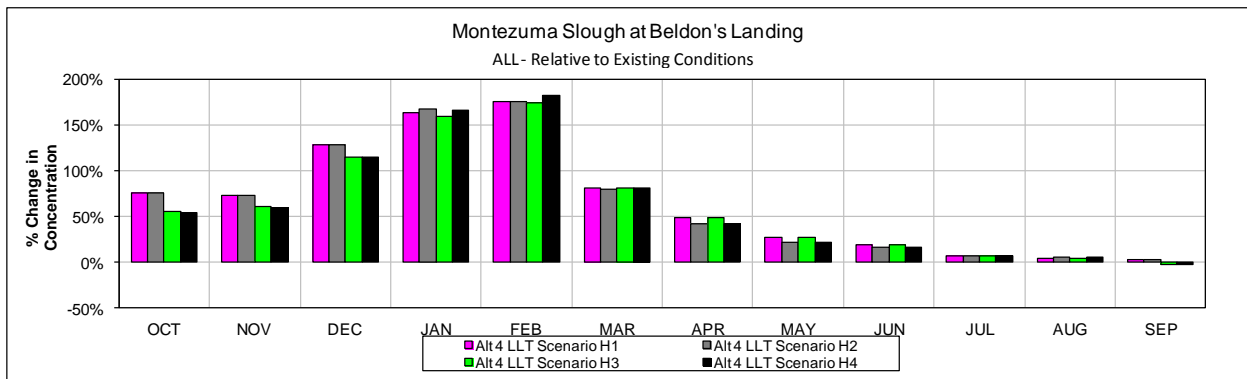
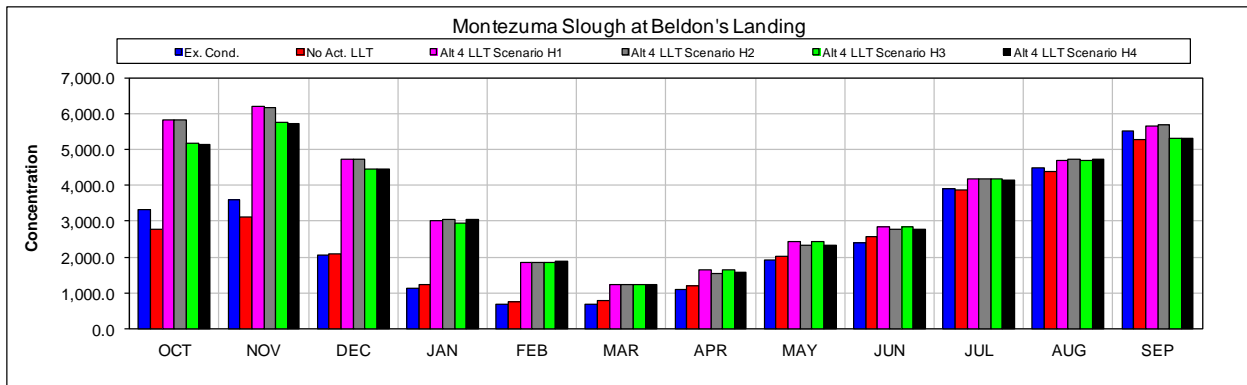
1 **Figure CI-6. Long-term average estimated chloride concentrations at Franks Tract, Old River at Rock Slough, Banks Pumping Plant, and Old River at Tracy Road for existing conditions, No Action LLT, and**
 2 **Alternative 4 Scenarios H1–H4 (mg/L).**
 3



1 **Figure CI-7. Long-term average estimated chloride concentrations at Sacramento River at Collinsville,**
 2 **and change relative to existing conditions and No Action LLT, for Alternative 4 Scenarios H1–H4**
 3 **(mg/L).**

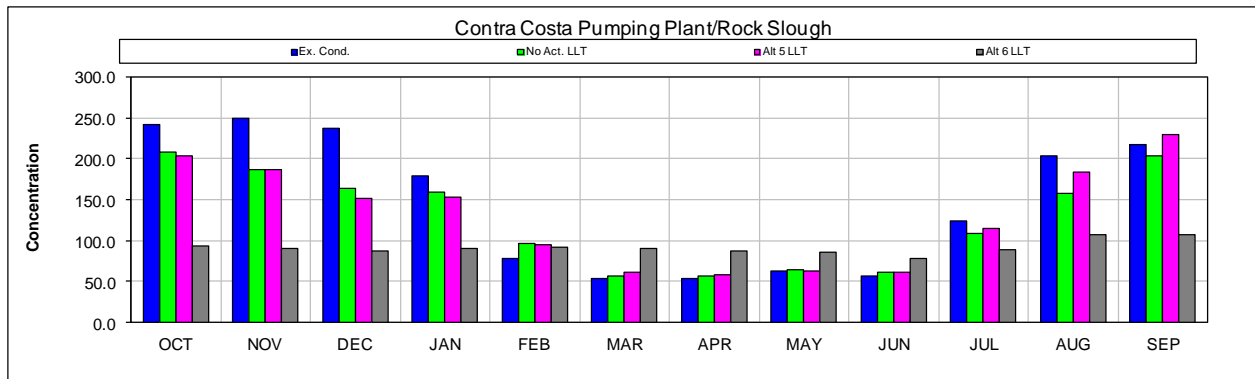


1 **Figure CI-8. Long-term average estimated chloride concentrations at Montezuma Slough at Beldon's**
 2 **Landing, and change relative to existing conditions and No Action LLT, for Alternative 4 Scenarios H1–**
 3 **H4 (mg/L).**

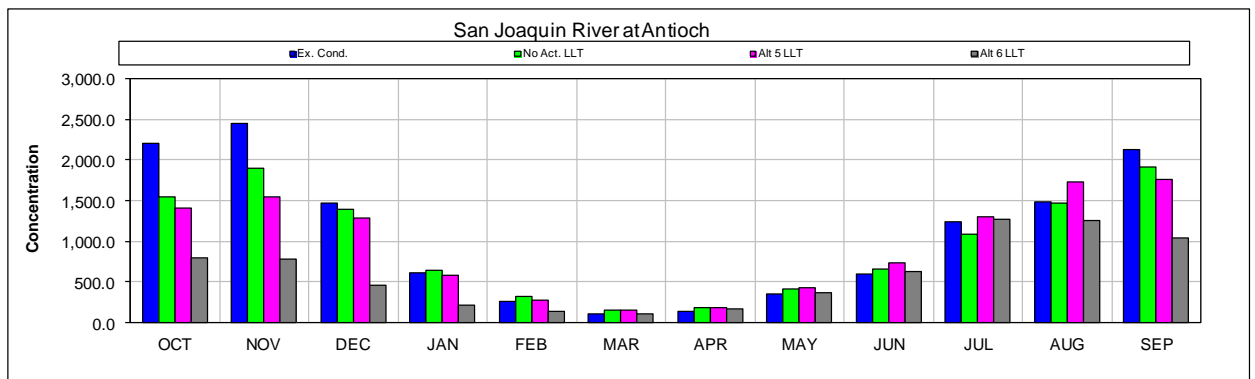


1 **Figure CI-9. Long-term average estimated chloride concentrations at Contra Costa Pumping Plant, San**
 2 **Joaquin River at Antioch, and Sacramento River at Mallard Island for existing conditions, No Action**
 3 **LLT, and Alternatives 5 and 6 (mg/L).**

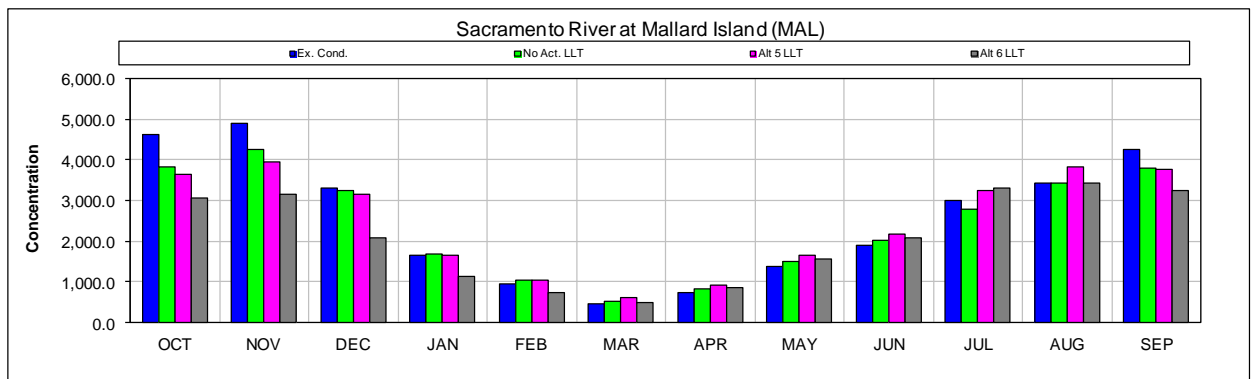
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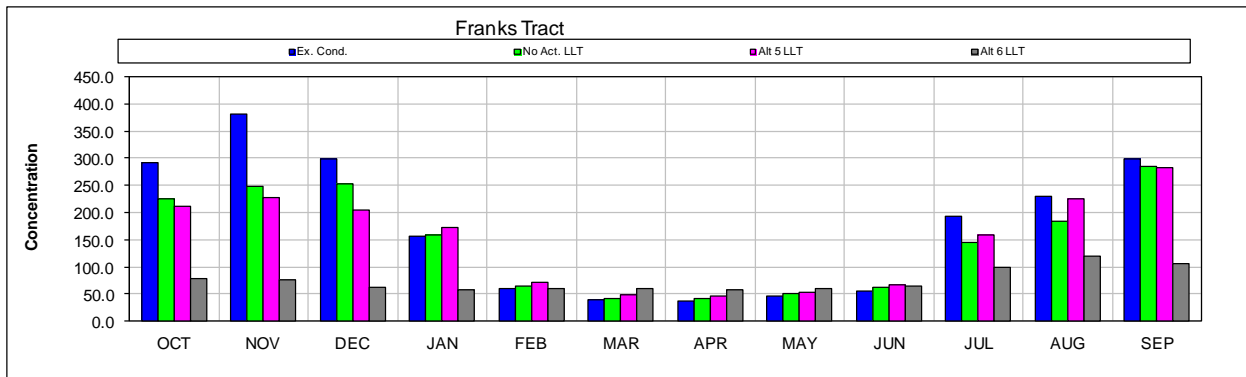
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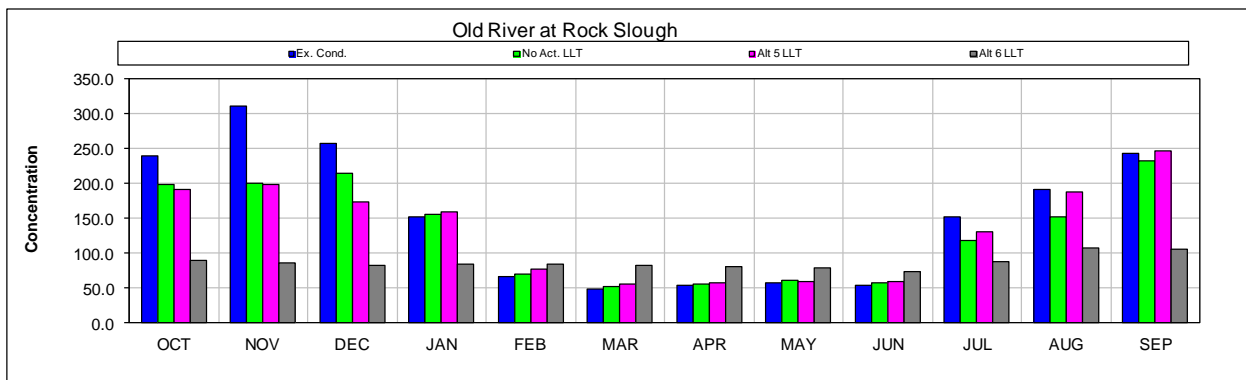
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1 **Figure CI-10. Long-term average estimated chloride concentrations at Franks Tract, Old River at Rock**
 2 **Slough, Banks Pumping Plant, and Old River at Tracy Road for existing conditions, No Action LLT, and**
 3 **Alternatives 5 and 6 (mg/L).**

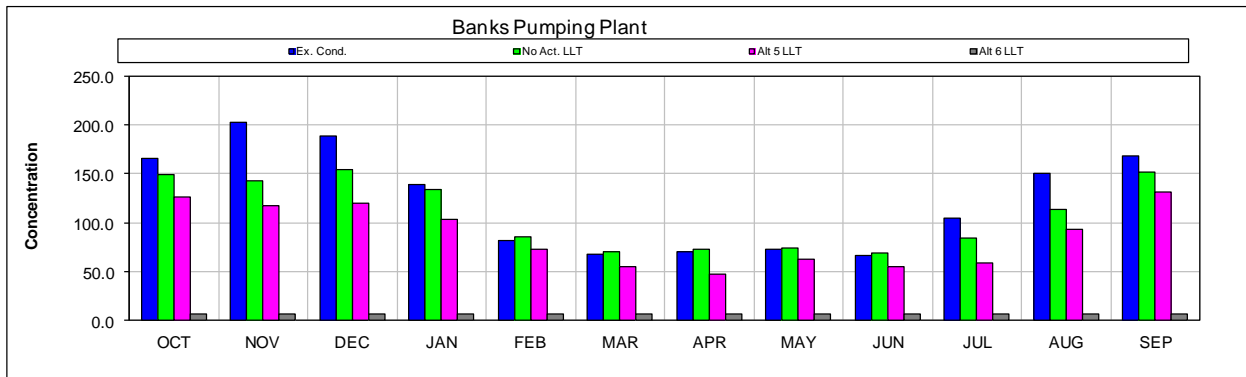
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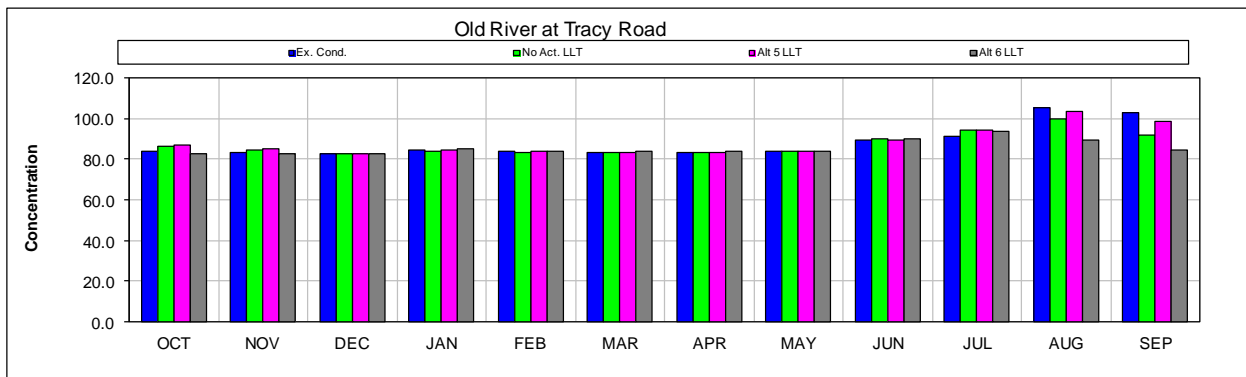
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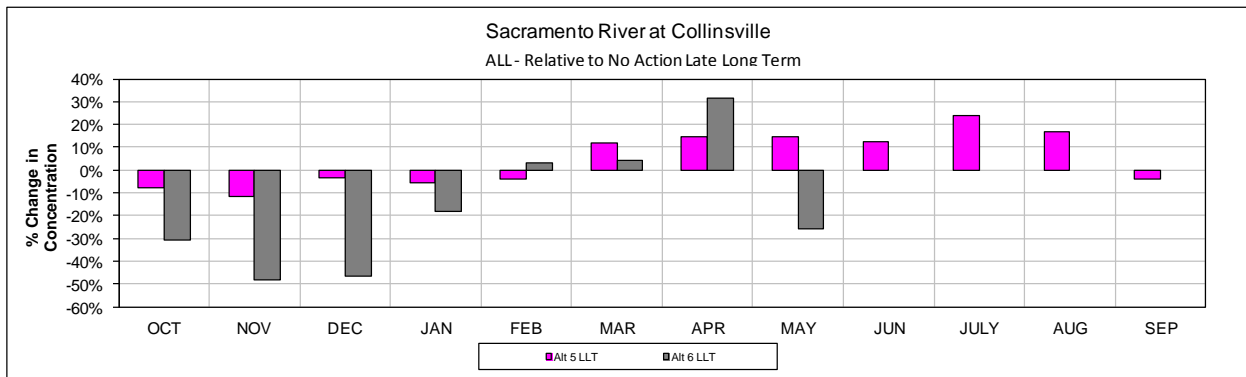
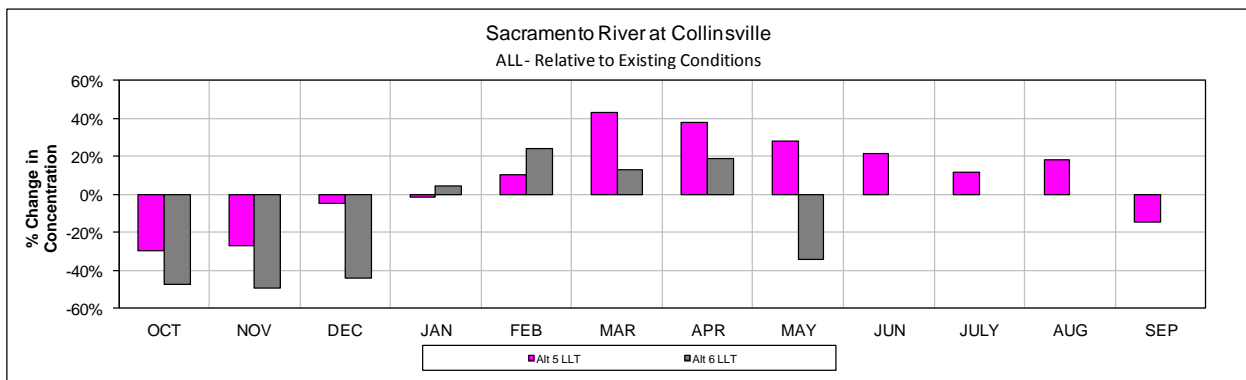
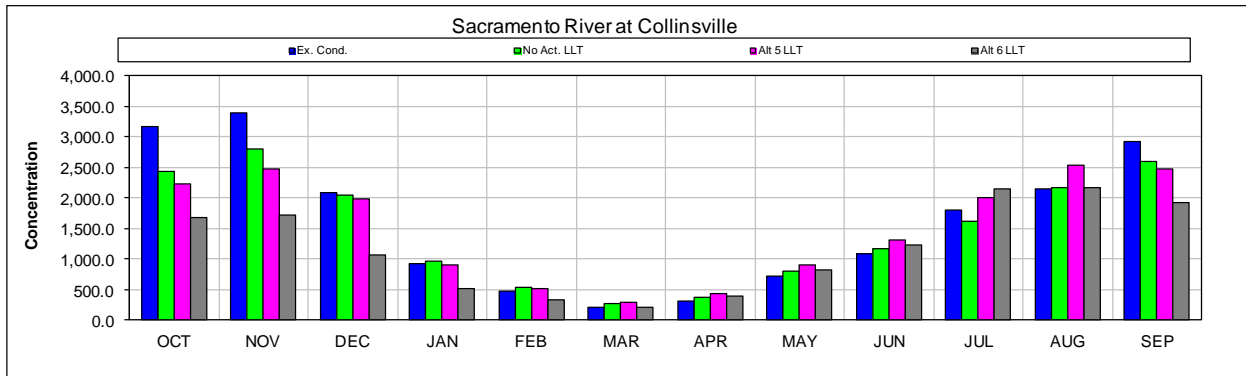


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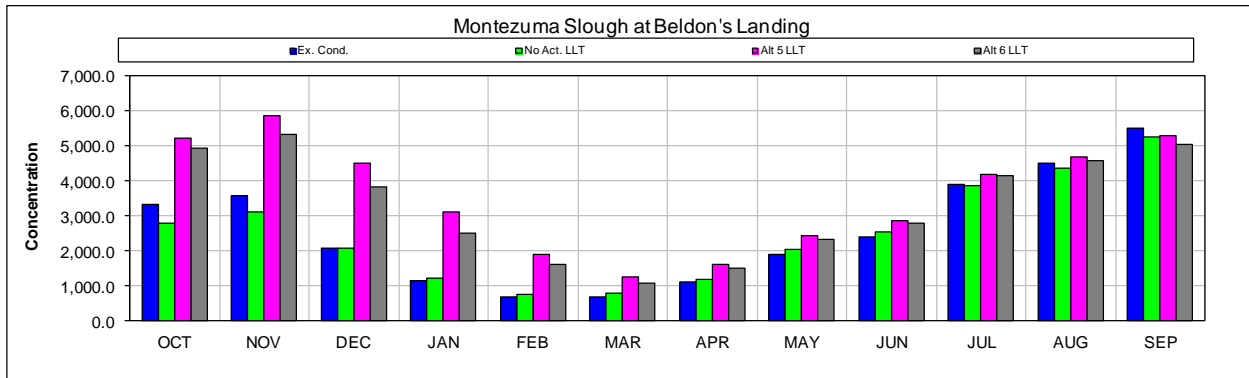
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1 **Figure CI-11. Long-term average estimated chloride concentrations at Sacramento River at Collinsville,**
 2 **and change relative to existing conditions and No Action LLT, for Alternatives 5 and 6 (mg/L).**

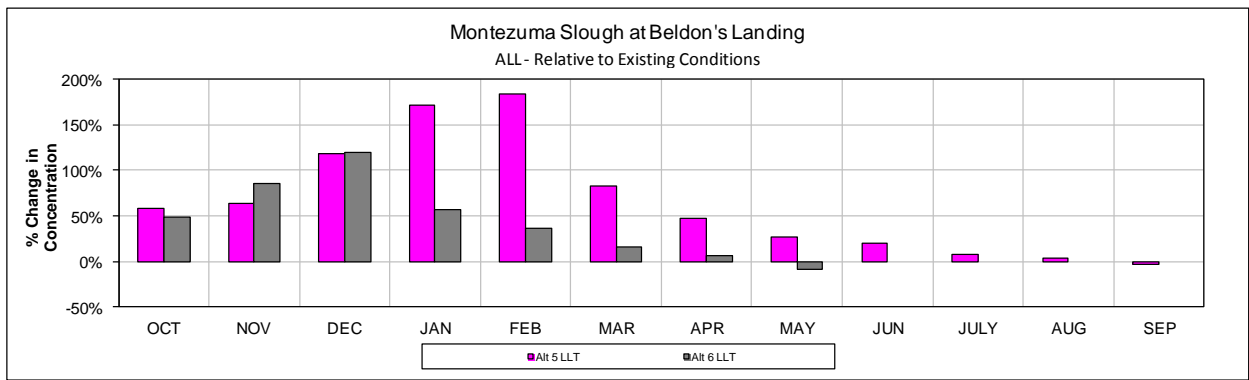


1 **Figure CI-12. Long-term average estimated chloride concentrations at Montezuma Slough at Beldon's**
 2 **Landing, and change relative to existing conditions and No Action LLT, for Alternatives 5 and 6 (mg/L).**

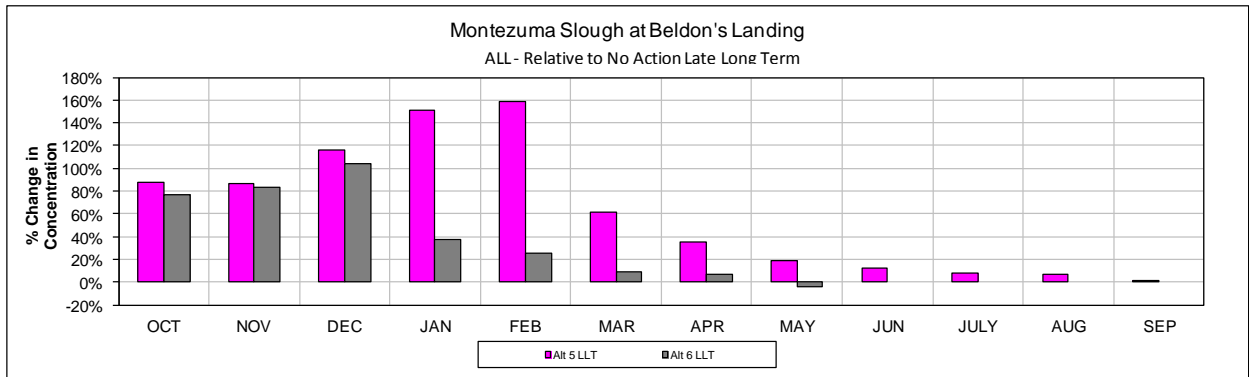
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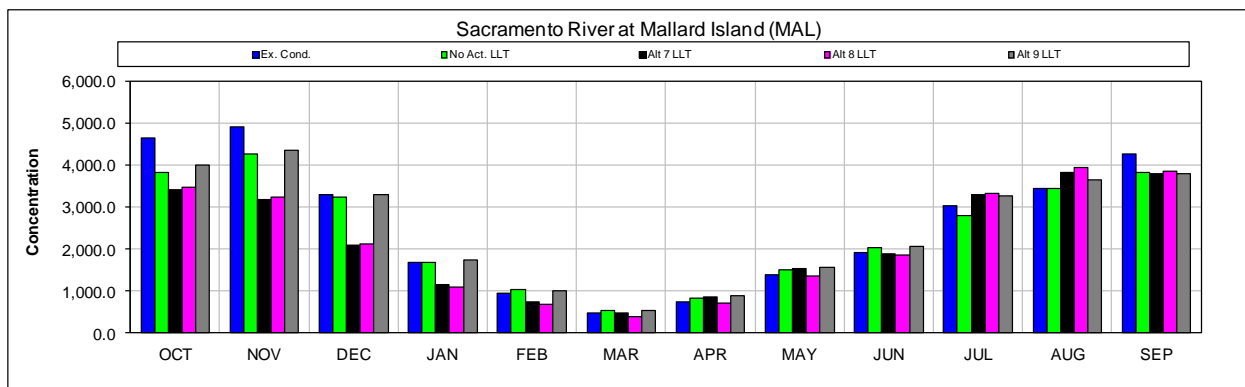
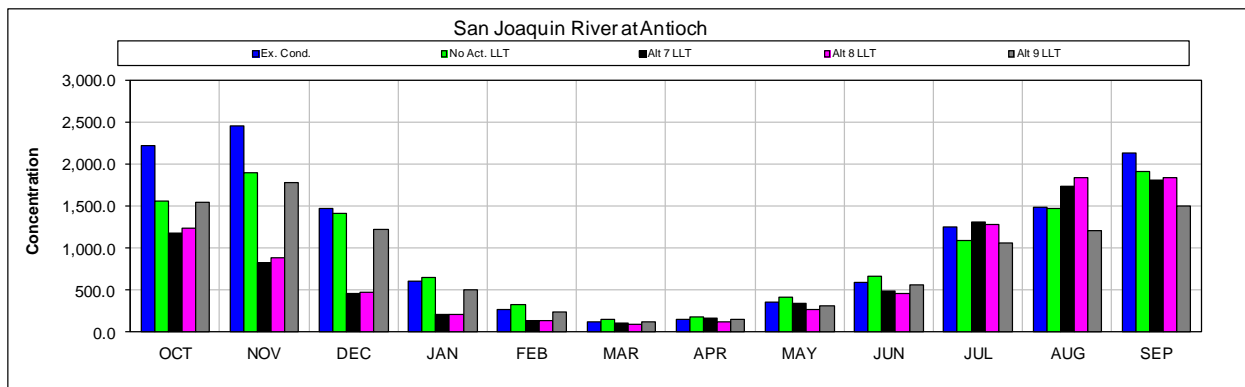
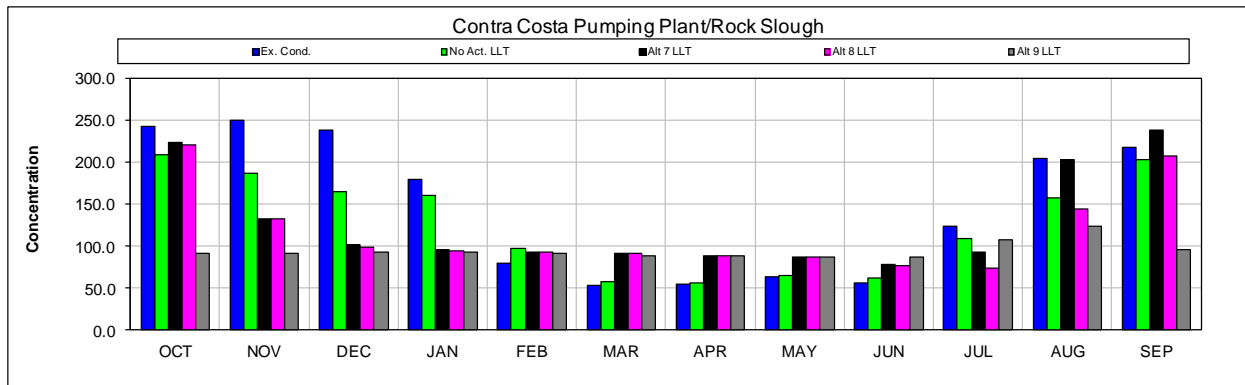
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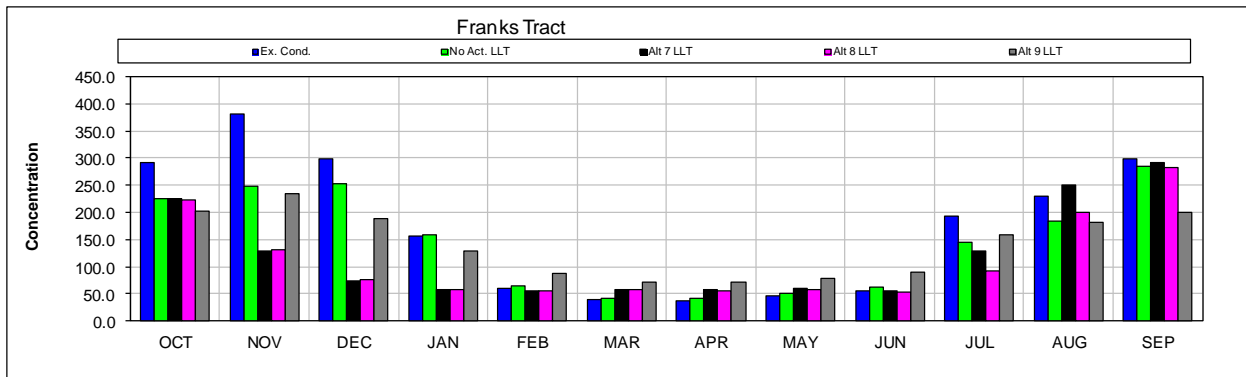
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1 **Figure CI-13. Long-term average estimated chloride concentrations at Contra Costa Pumping Plant, San Joaquin River at Antioch, and Sacramento River at Mallard Island for existing conditions, No**
 2 **Action LLT, and Alternatives 7–9 (mg/L).**
 3

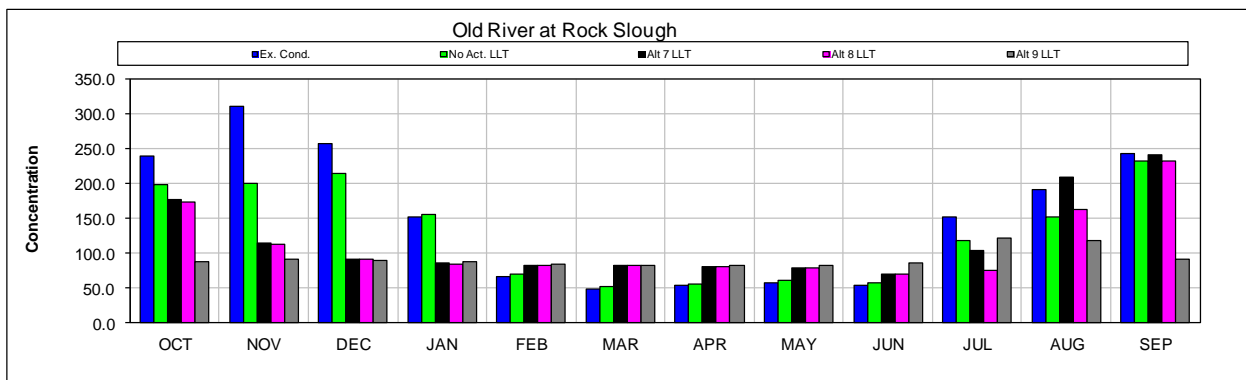


1 **Figure CI-14. Long-term average estimated chloride concentrations at Franks Tract, Old River at Rock**
 2 **Slough, Banks Pumping Plant, and Old River at Tracy Road for existing conditions, No Action LLT, and**
 3 **Alternatives 7–9 (mg/L).**

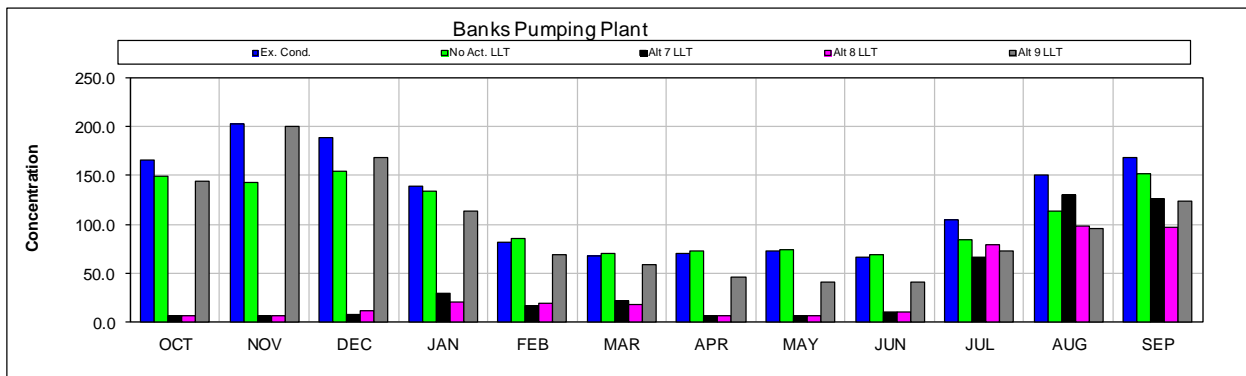
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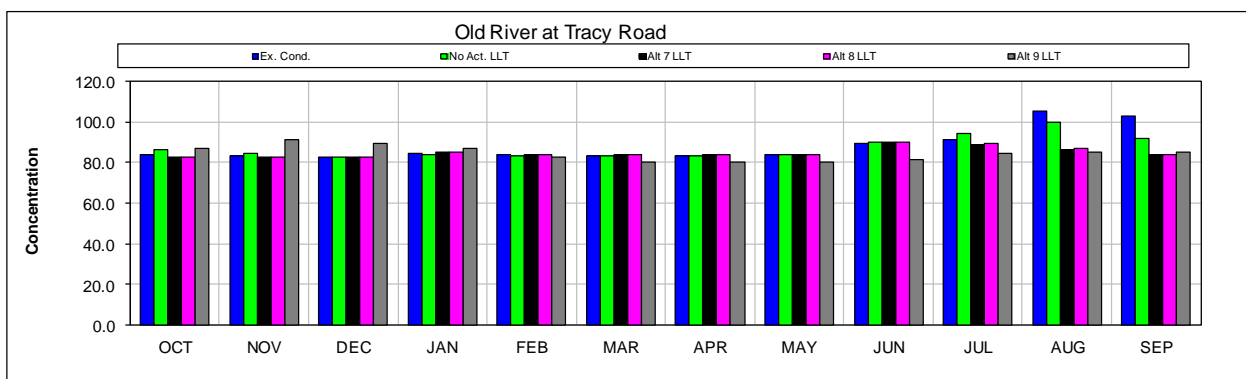
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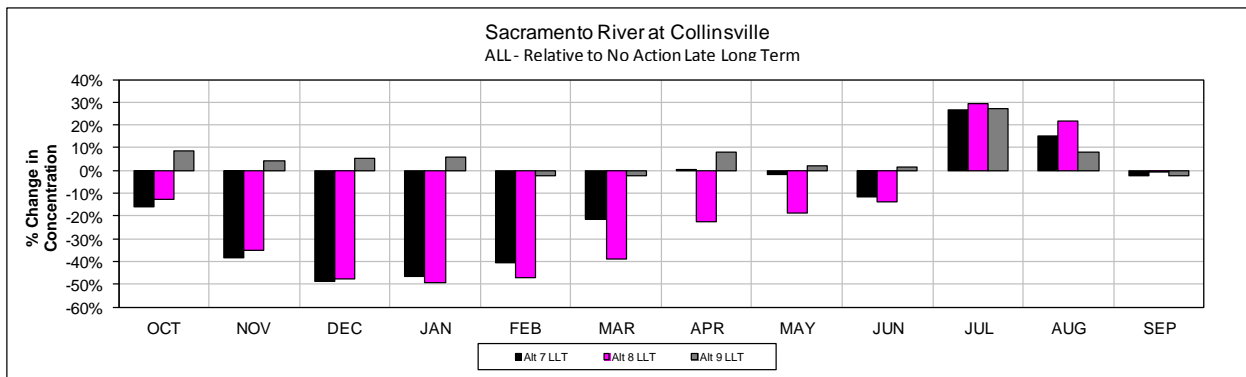
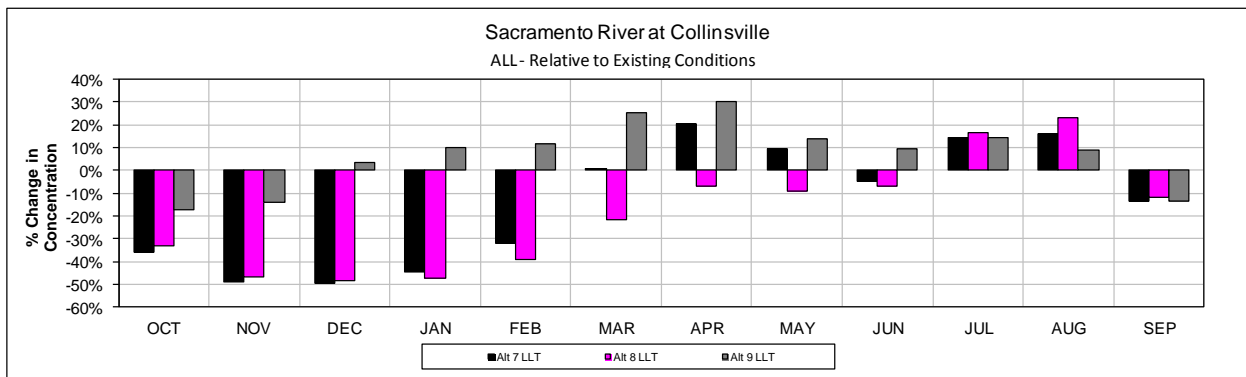
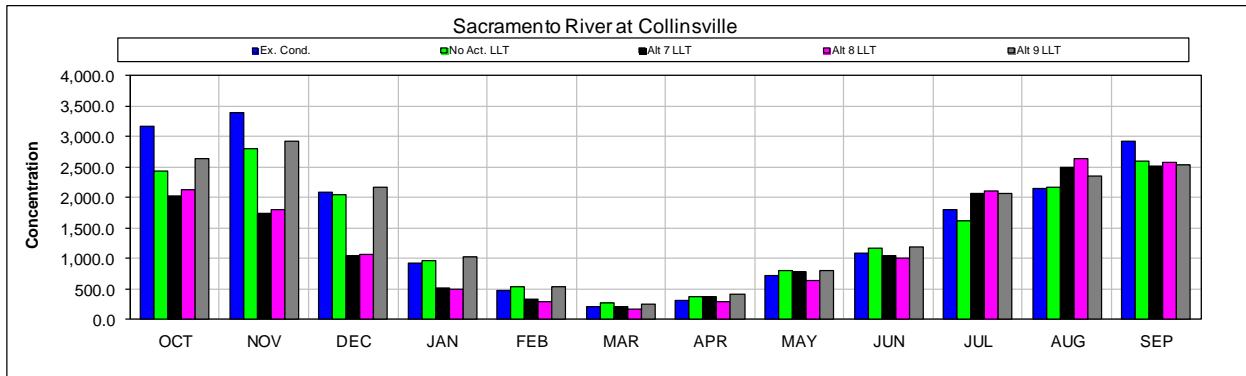
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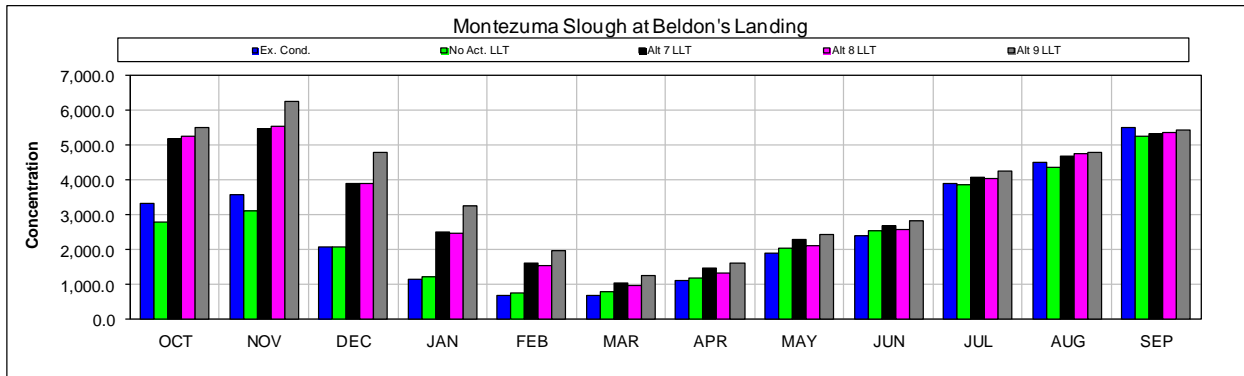


1 **Figure CI-15. Long-term average estimated chloride concentrations at Sacramento River at Collinsville,**
 2 **and change relative to existing conditions and No Action LLT, for Alternatives 7–9 (mg/L).**

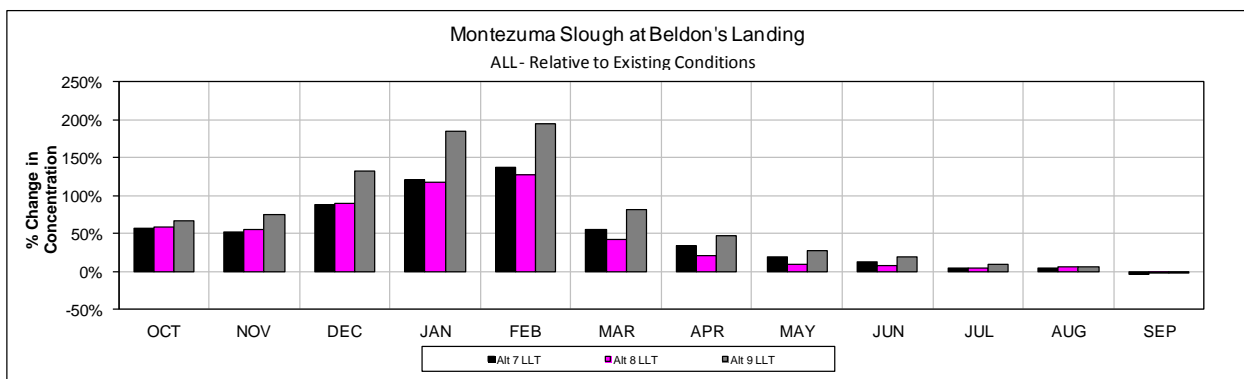


1 **Figure CI-16. Long-term average estimated chloride concentrations at Montezuma Slough at Beldon's**
 2 **Landing, and change relative to existing conditions and No Action LLT, for Alternatives 7–9 (mg/L).**

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