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3 **8K.1 Dissolved Organic Carbon Methodology**

4 Dissolved organic carbon (DOC) was modeled quantitatively for the Delta using DSM2-QUAL model
5 output. Section 8.3.1.3 and the DOC discussion under section 8.3.1.7 provide more detailed
6 information regarding the assessment methodology for DOC and the details of the quantitative
7 approach. Tables to support the assessment are provided below.

1 **DOC Table 1. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for the No Action Alternative LLT**

Dissolved Organic Carbon No Act. LLT	Location	Period ^a	Period Average Concentration mg/L		Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b		Other Relevant Threshold (3.0 mg/L) ^c		Other Relevant Threshold (4.0 mg/L) ^d	
			Ex. Cond.	No Act. LLT	Frequency of Criterion/Objective Exceedance (%)		Frequency of Criterion/Objective Exceedance (%)		Frequency of Criterion/Objective Exceedance (%)	
					Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT	Ex. Cond.	No Act. LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	3.2	3.2	100	100	43	41	19	18
		DROUGHT	3.4	3.3	100	100	45	43	27	23
	SJR at Buckley Cove	ALL	3.9	3.8	100	100	93	92	30	27
		DROUGHT	4.3	4.1	100	100	98	98	55	42
	Franks Tract	ALL	3.1	3.1	100	100	40	43	19	18
		DROUGHT	3.1	3.1	100	100	40	43	22	22
Old R. at Rock Slough	ALL	3.5	3.5	100	100	52	54	30	31	
	DROUGHT	3.5	3.6	100	100	47	48	32	32	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	93	94	16	18	8	8
		DROUGHT	2.7	2.8	97	100	28	30	12	13
	SJR at Antioch	ALL	2.8	2.8	98	98	30	31	14	13
		DROUGHT	2.8	2.9	100	100	30	32	17	15
Sac. R. at Mallard Island	ALL	2.6	2.6	98	96	19	19	7	7	
	DROUGHT	2.6	2.6	100	100	22	22	12	12	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	98	96	19	19	9	8
		DROUGHT	2.8	2.8	100	100	22	27	13	12
	Contra Costa PP #1	ALL	3.6	3.6	100	100	52	53	32	32
		DROUGHT	3.7	3.8	100	100	45	48	35	35
	Banks PP	ALL	3.8	3.9	100	100	64	71	33	35
		DROUGHT	4.1	4.2	100	100	57	75	42	43
	Jones PP	ALL	3.8	3.8	100	100	71	80	26	28
		DROUGHT	3.9	4.0	100	100	72	90	35	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).

^b Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

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1 DOC Table 2. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for Alternative 1A LLT

Dissolved Organic Carbon Alt 1 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b			Other Relevant Threshold (3.0 mg/L) ^c			Other Relevant Threshold (4.0 mg/L) ^d		
			Ex. Cond.	No Act. LLT	Alt 1 LLT	Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)		
						Ex. Cond.	No Act. LLT	Alt 1 LLT	Ex. Cond.	No Act. LLT	Alt 1 LLT	Ex. Cond.	No Act. LLT	Alt 1 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	3.2	3.2	3.4	100	100	100	43	41	55	19	18	21
		DROUGHT	3.4	3.3	3.5	100	100	100	45	43	62	27	23	25
	SJR at Buckley Cove	ALL	3.9	3.8	3.9	100	100	100	93	92	97	30	27	33
		DROUGHT	4.3	4.1	4.3	100	100	100	98	98	100	55	42	62
	Franks Tract	ALL	3.1	3.1	3.4	100	100	100	40	43	53	19	18	22
		DROUGHT	3.1	3.1	3.3	100	100	100	40	43	50	22	22	23
Old R. at Rock Slough	ALL	3.5	3.5	3.7	100	100	100	52	54	66	30	31	30	
	DROUGHT	3.5	3.6	3.8	100	100	100	47	48	63	32	32	40	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.6	93	94	96	16	18	17	8	8	7
		DROUGHT	2.7	2.8	2.7	97	100	100	28	30	28	12	13	12
	SJR at Antioch	ALL	2.8	2.8	2.9	98	98	99	30	31	32	14	13	15
		DROUGHT	2.8	2.9	2.9	100	100	100	30	32	28	17	15	15
	Sac. R. at Mallard Island	ALL	2.6	2.6	2.6	98	96	98	19	19	21	7	7	5
DROUGHT		2.6	2.6	2.6	100	100	100	22	22	20	12	12	5	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.5	98	96	96	19	19	15	9	8	0
		DROUGHT	2.8	2.8	2.6	100	100	100	22	27	22	13	12	0
	Contra Costa PP #1	ALL	3.6	3.6	3.8	100	100	100	52	53	68	32	32	34
		DROUGHT	3.7	3.8	3.9	100	100	100	45	48	67	35	35	42
	Banks PP	ALL	3.8	3.9	3.4	100	100	94	64	71	62	33	35	24
		DROUGHT	4.1	4.2	4.0	100	100	100	57	75	88	42	43	45
	Jones PP	ALL	3.8	3.8	3.4	100	100	92	71	80	69	26	28	21
		DROUGHT	3.9	4.0	3.9	100	100	98	72	90	87	35	35	33

^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 Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

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1 DOC Table 3. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for Alternative 2 LLT

Dissolved Organic Carbon Alt 2 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b			Other Relevant Threshold (3.0 mg/L) ^c			Other Relevant Threshold (4.0 mg/L) ^d		
			Ex. Cond.	No Act. LLT	Alt 2 LLT	Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)		
						Ex. Cond.	No Act. LLT	Alt 2 LLT	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	3.2	3.2	3.5	100	100	100	43	41	56	19	18	24
		DROUGHT	3.4	3.3	3.6	100	100	100	45	43	58	27	23	27
	SJR at Buckley Cove	ALL	3.9	3.8	3.9	100	100	100	93	92	96	30	27	28
		DROUGHT	4.3	4.1	4.2	100	100	100	98	98	100	55	42	50
	Franks Tract	ALL	3.1	3.1	3.5	100	100	100	40	43	57	19	18	24
		DROUGHT	3.1	3.1	3.4	100	100	100	40	43	52	22	22	23
Old R. at Rock Slough	ALL	3.5	3.5	3.9	100	100	100	52	54	74	30	31	36	
	DROUGHT	3.5	3.6	3.8	100	100	100	47	48	70	32	32	38	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.6	93	94	99	16	18	17	8	8	7
		DROUGHT	2.7	2.8	2.7	97	100	100	28	30	28	12	13	12
	SJR at Antioch	ALL	2.8	2.8	3.0	98	98	100	30	31	37	14	13	15
		DROUGHT	2.8	2.9	2.9	100	100	100	30	32	32	17	15	15
Sac. R. at Mallard Island	ALL	2.6	2.6	2.6	98	96	100	19	19	22	7	7	5	
	DROUGHT	2.6	2.6	2.6	100	100	100	22	22	20	12	12	3	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.5	98	96	97	19	19	15	9	8	0
		DROUGHT	2.8	2.8	2.6	100	100	100	22	27	20	13	12	0
	Contra Costa PP #1	ALL	3.6	3.6	3.9	100	100	100	52	53	80	32	32	41
		DROUGHT	3.7	3.8	4.0	100	100	100	45	48	80	35	35	42
	Banks PP	ALL	3.8	3.9	3.3	100	100	90	64	71	62	33	35	25
		DROUGHT	4.1	4.2	3.9	100	100	98	57	75	84	42	43	43
Jones PP	ALL	3.8	3.8	3.4	100	100	90	71	80	64	26	28	23	
	DROUGHT	3.9	4.0	3.9	100	100	97	72	90	88	35	35	41	

^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 Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

1 DOC Table 4. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for Alternative 3 LLT

Dissolved Organic Carbon Alt 3 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b			Other Relevant Threshold (3.0 mg/L) ^c			Other Relevant Threshold (4.0 mg/L) ^d		
			Ex. Cond.	No Act. LLT	Alt 3 LLT	Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)		
						Ex. Cond.	No Act. LLT	Alt 3 LLT	Ex. Cond.	No Act. LLT	Alt 3 LLT	Ex. Cond.	No Act. LLT	Alt 3 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	3.2	3.2	3.4	100	100	100	43	41	54	19	18	21
		DROUGHT	3.4	3.3	3.5	100	100	100	45	43	58	27	23	25
	SJR at Buckley Cove	ALL	3.9	3.8	3.9	100	100	100	93	92	97	30	27	33
		DROUGHT	4.3	4.1	4.3	100	100	100	98	98	100	55	42	63
	Franks Tract	ALL	3.1	3.1	3.3	100	100	100	40	43	52	19	18	24
		DROUGHT	3.1	3.1	3.3	100	100	100	40	43	50	22	22	23
Old R. at Rock Slough	ALL	3.5	3.5	3.7	100	100	100	52	54	65	30	31	33	
	DROUGHT	3.5	3.6	3.7	100	100	100	47	48	63	32	32	38	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.6	93	94	96	16	18	16	8	8	7
		DROUGHT	2.7	2.8	2.7	97	100	97	28	30	28	12	13	12
	SJR at Antioch	ALL	2.8	2.8	2.9	98	98	100	30	31	31	14	13	14
		DROUGHT	2.8	2.9	2.9	100	100	100	30	32	27	17	15	15
Sac. R. at Mallard Island	ALL	2.6	2.6	2.6	98	96	99	19	19	20	7	7	5	
	DROUGHT	2.6	2.6	2.6	100	100	100	22	22	20	12	12	5	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.5	98	96	97	19	19	15	9	8	0
		DROUGHT	2.8	2.8	2.6	100	100	100	22	27	20	13	12	0
	Contra Costa PP #1	ALL	3.6	3.6	3.8	100	100	100	52	53	65	32	32	37
		DROUGHT	3.7	3.8	3.9	100	100	100	45	48	67	35	35	42
	Banks PP	ALL	3.8	3.9	3.5	100	100	96	64	71	69	33	35	24
		DROUGHT	4.1	4.2	3.9	100	100	100	57	75	92	42	43	41
	Jones PP	ALL	3.8	3.8	3.6	100	100	97	71	80	77	26	28	23
		DROUGHT	3.9	4.0	3.9	100	100	100	72	90	88	35	35	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).

^b Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

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1 DOC Table 5. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for Alternative 4 LLT

Dissolved Organic Carbon Alt 4 LLT	Location	Period ^a	Period Average Concentration mg/L								Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b				Other Relevant Threshold (3.0 mg/L) ^c				Other Relevant Threshold (4.0 mg/L) ^d							
			Ex. Cond.	No Act. LLT	H1	H2	H3	H4	Ex. Cond.	No Act. LLT	H1	H2	H3	H4	Ex. Cond.	No Act. LLT	H1	H2	H3	H4	Ex. Cond.	No Act. LLT	H1	H2	H3	H4
			Frequency of Criterion/Objective Exceedance (%)								Frequency of Criterion/Objective Exceedance (%)				Frequency of Criterion/Objective Exceedance (%)											
Delta Interior	Moke. R. (SF) at Staten Island	ALL	3.2	3.2	3.4	3.5	3.5	3.5	100	100	100	100	100	100	43	41	57	58	57	59	19	18	22	24	23	24
		DROUGHT	3.4	3.3	3.5	3.6	3.5	3.6	100	100	100	100	100	100	45	43	60	58	60	58	27	23	27	30	28	30
	SJR at Buckley Cove	ALL	3.9	3.8	3.9	3.9	3.9	3.9	100	100	100	100	100	100	93	92	96	96	96	96	30	27	27	27	27	27
		DROUGHT	4.3	4.1	4.2	4.2	4.2	4.2	100	100	100	100	100	100	98	98	100	100	100	100	55	42	50	50	50	50
	Franks Tract	ALL	3.1	3.1	3.4	3.4	3.4	3.5	100	100	100	100	100	100	40	43	54	56	57	60	19	18	23	24	24	26
		DROUGHT	3.1	3.1	3.3	3.4	3.4	3.4	100	100	100	100	100	100	40	43	50	50	53	53	22	22	23	30	25	30
Old R. at Rock Slough	ALL	3.5	3.5	3.7	3.8	3.8	3.9	100	100	100	100	100	100	52	54	66	68	76	76	30	31	38	38	38	38	
	DROUGHT	3.5	3.6	3.8	3.9	3.8	3.9	100	100	100	100	100	100	47	48	67	62	75	67	32	32	38	38	38	38	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.6	2.7	2.6	2.7	93	94	98	98	99	98	16	18	17	17	17	17	8	8	7	7	7	7
		DROUGHT	2.7	2.8	2.7	2.8	2.8	2.8	97	100	100	100	100	100	28	30	28	28	28	28	12	13	12	12	12	12
	SJR at Antioch	ALL	2.8	2.8	3.0	3.0	3.0	3.0	98	98	100	100	100	100	30	31	37	39	37	39	14	13	15	15	15	15
		DROUGHT	2.8	2.9	2.9	2.9	2.9	2.9	100	100	100	100	100	100	30	32	30	35	30	35	17	15	15	15	15	15
Sac. R. at Mallard Island	ALL	2.6	2.6	2.6	2.6	2.6	2.7	98	96	99	100	100	100	19	19	21	21	21	21	7	7	5	5	5	5	
	DROUGHT	2.6	2.6	2.6	2.6	2.6	2.6	100	100	100	100	100	100	22	22	20	20	20	20	12	12	5	5	5	5	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.5	2.5	2.5	2.5	98	96	97	96	97	96	19	19	15	14	15	13	9	8	0	0	0	0
		DROUGHT	2.8	2.8	2.6	2.6	2.6	2.6	100	100	100	100	100	100	22	27	22	22	20	20	13	12	0	0	0	0
	Contra Costa PP #1	ALL	3.6	3.6	3.9	3.9	4.0	4.0	100	100	100	100	100	100	52	53	68	70	79	81	32	32	40	43	42	45
		DROUGHT	3.7	3.8	3.9	4.0	4.0	4.1	100	100	100	100	100	100	45	48	70	67	82	78	35	35	40	43	42	47
	Banks PP	ALL	3.8	3.9	3.4	3.4	3.4	3.4	100	100	96	94	93	86	64	71	63	67	64	61	33	35	26	26	26	24
		DROUGHT	4.1	4.2	3.9	3.7	4.0	3.7	100	100	98	95	97	90	57	75	80	82	83	77	42	43	45	35	44	32
	Jones PP	ALL	3.8	3.8	3.5	3.4	3.5	3.4	100	100	96	94	92	90	71	80	68	64	68	63	26	28	24	24	23	23
		DROUGHT	3.9	4.0	4.0	3.9	3.9	3.9	100	100	100	100	98	97	72	90	93	82	88	85	35	35	38	38	37	41

^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 Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

1 DOC Table 6. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for Alternative 5 LLT

Dissolved Organic Carbon Alt 5 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b			Other Relevant Threshold (3.0 mg/L) ^c			Other Relevant Threshold (4.0 mg/L) ^d		
			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)					
			Ex. Cond.	No Act. LLT	Alt 5 LLT	Ex. Cond.	No Act. LLT	Alt 5 LLT	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	3.2	3.2	3.4	100	100	100	43	41	51	19	18	20
		DROUGHT	3.4	3.3	3.5	100	100	100	45	43	58	27	23	25
	SJR at Buckley Cove	ALL	3.9	3.8	3.9	100	100	100	93	92	97	30	27	31
		DROUGHT	4.3	4.1	4.1	100	100	100	98	98	100	55	42	53
	Franks Tract	ALL	3.1	3.1	3.3	100	100	100	40	43	51	19	18	23
		DROUGHT	3.1	3.1	3.3	100	100	100	40	43	52	22	22	22
Old R. at Rock Slough	ALL	3.5	3.5	3.7	100	100	100	52	54	64	30	31	32	
	DROUGHT	3.5	3.6	3.8	100	100	100	47	48	62	32	32	37	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.6	93	94	97	16	18	15	8	8	7
		DROUGHT	2.7	2.8	2.7	97	100	100	28	30	27	12	13	12
	SJR at Antioch	ALL	2.8	2.8	2.9	98	98	100	30	31	32	14	13	13
		DROUGHT	2.8	2.9	2.9	100	100	100	30	32	30	17	15	15
	Sac. R. at Mallard Island	ALL	2.6	2.6	2.6	98	96	100	19	19	19	7	7	5
DROUGHT		2.6	2.6	2.6	100	100	100	22	22	20	12	12	5	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.5	98	96	96	19	19	15	9	8	0
		DROUGHT	2.8	2.8	2.6	100	100	100	22	27	20	13	12	0
	Contra Costa PP #1	ALL	3.6	3.6	3.8	100	100	100	52	53	70	32	32	35
		DROUGHT	3.7	3.8	3.9	100	100	100	45	48	75	35	35	40
	Banks PP	ALL	3.8	3.9	3.6	100	100	95	64	71	69	33	35	27
		DROUGHT	4.1	4.2	4.0	100	100	97	57	75	83	42	43	44
	Jones PP	ALL	3.8	3.8	3.7	100	100	96	71	80	78	26	28	27
		DROUGHT	3.9	4.0	4.0	100	100	98	72	90	93	35	35	39

^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 Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

1 DOC Table 7. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for Alternative 6 LLT

Dissolved Organic Carbon Alt 6 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b			Other Relevant Threshold (3.0 mg/L) ^c			Other Relevant Threshold (4.0 mg/L) ^d		
			Period Average Concentration mg/L			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)		
			Ex. Cond.	No Act. LLT	Alt 6 LLT	Ex. Cond.	No Act. LLT	Alt 6 LLT	Ex. Cond.	No Act. LLT	Alt 6 LLT	Ex. Cond.	No Act. LLT	Alt 6 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	3.2	3.2	3.7	100	100	100	43	41	69	19	18	26
		DROUGHT	3.4	3.3	3.7	100	100	100	45	43	72	27	23	32
	SJR at Buckley Cove	ALL	3.9	3.8	3.9	100	100	100	93	92	97	30	27	30
		DROUGHT	4.3	4.1	4.2	100	100	100	98	98	100	55	42	53
	Franks Tract	ALL	3.1	3.1	4.1	100	100	100	40	43	100	19	18	38
		DROUGHT	3.1	3.1	4.1	100	100	100	40	43	100	22	22	43
Old R. at Rock Slough	ALL	3.5	3.5	4.7	100	100	100	52	54	100	30	31	79	
	DROUGHT	3.5	3.6	5.1	100	100	100	47	48	100	32	32	95	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.9	93	94	100	16	18	21	8	8	7
		DROUGHT	2.7	2.8	3.0	97	100	100	28	30	32	12	13	10
	SJR at Antioch	ALL	2.8	2.8	3.4	98	98	100	30	31	56	14	13	18
		DROUGHT	2.8	2.9	3.3	100	100	100	30	32	48	17	15	20
Sac. R. at Mallard Island	ALL	2.6	2.6	2.9	98	96	100	19	19	29	7	7	8	
	DROUGHT	2.6	2.6	2.8	100	100	100	22	22	25	12	12	13	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.6	98	96	99	19	19	17	9	8	0
		DROUGHT	2.8	2.8	2.7	100	100	100	22	27	23	13	12	0
	Contra Costa PP #1	ALL	3.6	3.6	4.7	100	100	100	52	53	100	32	32	84
		DROUGHT	3.7	3.8	5.1	100	100	100	45	48	100	35	35	95
	Banks PP	ALL	3.8	3.9	2.3	100	100	39	64	71	13	33	35	8
		DROUGHT	4.1	4.2	2.3	100	100	33	57	75	17	42	43	10
	Jones PP	ALL	3.8	3.8	2.3	100	100	39	71	80	13	26	28	8
		DROUGHT	3.9	4.0	2.3	100	100	33	72	90	17	35	35	10

^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 Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

1 DOC Table 8. Period Average DOC Concentration with 2, 3, and 4 mg/L mg/L Frequency of Exceedence for Alternative 7 LLT

Dissolved Organic Carbon Alt 7 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b			Other Relevant Threshold (3.0 mg/L) ^c			Other Relevant Threshold (4.0 mg/L) ^d		
			Period Average Concentration mg/L			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)		
			Ex. Cond.	No Act. LLT	Alt 7 LLT	Ex. Cond.	No Act. LLT	Alt 7 LLT	Ex. Cond.	No Act. LLT	Alt 7 LLT	Ex. Cond.	No Act. LLT	Alt 7 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	3.2	3.2	3.5	100	100	100	43	41	56	19	18	26
		DROUGHT	3.4	3.3	3.6	100	100	100	45	43	60	27	23	30
	SJR at Buckley Cove	ALL	3.9	3.8	3.9	100	100	100	93	92	97	30	27	33
		DROUGHT	4.3	4.1	4.2	100	100	100	98	98	100	55	42	57
	Franks Tract	ALL	3.1	3.1	3.8	100	100	100	40	43	71	19	18	38
		DROUGHT	3.1	3.1	3.8	100	100	100	40	43	70	22	22	43
Old R. at Rock Slough	ALL	3.5	3.5	4.3	100	100	100	52	54	85	30	31	47	
	DROUGHT	3.5	3.6	4.6	100	100	100	47	48	82	32	32	57	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.7	93	94	99	16	18	19	8	8	7
		DROUGHT	2.7	2.8	2.8	97	100	100	28	30	28	12	13	10
	SJR at Antioch	ALL	2.8	2.8	3.2	98	98	100	30	31	48	14	13	17
		DROUGHT	2.8	2.9	3.2	100	100	100	30	32	45	17	15	20
Sac. R. at Mallard Island	ALL	2.6	2.6	2.8	98	96	100	19	19	28	7	7	8	
	DROUGHT	2.6	2.6	2.7	100	100	100	22	22	23	12	12	13	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.5	98	96	98	19	19	17	9	8	0
		DROUGHT	2.8	2.8	2.7	100	100	100	22	27	25	13	12	0
	Contra Costa PP #1	ALL	3.6	3.6	4.3	100	100	100	52	53	85	32	32	52
		DROUGHT	3.7	3.8	4.6	100	100	100	45	48	88	35	35	58
	Banks PP	ALL	3.8	3.9	2.7	100	100	67	64	71	32	33	35	9
		DROUGHT	4.1	4.2	2.8	100	100	60	57	75	42	42	43	13
	Jones PP	ALL	3.8	3.8	2.7	100	100	61	71	80	37	26	28	10
		DROUGHT	3.9	4.0	2.8	100	100	57	72	90	38	35	35	15

^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 Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

1 DOC Table 9. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for Alternative 8 LLT

Dissolved Organic Carbon Alt 8 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b			Other Relevant Threshold (3.0 mg/L) ^c			Other Relevant Threshold (4.0 mg/L) ^d		
			Ex. Cond.	No Act. LLT	Alt 8 LLT	Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)			Frequency of Criterion/Objective Exceedence (%)		
						Ex. Cond.	No Act. LLT	Alt 8 LLT	Ex. Cond.	No Act. LLT	Alt 8 LLT	Ex. Cond.	No Act. LLT	Alt 8 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	3.2	3.2	3.5	100	100	100	43	41	60	19	18	25
		DROUGHT	3.4	3.3	3.6	100	100	100	45	43	62	27	23	28
	SJR at Buckley Cove	ALL	3.9	3.8	3.9	100	100	100	93	92	97	30	27	32
		DROUGHT	4.3	4.1	4.2	100	100	100	98	98	100	55	42	58
	Franks Tract	ALL	3.1	3.1	3.8	100	100	100	40	43	76	19	18	35
		DROUGHT	3.1	3.1	3.8	100	100	100	40	43	72	22	22	38
Old R. at Rock Slough	ALL	3.5	3.5	4.3	100	100	100	52	54	90	30	31	48	
	DROUGHT	3.5	3.6	4.6	100	100	100	47	48	88	32	32	57	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.7	93	94	100	16	18	17	8	8	7
		DROUGHT	2.7	2.8	2.8	97	100	100	28	30	25	12	13	8
	SJR at Antioch	ALL	2.8	2.8	3.2	98	98	100	30	31	47	14	13	16
		DROUGHT	2.8	2.9	3.1	100	100	100	30	32	43	17	15	18
Sac. R. at Mallard Island	ALL	2.6	2.6	2.8	98	96	100	19	19	27	7	7	7	
	DROUGHT	2.6	2.6	2.7	100	100	100	22	22	23	12	12	12	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.6	98	96	98	19	19	17	9	8	0
		DROUGHT	2.8	2.8	2.7	100	100	100	22	27	25	13	12	0
	Contra Costa PP #1	ALL	3.6	3.6	4.4	100	100	100	52	53	93	32	32	55
		DROUGHT	3.7	3.8	4.6	100	100	100	45	48	95	35	35	60
	Banks PP	ALL	3.8	3.9	2.8	100	100	63	64	71	40	33	35	11
		DROUGHT	4.1	4.2	2.9	100	100	62	57	75	49	42	43	17
	Jones PP	ALL	3.8	3.8	2.8	100	100	61	71	80	36	26	28	15
		DROUGHT	3.9	4.0	2.8	100	100	57	72	90	40	35	35	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 Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

2

1 DOC Table 10. Period Average DOC Concentration with 2, 3, and 4 mg/L Frequency of Exceedence for Alternative 9 LLT

Dissolved Organic Carbon Alt 9 LLT	Location	Period ^a	Period Average Concentration mg/L			Lowest Applicable Human Health Criterion/Objective (2.0 mg/L) ^b			Other Relevant Threshold (3.0 mg/L) ^c			Other Relevant Threshold (4.0 mg/L) ^d		
			Ex. Cond.	No Act. LLT	Alt 9 LLT	Frequency of Criterion/Objective Exceedance (%)			Frequency of Criterion/Objective Exceedance (%)			Frequency of Criterion/Objective Exceedance (%)		
						Ex. Cond.	No Act. LLT	Alt 9 LLT	Ex. Cond.	No Act. LLT	Alt 9 LLT	Ex. Cond.	No Act. LLT	Alt 9 LLT
Delta Interior	Moke. R. (SF) at Staten Island	ALL	3.2	3.2	3.1	100	100	100	43	41	40	19	18	15
		DROUGHT	3.4	3.3	3.2	100	100	100	45	43	48	27	23	22
	SJR at Buckley Cove	ALL	3.9	3.8	4.0	100	100	100	93	92	94	30	27	39
		DROUGHT	4.3	4.1	4.3	100	100	100	98	98	98	55	42	50
	Franks Tract	ALL	3.1	3.1	3.8	100	100	100	40	43	97	19	18	24
		DROUGHT	3.1	3.1	3.8	100	100	100	40	43	93	22	22	30
Old R. at Rock Slough	ALL	3.5	3.5	4.2	100	100	100	52	54	99	30	31	44	
	DROUGHT	3.5	3.6	4.5	100	100	100	47	48	100	32	32	67	
Western Delta	Sac. R. at Emmaton	ALL	2.6	2.6	2.6	93	94	96	16	18	16	8	8	7
		DROUGHT	2.7	2.8	2.7	97	100	100	28	30	27	12	13	12
	SJR at Antioch	ALL	2.8	2.8	3.0	98	98	100	30	31	34	14	13	14
		DROUGHT	2.8	2.9	3.0	100	100	100	30	32	33	17	15	17
Sac. R. at Mallard Island	ALL	2.6	2.6	2.6	98	96	100	19	19	19	7	7	6	
	DROUGHT	2.6	2.6	2.7	100	100	100	22	22	20	12	12	8	
Major Diversions (Pumping Stations)	NBA at Barker Slough PP	ALL	2.7	2.6	2.5	98	96	94	19	19	15	9	8	0
		DROUGHT	2.8	2.8	2.6	100	100	100	22	27	22	13	12	0
	Contra Costa PP #1	ALL	3.6	3.6	4.2	100	100	100	52	53	100	32	32	45
		DROUGHT	3.7	3.8	4.5	100	100	100	45	48	100	35	35	65
	Banks PP	ALL	3.8	3.9	2.3	100	100	39	64	71	13	33	35	8
		DROUGHT	4.1	4.2	2.3	100	100	32	57	75	17	42	43	10
	Jones PP	ALL	3.8	3.8	2.3	100	100	39	71	80	13	26	28	8
		DROUGHT	3.9	4.0	2.3	100	100	32	72	90	17	35	35	10

^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 Minimum EPA action threshold to require a drinking water utility to employ treatment to achieve a reduction in TOC.

^c CALFED Drinking Water Program established goal for TOC as a long-term average as applied to municipal drinking water intakes drawing water from the Delta (CALFED 2000).

^d Minimum TOC believed sufficient to meet currently established drinking water criteria for DBPs (CUWA 1998, ES2).

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