

Appendix G, Water Quality Technical Appendix

Attachment G.3 Bromide Modeling Results

The information contained in this attachment supports the quantitative assessment of the project alternatives' effects on bromide concentrations at Sacramento–San Joaquin Delta (Delta) assessment locations presented in Appendix G, Water Quality Technical Appendix, prepared in support of the Reinitiation of Consultation on the Long-term Operations of the Central Valley Project (CVP) and State Water Project (SWP) Environmental Impact Statement (EIS). This attachment presents the following information.

- The bromide modeling methodology.
- The source water concentrations used in the mass-balance modeling of bromide at the Delta assessment locations.
- Applicable water quality criteria for bromide used in the effects assessment.
- Tables and figures presenting modeled bromide concentrations at the Delta assessment locations for the No Action Alternative and the project alternatives.

G.3.1 Modeling Methodology

The method for calculating bromide concentrations for the Delta varied by assessment location. For Delta locations where the predominant source of bromide is sea water, bromide concentrations were determined by applying known relationships between electrical conductivity (EC), chloride, and bromide concentrations to Delta Simulation Model II (DSM2)-modeled EC. The Delta locations where bromide concentrations are more influenced by Delta inflows from the Sacramento and San Joaquin Rivers, a mass-balance approach was applied. Table G.3-1 summarizes the calculation method used for each Delta assessment location.

Table G.3-1. Delta Assessment Locations and Concentration Calculation Method

Assessment Location	Delta Region	Concentration Calculation Method
Barker Slough at North Bay Aqueduct	Northern	Mass-balance
Banks Pumping Plant	Export area	Mass-balance
Jones Pumping Plant	Export area	Mass-balance
San Joaquin River at Antioch	Western	Regression
Contra Costa Water District Pumping Plant #1	Interior	Regression

G.3.1.1 Mass-Balance Methodology

The mass-balance methodology used to calculate bromide concentrations used the DSM2-modeled average monthly source water flow fractions for each Delta assessment location. The source water flow fraction output is the percentage of water at each assessment location constituted by the six primary source waters—Sacramento River (SAC), San Joaquin River (SJR), Yolo Bypass (YOL), Eastside Tributaries (EST), San Francisco Bay (BAY), and Delta Agricultural Return Waters (AGR). These flow fractions were used together with source water constituent concentrations to calculate a given constituent concentration at the assessment locations according to the following equation.

$$C_i = f_{SAC,i}(C_{SAC}) + f_{SJR,i}(C_{SJR}) + f_{YOL,i}(C_{YOL}) + f_{EST,i}(C_{EST}) + f_{BAY,i}(C_{BAY}) + f_{AGR,i}(C_{AGR})$$

In the above equation, C_i is the concentration at Delta assessment location i , $f_{X,i}$ is the average monthly flow fraction from source water X at assessment location i , and C_X is the source water X concentration. Source water concentrations input into the above equation are discussed below in Section G.3.2, *Source Water Concentrations*.

G.3.1.2 Regression Methodology

The regression methodology used known relationships between EC and chloride and chloride and bromide to calculate bromide concentrations at Delta assessment locations. These relationships were applied to the EC output from DSM2.

The EC-chloride relationship was developed based on data at Mallard Island, Jersey Island, and Old River at Rock Slough (Contra Costa Water District 1997:1). The relationship is defined by the following equation in which Cl is the chloride concentration in milligrams per liter (mg/L) and EC is in micromhos per centimeter ($\mu\text{mhos/cm}$).

$$Cl = \max \left(\begin{array}{l} 0.15 * EC - 12 \\ 0.285 * EC - 50 \end{array} \right)$$

The chloride-bromide relationship is approximately the same in multiple areas in the west Delta, including Old River at Rock Slough (Contra Costa Water District 1997:1) and Mallard Island (refer to Figure G.3-1). The relationship is defined by the following equation in which Br is the bromide concentration in mg/L and Cl is the chloride concentration in mg/L.

$$Br = 0.0035 * Cl$$

The chloride-bromide regression method was developed based on west Delta ratios of chloride to bromide that were indicative of sea-water influence, and so considered valid for that area.

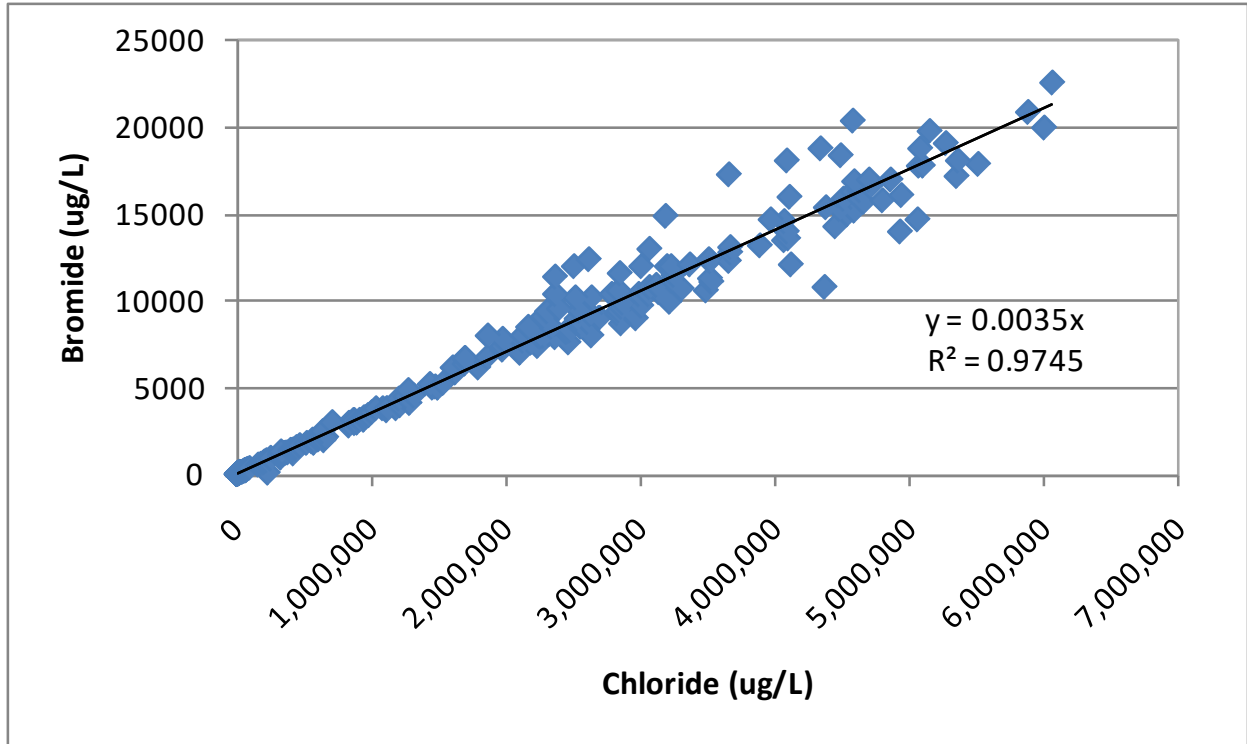


Figure G.3-1. Bromide to Chloride Ratio for Mallard Island Monitoring Station

G.3.2 Source Water Concentrations

An input to the mass-balance calculation of bromide concentrations at the Delta assessment locations is the concentration of bromide in the primary source waters to the Delta: SAC, SJR, YOL, EST, BAY, and AGR. The concentrations of bromide for all source waters except the San Joaquin River were based on historical data. Table G.3-2 provides summary statistics for the primary source water concentrations, as well as information on the source of the data. Due to data availability, Yolo Bypass concentrations were set equal to Sacramento River concentrations, which is the source of flows to the Yolo Bypass.

Table G.3-2. Source Water Bromide Concentrations (in micrograms per liter)

Data Parameter	SAC	SJR	BAY ^a	EST	AGR
Average	14	228	22,774	11	517
Minimum	1	10	28	10	20
Maximum	100	650	44,100	30	5,280
75th percentile	20	320	32,393	10	600
99th percentile	40	560	43,624	20.7	3,650
Data source	DWR 2020b	DWR 2020b	DWR 2020b	CEDEN, 2020 DWR 2020b	DWR 2020b
Station(s)	SAC at Greene's Landing, SAC at Hood	SJR at Vernalis	Suisun Bay at Bulls Head near Martinez	Mokelumne River at Sacramento Road; at confluence with the South Mokelumne River	All data were pooled – see narrative description below
Date range	1990–2020	1990–2020	1980–2007	1990–2013	1990–2001
Non-detect results replaced with reporting limit for statistics	Yes	No	No	Yes	Yes
Data omitted	None	None	None	None	Yes – see narrative description below
Number of data points	1,136	933	319	94	1,017

SAC = Sacramento River; SJR = San Joaquin River; BAY = San Francisco Bay; EST = Eastside Tributaries; AGR = Delta Agricultural Return Waters; CEDEN = California Environmental Data Exchange Network; DWR = California Department of Water Resources.

^a Data was calculated from the regressed relationship of bromide to chloride based on CEDEN data for chloride.

Each source water dataset was evaluated to determine whether the primary source water concentration should be represented by a single value or a different value for each month. Analysis of the Sacramento River (Kruskal Wallis; $p < 0.05$) and Delta Agricultural Return Waters (Kruskal Wallis; $p < 0.05$) datasets indicated significant differences in concentration by month. Concentrations in the Eastside Tributaries did not vary significantly among months (Kruskal Wallis; $p > 0.05$). Due to the presence of a distinct monthly pattern in Sacramento River and Delta Agricultural Return Waters, monthly average concentrations were used for these locations in the mass-balance calculation. Due to the very limited dataset and lack of monthly patterns in the Eastside Tributaries, concentrations for this source water are represented by a single average of the entire dataset shown in Table G.3-2 in the mass-balance calculation. Tables

G.3-3 and G.3-4 provide the monthly average concentrations for the Sacramento River and Delta Agricultural Return Waters used in the mass-balance calculation, respectively.

The source water concentrations for the San Joaquin River and San Francisco Bay were calculated in a different manner. Because San Joaquin River and San Francisco Bay bromide concentrations are closely related to flow, in addition to time of year, concentrations were calculated from DSM2-modeled EC. The EC-chloride regression equations defined below were applied to each modeled monthly average EC value for water years 1922–2021 to develop monthly average chloride concentrations for the modeled period, resulting in a time-series of monthly average chloride concentrations consisting of 1,200 values (i.e., 12 months times 100 years). In the following equation, Cl is the chloride concentration in mg/L and EC is in $\mu\text{mhos/cm}$.

$$\text{San Joaquin River at Vernalis } Cl = 0.1845 * EC \text{ at Vernalis} - 23$$

$$\text{San Francisco Bay at Martinez } Cl = 0.285 * EC \text{ at Martinez} - 50$$

The chloride-bromide regression equation defined in Section G.3.1.2, *Regression Methodology*, was applied to each monthly average chloride concentration to develop a time-series of monthly average bromide concentrations for the modeled period. The monthly average bromide concentrations were input as C_{SJR} and C_{BAY} in the mass-balance equation defined in Section G.3.1.1.

Table G.3-3. Monthly Average Source Water Bromide Concentrations for the Sacramento River (in micrograms per liter)

Data Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average concentration	14	15	14	14	14	14	12	15	17	12	16	14
Number of data points	92	95	98	98	95	97	96	101	101	91	84	88

Table G.3-4. Monthly Average Source Water Bromide Concentrations for Delta Agricultural Return Waters (in micrograms per liter)

Data Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average concentration	592	623	662	596	394	405	391	468	468	627	529	532
Number of data points	137	28	31	141	27	121	170	135	24	146	30	27

Additional notes regarding the calculation of Delta Agricultural Return Water concentrations are provided below.

Delta Agricultural Return Water. Agricultural return drains are distributed unevenly throughout the Delta. Water quality associated with these drains varies depending on the specific location of the drain within the Delta and largely coincides with the water quality of the water that is withdrawn from the Delta for application onto agricultural lands. To characterize bromide concentrations in agricultural drain water as a whole, the following process was followed.

1. All agricultural drain data from the California Department of Water Resources Water Data Library, which had historical bromide data, were compiled.
2. All agricultural drain data were pooled and the results summarized in Table G.3-2.

Data for the Byron Tract #2 (65,000 micrograms per liter [$\mu\text{g/L}$] on May 29, 1996) and Byron Tract #3 (46,800 $\mu\text{g/L}$ on May 29, 1996) agricultural drains in the west Delta were omitted from the database due to their reported values being substantially outside the distribution of all other values.

G.3.3 Applicable Water Quality Objectives

There are presently no federal or state adopted numeric water quality criteria/objectives for bromide. To evaluate the effects of the project alternatives on bromide, the assessment considered work by a panel of three water quality and treatment experts, engaged by the California Urban Water Agencies, which produced a report titled “Bay-Delta Water Quality Evaluation, Draft Final Report” (California Urban Water Agencies 1998).

California Urban Water Agencies had charged the panel with developing potential regulatory scenarios, defining appropriate treatment process criteria, and estimating the Delta source water quality required to achieve compliance under the anticipated regulatory scenarios. The panel identified two regulatory scenarios for their evaluation, a near-term scenario consisting of the then current (and still current today) treatment rules governing pathogen inactivation and disinfection and a long-term scenario which included the anticipated more stringent versions of these rules then under development (and not implemented). The panel focused on inactivation requirements and the disinfection byproduct precursors total organic carbon and bromide as the constituents in Delta water that would be most likely to drive treatment technology decisions.

For the near-term regulatory scenario evaluated by the panel consisted of drinking water maximum contaminant levels (MCLs) of 80 microgram per liter ($\mu\text{g/L}$) total trihalomethanes, 60 $\mu\text{g/L}$ haloacetic acids, and 10 $\mu\text{g/L}$ bromate (as running annual averages) as well as an additional 1- to 2-log inactivation of *Giardia*. The panel’s findings for this scenario was total organic carbon concentrations ranging from 4 mg/L to 7 mg/L and bromide concentrations ranging from 100 $\mu\text{g/L}$ to 300 $\mu\text{g/L}$ to give users flexibility in their choice of treatment method (enhanced coagulation or ozone disinfection) (California Urban Water Agencies 1998:ES-2).

The long-term, more stringent scenario evaluated by the panel consisted of drinking water MCLs of 40 $\mu\text{g/L}$ total trihalomethanes, 30 $\mu\text{g/L}$ haloacetic acids, and 5 $\mu\text{g/L}$ bromate (as running annual averages) as well as an additional 1- to 2-log inactivation of *Giardia* and 1-log inactivation of *Cryptosporidium*. The panel’s basic finding for the long-term scenario was that it would be necessary to keep Delta water diverted for municipal use to no more than 3 mg/L total organic carbon and 50 $\mu\text{g/L}$ bromide to give users flexibility in their choice of treatment method (enhanced coagulation or ozone disinfection). However, these thresholds for total trihalomethanes, haloacetic acids, and bromate have not been implemented as drinking water MCLs.

G.3.4 Modeling Results

The modeled monthly average concentrations of bromide at each Delta assessment location are presented on the following pages in tables and figures, in the following formats.

- Tables
 - Probability of exceedance of the monthly average concentrations for the entire simulation period (water years 1921–2021).
 - Average of monthly average concentrations for the entire simulation period (water years 1921–2021) and by water year type: wet, above normal, below normal, dry, and critical.
 - Results shown for the No Action Alternative and each project alternative, and the project alternative minus the No Action Alternative.
- Monthly Average Plots
 - Average of monthly average concentrations for the entire simulation period (water years 1921–2021) and by water year type: wet, above normal, below normal, dry, and critical.
 - No Action Alternative and project alternatives shown on same plot.
- Exceedance Plots
 - Probability exceedance of the monthly average concentrations for the entire simulation period (water years 1921–2021).
 - No Action Alternative and project alternatives shown on same plot.

Table G.3-1-1-A. Barker Slough at North Bay Aqueduct, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	89	94	123	137	183	187	112	68	62	63	74	76
1%	88	93	115	133	156	150	112	68	61	62	72	76
5%	85	87	103	123	130	132	104	61	58	58	70	72
10%	81	84	99	113	123	127	101	58	56	51	67	66
25%	73	77	89	95	104	114	91	55	48	43	51	57
50%	68	73	84	66	73	88	82	51	46	41	49	54
75%	64	68	76	52	51	68	72	48	43	40	47	53
99.9%	58	62	63	43	42	52	55	34	40	36	45	50

Table G.3-1-1-B. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	70	73	84	74	80	92	83	52	47	43	51	56
Wet Water Years	67	72	84	62	62	74	76	49	43	40	47	53
Above Normal Water Years	69	75	87	76	83	90	79	49	44	41	47	53
Below Normal Water Years	69	73	84	72	75	84	79	51	46	42	49	56
Dry Water Years	69	73	82	78	89	105	88	52	47	41	50	55
Critical Water Years	75	76	86	92	103	117	91	58	57	55	67	68

Table G.3-1-2-A. Barker Slough at North Bay Aqueduct, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	88	94	123	138	184	188	120	68	61	55	67	72
1%	88	93	115	138	155	156	115	65	60	54	64	71
5%	84	88	104	125	132	141	110	61	57	53	64	69
10%	82	85	97	114	126	133	104	58	55	50	61	65
25%	74	79	91	96	107	117	95	54	48	42	51	57
50%	68	74	85	66	74	89	84	51	45	41	49	54
75%	66	68	78	53	51	68	72	48	43	40	48	53
99.9%	61	63	68	43	42	52	54	34	40	36	46	50

Table G.3-1-2-B. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), Alternative 1

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	71	74	85	76	81	94	84	52	47	42	51	56
Wet Water Years	69	74	85	62	62	74	77	49	43	40	48	54
Above Normal Water Years	70	75	87	77	83	90	80	49	44	40	48	54
Below Normal Water Years	70	73	84	73	76	85	80	52	45	41	50	56
Dry Water Years	70	74	84	82	91	105	89	52	47	41	50	56
Critical Water Years	76	78	88	95	106	125	100	58	56	51	62	66

Table G.3-1-2-C. Barker Slough at North Bay Aqueduct, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	0	0	0	2	0	1	8	0	-1	-8	-7	-4
1%	0	0	0	4	0	7	3	-3	-1	-8	-8	-4
5%	-1	1	1	3	2	9	6	0	-1	-5	-6	-3
10%	0	0	-2	1	4	6	3	0	-1	-1	-6	-2
25%	2	2	2	2	2	3	4	0	0	0	0	0
50%	1	1	1	-1	1	1	2	1	-1	-1	0	0
75%	2	1	1	0	0	0	-1	0	0	0	0	1
99.9%	2	1	5	0	0	0	0	0	0	0	1	0

Table G.3-1-2-D. Barker Slough at North Bay Aqueduct, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	1	1	1	2	1	2	2	0	-1	-1	0	0
Wet Water Years	2	1	0	0	0	0	0	0	0	0	0	1
Above Normal Water Years	1	0	0	0	0	0	1	0	-1	-1	1	1
Below Normal Water Years	1	0	0	1	1	1	1	0	-1	-1	1	1
Dry Water Years	1	1	2	4	2	0	0	0	0	0	0	0
Critical Water Years	1	2	2	3	3	9	8	0	-1	-4	-5	-2

Table G.3-1-3-A. Barker Slough at North Bay Aqueduct, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	90	94	121	137	183	187	117	68	62	61	74	74
1%	88	92	114	137	155	151	112	67	61	60	73	74
5%	84	87	102	123	131	132	104	61	58	57	70	72
10%	81	84	97	112	122	125	101	58	56	52	68	69
25%	74	78	89	92	101	115	92	55	48	43	51	58
50%	67	72	84	66	74	87	82	51	46	41	49	54
75%	63	67	77	52	51	68	72	48	43	40	47	53
99.9%	56	60	63	43	42	52	55	34	40	36	46	50

Table G.3-1-3-B. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	69	73	84	74	80	92	83	52	47	43	52	57
Wet Water Years	67	72	85	62	62	74	76	49	43	40	48	53
Above Normal Water Years	70	74	86	76	83	90	79	49	44	41	48	53
Below Normal Water Years	69	73	84	72	75	84	79	51	46	42	49	55
Dry Water Years	68	72	81	78	89	105	88	52	47	42	50	56
Critical Water Years	75	76	86	93	101	116	93	58	56	54	67	69

Table G.3-1-3-C. Barker Slough at North Bay Aqueduct, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	1	0	-2	1	0	0	5	0	0	-2	0	-2
1%	-1	-1	-1	4	0	2	0	-1	0	-2	1	-2
5%	-1	1	-1	0	1	0	0	0	0	-1	0	-1
10%	0	0	-2	-2	0	-2	0	0	-1	1	1	3
25%	1	1	0	-2	-3	1	1	0	0	0	0	0
50%	0	0	0	0	0	-1	0	0	0	0	0	0
75%	-1	0	0	0	0	0	-1	0	0	0	0	0
99.9%	-3	-2	0	0	0	0	0	0	0	0	1	1

Table G.3-1-3-D. Barker Slough at North Bay Aqueduct, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	0	0	0	0	0	0	0	0	0	0	0	0
Wet Water Years	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal Water Years	0	0	-1	0	0	0	0	0	0	0	0	0
Below Normal Water Years	0	0	0	0	0	0	0	0	0	0	0	0
Dry Water Years	-1	-1	0	0	0	0	0	0	0	0	1	1
Critical Water Years	0	0	0	0	-1	0	2	0	0	0	0	1

Table G.3-1-4-A. Barker Slough at North Bay Aqueduct, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	87	94	121	137	183	188	119	68	60	55	67	72
1%	87	94	111	137	155	152	112	65	60	55	64	71
5%	84	86	102	121	131	141	110	62	57	53	63	69
10%	80	84	97	110	122	131	104	58	55	51	62	65
25%	74	78	89	94	101	115	94	55	48	43	51	58
50%	67	72	84	66	74	87	83	50	46	41	49	54
75%	63	67	76	52	51	68	72	48	43	40	47	53
99.9%	59	62	63	43	42	52	55	34	40	36	46	50

Table G.3-1-4-B. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	69	73	84	74	80	93	84	52	47	43	51	56
Wet Water Years	67	72	85	62	62	74	76	49	43	40	48	53
Above Normal Water Years	69	74	86	76	83	90	79	49	44	41	48	53
Below Normal Water Years	69	73	83	72	75	84	79	52	46	42	49	56
Dry Water Years	68	72	81	78	89	105	88	52	47	42	50	56
Critical Water Years	74	75	86	92	102	122	100	58	56	51	62	66

Table G.3-1-4-C. Barker Slough at North Bay Aqueduct, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-2	0	-2	1	0	0	7	-1	-2	-7	-7	-4
1%	-2	1	-4	4	0	2	1	-4	-1	-8	-8	-5
5%	-1	-1	-1	-2	1	9	6	2	-1	-5	-7	-3
10%	-1	0	-2	-3	0	4	3	0	-1	-1	-6	-2
25%	1	1	0	-1	-3	1	3	0	0	0	0	1
50%	-1	-1	0	0	0	-1	1	0	0	0	0	0
75%	0	-1	0	0	0	0	-1	0	0	0	0	0
99.9%	0	0	0	0	0	0	0	0	0	0	1	1

Table G.3-1-4-D. Barker Slough at North Bay Aqueduct, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	0	0	0	0	0	1	1	0	0	0	-1	0
Wet Water Years	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal Water Years	0	0	-1	0	0	0	0	0	0	0	0	0
Below Normal Water Years	-1	-1	-1	0	0	0	0	0	0	0	0	0
Dry Water Years	-1	0	0	0	0	0	0	0	0	0	1	1
Critical Water Years	-1	-1	-1	0	-1	6	8	0	-1	-3	-5	-2

Table G.3-1-5-A. Barker Slough at North Bay Aqueduct, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	87	94	121	137	183	188	119	68	60	55	66	75
1%	86	92	115	137	155	152	113	65	59	54	64	72
5%	82	85	102	117	129	141	111	62	57	53	63	68
10%	79	84	97	109	122	133	104	58	55	51	62	65
25%	73	77	89	94	104	115	94	55	48	43	51	57
50%	67	72	84	66	73	88	83	51	46	41	49	54
75%	63	67	77	52	51	68	72	48	44	40	47	53
99.9%	55	60	65	43	42	52	55	34	40	36	46	50

Table G.3-1-5-B. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	69	73	84	74	80	93	84	52	47	43	51	56
Wet Water Years	67	72	85	62	62	74	76	49	43	40	48	53
Above Normal Water Years	69	74	86	76	83	90	79	49	44	41	47	53
Below Normal Water Years	68	72	83	72	75	84	79	52	46	42	49	56
Dry Water Years	68	72	81	78	88	105	88	52	47	42	50	55
Critical Water Years	74	76	86	90	102	123	100	58	56	51	62	66

Table G.3-1-5-C. Barker Slough at North Bay Aqueduct, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-2	-1	-2	1	0	0	7	-1	-2	-8	-9	-1
1%	-2	-1	0	4	0	2	1	-4	-1	-9	-8	-3
5%	-2	-2	-1	-6	-1	9	7	2	-1	-5	-7	-4
10%	-2	0	-2	-4	0	6	3	0	-1	-1	-6	-1
25%	0	0	0	0	0	1	3	0	0	0	0	0
50%	-1	0	0	0	0	0	1	0	0	0	0	0
75%	-1	0	0	0	0	0	0	0	0	0	0	0
99.9%	-3	-2	2	0	0	0	0	0	0	0	1	0

Table G.3-1-5-D. Barker Slough at North Bay Aqueduct, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	-1	0	0	0	0	1	1	0	0	0	-1	0
Wet Water Years	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal Water Years	0	0	-1	0	0	0	0	0	0	0	0	0
Below Normal Water Years	-1	-1	-1	0	0	0	0	0	0	0	0	0
Dry Water Years	-1	-1	0	-1	0	0	0	0	0	0	0	0
Critical Water Years	-1	0	0	-2	0	7	9	0	-1	-3	-5	-2

Table G.3-1-6-A. Barker Slough at North Bay Aqueduct, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	87	94	121	137	183	188	119	68	60	54	65	72
1%	86	92	115	137	155	152	112	64	59	54	64	71
5%	82	85	104	115	129	141	111	62	57	53	63	68
10%	78	84	97	110	122	131	103	58	55	51	61	65
25%	73	77	89	93	104	115	94	54	48	43	51	57
50%	67	72	84	66	73	88	83	50	46	42	49	54
75%	63	67	76	52	51	68	72	48	43	40	47	53
99.9%	55	60	65	43	42	52	54	33	40	36	46	50

Table G.3-1-6-B. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	69	73	84	74	80	93	84	51	47	43	51	56
Wet Water Years	67	72	85	62	62	74	76	49	43	40	48	53
Above Normal Water Years	69	75	86	76	83	90	79	49	44	41	48	53
Below Normal Water Years	68	72	85	72	75	84	79	51	46	42	49	55
Dry Water Years	68	72	82	78	88	105	88	52	47	42	50	55
Critical Water Years	74	76	86	91	102	123	100	58	56	51	62	66

Table G.3-1-6-C. Barker Slough at North Bay Aqueduct, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-2	-1	-2	1	0	0	7	-1	-2	-8	-9	-4
1%	-2	-1	0	4	0	2	1	-4	-2	-8	-8	-5
5%	-2	-2	1	-8	-1	9	7	1	-1	-5	-7	-4
10%	-3	0	-1	-3	0	4	3	0	-1	-1	-6	-1
25%	0	0	0	-1	0	1	3	-1	0	0	0	0
50%	0	0	0	0	0	0	1	0	0	0	0	0
75%	-1	0	0	0	0	0	0	0	0	0	0	0
99.9%	-3	-2	2	0	0	0	0	0	0	0	1	0

Table G.3-1-6-D. Barker Slough at North Bay Aqueduct, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	-1	0	0	0	0	1	1	0	0	0	-1	0
Wet Water Years	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal Water Years	0	0	-1	0	0	0	0	0	0	0	0	0
Below Normal Water Years	-1	-1	1	0	0	0	0	-1	0	0	0	0
Dry Water Years	-1	-1	0	-1	0	0	0	0	0	0	0	0
Critical Water Years	-1	0	0	-1	-1	6	8	0	-1	-4	-5	-3

Table G.3-1-7-A. Barker Slough at North Bay Aqueduct, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	87	95	121	157	194	223	131	72	65	55	66	70
1%	87	94	114	143	170	165	130	72	60	54	66	69
5%	83	88	107	126	148	151	121	63	59	52	62	66
10%	80	84	100	117	134	140	109	61	55	50	61	62
25%	74	80	94	99	107	125	100	57	49	46	54	58
50%	69	74	87	69	76	96	86	54	47	44	52	56
75%	66	69	79	55	52	70	76	51	45	43	50	55
99.9%	60	63	67	45	43	56	51	33	42	37	47	49

Table G.3-1-7-B. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), Alternative 3

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	71	75	87	79	85	100	89	54	48	45	53	57
Wet Water Years	69	74	88	67	66	80	83	53	45	42	50	56
Above Normal Water Years	70	75	89	81	90	101	89	53	46	44	52	56
Below Normal Water Years	70	74	86	75	80	88	83	53	48	45	53	57
Dry Water Years	70	74	85	83	92	112	92	53	48	43	50	54
Critical Water Years	75	78	89	97	107	128	100	59	57	50	62	64

Table G.3-1-7-C. Barker Slough at North Bay Aqueduct, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-2	0	-2	21	11	36	20	4	3	-8	-8	-6
1%	-2	1	0	10	15	16	18	3	-1	-9	-6	-7
5%	-1	2	4	3	18	20	17	2	1	-6	-7	-6
10%	-1	0	1	4	11	13	8	3	-1	-1	-6	-4
25%	1	3	5	5	3	11	10	2	1	3	3	1
50%	2	1	3	3	3	8	3	3	1	3	3	2
75%	3	1	3	2	1	3	3	3	1	2	3	2
99.9%	2	1	4	2	1	4	-3	-1	2	1	2	-1

Table G.3-1-7-D. Barker Slough at North Bay Aqueduct, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	1	1	3	5	4	8	6	2	1	1	1	1
Wet Water Years	2	2	4	5	4	6	6	5	1	2	3	3
Above Normal Water Years	1	0	3	5	7	11	9	3	1	4	5	3
Below Normal Water Years	1	1	2	4	5	4	4	1	2	3	4	2
Dry Water Years	1	1	3	4	3	7	4	1	1	1	1	-1
Critical Water Years	0	2	3	5	4	11	9	2	0	-4	-5	-4

Table G.3-1-8-A. Barker Slough at North Bay Aqueduct, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	90	94	121	137	183	187	117	68	62	61	75	74
1%	88	92	114	137	155	149	112	68	61	61	74	74
5%	84	87	102	123	130	132	104	61	58	59	70	71
10%	81	84	97	112	122	125	101	58	56	53	67	69
25%	73	78	89	94	102	115	91	55	48	43	51	57
50%	68	72	84	66	73	87	82	51	46	41	49	54
75%	63	67	76	52	51	68	72	48	43	40	47	53
99.9%	56	60	63	44	42	52	55	34	40	36	46	49

Table G.3-1-8-B. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), Alternative 4

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	70	73	84	74	80	92	83	52	47	43	52	57
Wet Water Years	67	72	84	62	62	74	76	49	43	40	48	53
Above Normal Water Years	69	74	86	76	83	90	79	49	44	41	48	53
Below Normal Water Years	69	73	83	72	75	84	79	51	46	42	49	55
Dry Water Years	69	72	81	78	89	105	88	52	47	42	50	56
Critical Water Years	75	76	86	93	102	117	93	58	57	55	67	69

Table G.3-1-8-C. Barker Slough at North Bay Aqueduct, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	2	0	-2	1	0	0	5	0	0	-1	0	-2
1%	-1	-1	-1	4	0	0	0	-1	0	-1	2	-2
5%	-1	1	-1	0	0	0	0	0	0	1	0	-1
10%	0	0	-2	-1	0	-2	0	0	0	2	0	3
25%	1	1	0	-1	-2	1	0	0	0	0	0	0
50%	0	0	0	0	0	-1	0	0	0	0	0	0
75%	0	0	0	0	0	0	-1	0	0	0	0	0
99.9%	-3	-2	0	0	0	0	0	0	0	0	1	0

Table G.3-1-8-D. Barker Slough at North Bay Aqueduct, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	0	0	0	0	0	0	0	0	0	0	0	0
Wet Water Years	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal Water Years	0	0	-1	0	0	0	0	0	0	0	0	0
Below Normal Water Years	0	0	-1	0	0	0	0	0	0	0	0	0
Dry Water Years	0	0	-1	0	0	0	0	0	0	0	1	1
Critical Water Years	0	0	0	0	-1	0	2	0	0	0	0	1

Table G.3-2-1-A. Banks Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	546	610	711	646	574	473	346	356	498	529	613	613
1%	544	607	695	645	563	401	312	325	471	522	570	549
5%	500	564	665	604	425	361	292	245	341	450	515	510
10%	488	533	590	525	384	309	272	219	268	383	466	493
25%	459	457	504	384	296	278	241	185	161	182	314	434
50%	411	367	414	281	234	255	222	168	143	151	210	330
75%	132	144	231	190	173	152	129	120	132	121	130	152
99.9%	70	22	6	4	3	5	2	1	8	80	94	88

Table G.3-2-1-B. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	310	313	381	297	230	220	185	148	161	183	243	308
Wet Water Years	278	252	234	166	135	118	84	62	110	126	129	143
Above Normal Water Years	308	287	401	277	207	203	182	149	138	113	130	161
Below Normal Water Years	254	269	401	303	233	247	199	160	143	149	236	418
Dry Water Years	331	345	468	376	282	264	235	178	142	174	296	381
Critical Water Years	399	449	471	420	336	321	276	242	320	394	472	491

Table G.3-2-2-A. Banks Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	613	680	627	648	600	432	312	254	413	521	464	539
1%	579	647	624	643	593	426	291	237	357	463	456	507
5%	548	605	597	587	499	379	270	229	282	347	387	479
10%	513	591	583	526	424	333	264	208	233	257	359	452
25%	487	507	551	450	338	257	229	177	167	192	304	432
50%	453	450	439	278	202	189	200	154	132	148	237	410
75%	417	373	214	148	131	133	127	110	114	116	191	368
99.9%	71	22	6	5	3	4	2	1	7	87	95	85

Table G.3-2-2-B. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 1

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	435	425	393	297	229	197	175	136	145	169	250	392
Wet Water Years	398	349	235	151	115	100	82	59	97	128	173	359
Above Normal Water Years	469	451	413	254	168	161	170	134	115	106	199	435
Below Normal Water Years	428	411	386	286	236	198	184	149	134	146	263	385
Dry Water Years	449	452	485	407	294	236	220	168	145	179	300	396
Critical Water Years	454	511	520	438	376	339	263	212	265	307	339	414

Table G.3-2-2-C. Banks Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	67	70	-84	2	25	-40	-34	-103	-85	-7	-148	-74
1%	35	40	-71	-2	31	25	-22	-88	-114	-59	-114	-42
5%	48	42	-68	-17	74	18	-22	-16	-60	-103	-128	-31
10%	25	58	-7	1	39	24	-8	-11	-35	-126	-107	-41
25%	28	49	47	66	42	-21	-13	-9	7	11	-10	-2
50%	43	83	24	-3	-32	-65	-22	-14	-11	-3	27	81
75%	285	230	-17	-42	-41	-19	-3	-10	-17	-6	61	215
99.9%	1	0	0	0	0	0	0	0	-1	6	1	-3

Table G.3-2-2-D. Banks Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	125	111	11	0	-1	-23	-10	-12	-16	-14	7	85
Wet Water Years	120	97	1	-15	-20	-18	-1	-3	-13	2	44	217
Above Normal Water Years	160	165	12	-23	-39	-41	-12	-14	-23	-7	70	274
Below Normal Water Years	175	142	-15	-17	4	-48	-15	-11	-9	-3	27	-33
Dry Water Years	118	107	17	31	12	-28	-15	-10	3	5	4	16
Critical Water Years	55	62	49	18	40	19	-13	-30	-55	-88	-134	-77

Table G.3-2-3-A. Banks Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	545	620	728	637	577	442	333	334	501	542	549	546
1%	545	620	672	633	563	423	319	320	448	540	545	528
5%	509	579	626	582	426	357	291	249	358	414	513	515
10%	492	564	573	526	372	311	272	217	256	359	467	484
25%	461	469	506	382	290	281	237	181	169	188	301	433
50%	404	350	409	284	237	257	218	162	149	149	226	355
75%	134	143	229	191	174	149	134	113	132	121	140	166
99.9%	71	22	6	4	3	5	2	1	7	87	95	84

Table G.3-2-3-B. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	312	315	378	297	229	221	183	143	162	182	248	313
Wet Water Years	275	247	229	165	133	116	84	59	109	129	137	149
Above Normal Water Years	315	287	382	281	207	201	176	138	138	108	144	173
Below Normal Water Years	257	272	389	300	234	248	199	155	147	150	248	415
Dry Water Years	334	344	473	374	281	267	233	174	150	179	305	396
Critical Water Years	400	465	482	420	333	324	272	235	313	377	450	480

Table G.3-2-3-C. Banks Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-1	11	18	-9	2	-30	-13	-22	3	13	-64	-67
1%	1	13	-22	-12	0	22	7	-5	-23	18	-25	-21
5%	9	15	-39	-22	1	-4	-1	4	17	-35	-1	5
10%	4	31	-16	1	-13	2	0	-3	-12	-24	1	-9
25%	1	12	3	-1	-7	4	-5	-4	9	6	-12	-1
50%	-7	-17	-6	4	3	3	-5	-7	7	-1	16	25
75%	2	0	-2	1	1	-3	5	-7	0	0	10	14
99.9%	2	0	0	0	0	0	0	0	0	7	0	-4

Table G.3-2-3-D. Banks Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	2	2	-3	0	-1	1	-2	-5	1	-1	5	5
Wet Water Years	-3	-5	-5	0	-2	-2	0	-2	-1	3	8	7
Above Normal Water Years	7	0	-20	4	0	-1	-5	-10	0	-5	14	12
Below Normal Water Years	3	3	-12	-3	1	2	0	-5	3	1	12	-4
Dry Water Years	3	-1	5	-2	0	3	-2	-3	9	5	10	16
Critical Water Years	1	16	11	0	-3	4	-4	-6	-7	-17	-22	-12

Table G.3-2-4-A. Banks Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	560	614	728	637	577	428	307	254	395	531	474	516
1%	546	600	673	632	563	423	291	249	351	451	470	509
5%	529	582	626	596	426	363	275	221	255	324	418	468
10%	494	563	575	527	376	321	256	205	223	263	365	451
25%	463	475	500	381	290	285	235	181	166	188	277	411
50%	410	345	410	287	239	257	219	162	149	149	221	352
75%	134	143	229	191	174	151	134	113	132	121	140	166
99.9%	71	22	6	4	3	5	2	1	7	87	95	84

Table G.3-2-4-B. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	314	316	376	298	230	223	181	139	153	168	228	301
Wet Water Years	274	246	228	165	133	117	85	59	109	129	137	149
Above Normal Water Years	314	288	380	283	208	202	177	138	138	108	144	172
Below Normal Water Years	260	275	394	303	234	247	199	156	148	152	245	405
Dry Water Years	337	344	466	370	281	267	233	175	150	179	304	396
Critical Water Years	409	465	474	428	341	338	258	207	253	293	330	419

Table G.3-2-4-C. Banks Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	14	5	17	-9	2	-44	-39	-102	-103	2	-139	-97
1%	2	-8	-22	-12	0	22	-21	-76	-120	-71	-100	-40
5%	29	19	-39	-8	1	2	-17	-24	-86	-125	-97	-42
10%	6	29	-14	2	-9	12	-16	-15	-45	-120	-101	-42
25%	4	18	-3	-2	-7	8	-6	-4	6	6	-37	-22
50%	-1	-22	-5	6	6	2	-3	-7	6	-1	11	22
75%	2	0	-2	1	1	-1	5	-7	0	0	9	13
99.9%	2	0	0	0	0	0	0	0	0	7	0	-4

Table G.3-2-4-D. Banks Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	4	2	-6	1	0	3	-4	-9	-8	-14	-15	-7
Wet Water Years	-4	-6	-5	0	-2	-1	1	-2	-1	2	8	7
Above Normal Water Years	6	2	-21	6	1	-1	-5	-10	0	-5	15	12
Below Normal Water Years	6	7	-7	1	1	1	0	-4	4	3	9	-13
Dry Water Years	5	-1	-2	-6	-1	3	-2	-3	8	5	9	15
Critical Water Years	10	16	3	8	4	17	-18	-34	-67	-101	-143	-73

Table G.3-2-5-A. Banks Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	611	642	732	642	753	462	326	261	397	544	474	511
1%	567	633	718	632	573	432	298	251	349	455	473	511
5%	550	598	635	575	432	403	290	227	257	324	415	496
10%	520	566	583	493	374	364	281	209	223	262	364	465
25%	464	461	509	382	291	333	256	189	168	185	292	422
50%	418	351	410	286	241	272	234	172	152	150	226	359
75%	133	144	228	191	174	160	134	115	135	124	139	164
99.9%	71	22	6	4	3	5	2	1	8	89	95	84

Table G.3-2-5-B. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	318	317	378	296	234	245	193	145	155	170	231	306
Wet Water Years	280	252	231	166	133	121	85	61	109	129	135	148
Above Normal Water Years	318	293	382	283	208	224	193	149	142	115	146	168
Below Normal Water Years	268	271	399	306	236	288	217	163	150	152	249	416
Dry Water Years	334	345	468	364	283	300	256	186	153	180	314	410
Critical Water Years	415	466	472	423	357	349	262	209	254	294	331	424

Table G.3-2-5-C. Banks Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	65	32	21	-3	179	-11	-20	-95	-101	16	-139	-102
1%	23	25	23	-13	10	31	-14	-75	-122	-67	-97	-38
5%	50	34	-30	-29	7	43	-2	-18	-84	-125	-99	-13
10%	31	33	-7	-32	-10	55	9	-10	-45	-121	-101	-28
25%	5	3	6	-1	-6	55	14	4	7	4	-22	-12
50%	7	-16	-5	5	7	17	12	4	9	-1	16	29
75%	2	0	-3	1	1	8	5	-5	4	3	9	11
99.9%	2	0	0	0	0	0	0	0	0	9	0	-4

Table G.3-2-5-D. Banks Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	8	4	-3	-1	4	25	8	-3	-6	-13	-12	-2
Wet Water Years	2	0	-3	0	-2	3	2	-1	-1	3	6	6
Above Normal Water Years	10	6	-19	6	1	21	11	0	3	3	16	7
Below Normal Water Years	14	2	-2	3	3	42	17	3	7	3	13	-3
Dry Water Years	3	0	0	-12	1	36	22	9	11	6	18	29
Critical Water Years	16	17	1	3	21	29	-14	-33	-65	-100	-141	-67

Table G.3-2-6-A. Banks Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	640	644	731	642	754	463	325	258	371	524	478	504
1%	621	633	715	638	568	435	298	250	292	386	478	499
5%	556	600	623	578	436	403	290	218	241	297	416	491
10%	498	566	581	484	387	366	281	211	213	259	359	474
25%	464	456	499	373	289	333	255	192	165	188	286	423
50%	417	366	411	286	240	275	234	172	148	154	224	357
75%	133	144	229	191	174	160	133	115	133	124	137	162
99.9%	71	22	6	4	3	5	2	1	8	89	95	83

Table G.3-2-6-B. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	318	317	377	296	234	245	193	145	150	169	229	306
Wet Water Years	281	252	231	167	133	121	85	61	109	130	135	148
Above Normal Water Years	314	293	383	282	208	224	193	149	140	112	137	165
Below Normal Water Years	271	280	396	304	237	288	216	162	146	156	245	416
Dry Water Years	334	343	465	358	280	300	256	187	149	183	319	411
Critical Water Years	414	459	472	428	364	351	262	206	237	280	326	422

Table G.3-2-6-C. Banks Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	94	34	20	-4	180	-10	-21	-98	-127	-4	-135	-109
1%	77	26	20	-7	5	34	-14	-75	-179	-136	-92	-50
5%	56	36	-42	-27	11	43	-2	-27	-100	-152	-99	-19
10%	10	33	-9	-41	3	57	9	-8	-55	-124	-107	-19
25%	5	-1	-4	-11	-7	55	14	6	4	7	-28	-10
50%	6	-1	-4	6	7	20	11	4	5	4	14	27
75%	1	1	-2	1	1	8	4	-5	2	3	7	10
99.9%	2	0	0	0	0	0	0	0	0	9	0	-5

Table G.3-2-6-D. Banks Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	8	4	-5	-2	4	25	8	-3	-11	-14	-14	-2
Wet Water Years	3	0	-2	1	-2	3	1	-1	-1	3	5	6
Above Normal Water Years	6	6	-18	5	1	21	11	0	1	-1	7	4
Below Normal Water Years	18	11	-5	1	4	42	17	2	3	7	9	-3
Dry Water Years	2	-2	-3	-18	-2	36	21	10	7	9	23	30
Critical Water Years	15	10	1	8	28	30	-14	-36	-83	-115	-147	-69

Table G.3-2-7-A. Banks Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	480	574	557	505	545	443	330	292	365	300	336	340
1%	478	572	544	472	454	440	325	280	294	287	324	337
5%	433	545	508	430	389	417	317	270	272	258	312	321
10%	390	504	468	400	362	401	311	264	258	251	247	271
25%	275	382	422	319	309	340	298	258	243	236	212	156
50%	222	288	328	263	238	241	227	187	224	191	158	137
75%	154	174	206	198	184	141	118	117	179	155	144	122
99.9%	67	18	6	4	3	4	2	1	2	98	110	91

Table G.3-2-7-B. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 3

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	231	289	310	257	230	238	200	170	200	194	180	161
Wet Water Years	190	226	254	174	133	116	76	57	132	197	176	130
Above Normal Water Years	241	268	302	255	205	212	172	154	207	204	169	139
Below Normal Water Years	209	259	291	264	261	278	217	196	209	198	169	137
Dry Water Years	240	318	328	294	281	292	278	231	230	155	143	138
Critical Water Years	305	409	411	342	310	349	306	263	255	233	263	294

Table G.3-2-7-C. Banks Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-66	-36	-153	-140	-29	-30	-16	-65	-133	-228	-277	-273
1%	-66	-35	-151	-173	-108	39	13	-45	-177	-235	-246	-212
5%	-67	-19	-157	-174	-36	56	25	25	-69	-191	-203	-189
10%	-99	-30	-122	-125	-22	92	39	45	-10	-132	-219	-222
25%	-184	-75	-81	-64	13	63	57	73	82	54	-102	-278
50%	-189	-79	-87	-17	5	-14	5	18	81	40	-52	-193
75%	22	30	-25	8	12	-11	-11	-3	48	34	14	-30
99.9%	-2	-4	0	0	0	-1	0	0	-6	18	16	3

Table G.3-2-7-D. Banks Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	-79	-24	-71	-40	0	18	15	22	39	11	-63	-147
Wet Water Years	-88	-26	20	8	-2	-1	-8	-5	22	71	47	-13
Above Normal Water Years	-67	-18	-99	-22	-2	10	-10	5	69	91	40	-22
Below Normal Water Years	-45	-10	-110	-39	28	31	17	36	66	49	-67	-281
Dry Water Years	-92	-26	-140	-82	-1	28	44	53	89	-19	-152	-243
Critical Water Years	-94	-40	-60	-78	-26	28	31	21	-65	-161	-209	-197

Table G.3-2-8-A. Banks Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	545	620	670	632	582	467	379	361	453	552	563	547
1%	545	618	628	614	563	405	313	328	450	538	543	540
5%	519	586	576	557	406	350	291	246	339	430	512	511
10%	494	564	535	522	373	311	272	217	264	357	462	487
25%	466	477	496	370	286	279	236	181	162	188	300	434
50%	411	358	408	269	224	249	217	161	149	149	218	356
75%	134	143	235	194	166	149	134	113	132	120	140	165
99.9%	71	22	6	4	3	5	2	1	7	86	95	84

Table G.3-2-8-B. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 4

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	314	317	368	290	223	217	183	144	161	181	248	314
Wet Water Years	281	251	231	168	130	113	84	59	109	129	137	149
Above Normal Water Years	313	285	369	274	199	196	176	138	138	108	144	171
Below Normal Water Years	259	277	376	290	225	245	199	155	145	148	248	420
Dry Water Years	333	344	453	366	273	264	232	174	149	177	303	400
Critical Water Years	405	466	468	405	326	319	274	237	306	382	449	481

Table G.3-2-8-C. Banks Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-1	10	-41	-14	8	-5	33	5	-45	24	-50	-66
1%	1	11	-67	-30	0	4	1	3	-21	16	-27	-9
5%	19	22	-90	-47	-19	-11	-1	1	-2	-19	-3	2
10%	5	31	-54	-3	-11	2	1	-3	-4	-26	-4	-6
25%	7	20	-8	-13	-10	2	-5	-4	1	6	-14	0
50%	0	-9	-7	-11	-10	-5	-5	-7	6	-1	9	26
75%	2	-1	4	4	-7	-3	5	-7	0	-1	10	12
99.9%	2	0	0	0	0	0	0	0	0	6	0	-4

Table G.3-2-8-D. Banks Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	4	4	-14	-7	-7	-3	-2	-5	-1	-1	4	6
Wet Water Years	3	0	-2	2	-5	-5	0	-2	-1	3	8	6
Above Normal Water Years	5	-2	-32	-3	-8	-7	-6	-11	0	-5	14	11
Below Normal Water Years	6	9	-25	-12	-8	-1	-1	-6	2	-1	12	1
Dry Water Years	2	-1	-15	-10	-8	0	-3	-3	7	3	8	19
Critical Water Years	5	17	-3	-15	-10	-1	-1	-5	-13	-12	-23	-11

Table G.3-3-1-A. Jones Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	524	594	660	614	565	466	336	342	484	516	602	597
1%	522	586	641	591	554	408	320	319	460	515	562	542
5%	483	549	623	576	428	383	309	253	334	441	510	495
10%	471	515	558	498	388	339	289	234	274	384	455	482
25%	446	448	473	396	316	300	257	198	178	200	314	424
50%	397	378	419	290	250	278	233	178	164	174	220	325
75%	172	200	253	209	176	154	129	123	147	154	164	177
99.9%	79	21	7	5	3	7	4	2	5	96	117	122

Table G.3-3-1-B. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	319	335	376	302	242	234	193	155	173	204	258	313
Wet Water Years	291	281	249	179	143	121	85	62	118	157	161	169
Above Normal Water Years	319	316	395	290	222	213	185	153	155	149	162	183
Below Normal Water Years	272	301	390	311	246	264	208	168	161	175	247	406
Dry Water Years	337	358	451	375	298	285	248	190	162	190	296	374
Critical Water Years	394	450	450	410	344	341	291	250	318	390	467	482

Table G.3-3-2-A. Jones Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	589	626	593	593	578	445	319	265	399	507	455	512
1%	558	623	586	590	565	441	300	247	350	458	441	474
5%	529	586	566	561	481	396	285	238	283	345	383	452
10%	489	567	551	518	438	353	280	222	243	266	359	431
25%	460	489	524	433	347	287	240	188	186	207	303	416
50%	428	439	441	297	233	226	212	169	156	176	249	396
75%	396	377	245	186	161	144	129	115	137	149	209	351
99.9%	79	21	7	5	3	6	4	2	5	97	117	120

Table G.3-3-2-B. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 1

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	415	423	389	307	245	219	183	144	162	192	260	377
Wet Water Years	383	357	256	174	130	110	84	60	109	159	196	338
Above Normal Water Years	447	450	409	275	197	182	176	142	141	145	220	412
Below Normal Water Years	405	411	377	300	254	228	193	158	157	173	269	375
Dry Water Years	426	442	468	403	312	268	232	179	166	195	300	386
Critical Water Years	439	499	501	431	380	361	278	226	271	309	338	405

Table G.3-3-2-C. Jones Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	65	32	-67	-21	14	-21	-18	-77	-85	-9	-147	-85
1%	36	37	-55	-2	11	33	-20	-73	-110	-58	-121	-69
5%	46	37	-57	-15	53	13	-24	-15	-52	-95	-127	-43
10%	18	51	-6	21	51	14	-9	-12	-31	-119	-96	-51
25%	15	40	51	37	31	-12	-16	-10	8	7	-11	-8
50%	31	61	23	8	-18	-52	-20	-9	-8	2	29	71
75%	224	177	-8	-24	-15	-10	0	-8	-10	-5	45	174
99.9%	0	0	0	0	0	-1	0	0	0	1	0	-1

Table G.3-3-2-D. Jones Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	96	88	14	4	3	-15	-10	-11	-12	-12	2	64
Wet Water Years	92	76	7	-6	-13	-11	0	-2	-9	2	34	169
Above Normal Water Years	128	134	14	-15	-25	-30	-9	-11	-15	-4	58	228
Below Normal Water Years	133	110	-13	-10	8	-36	-15	-10	-4	-2	22	-32
Dry Water Years	89	84	17	28	14	-17	-16	-11	4	5	3	12
Critical Water Years	45	49	51	21	36	19	-13	-25	-47	-81	-128	-77

Table G.3-3-3-A. Jones Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	526	603	671	604	565	450	331	323	485	535	546	536
1%	524	597	623	584	556	424	318	315	429	527	537	519
5%	492	561	591	555	426	379	309	256	349	409	510	506
10%	470	545	544	492	384	342	288	230	261	341	451	470
25%	447	458	477	390	311	305	253	194	188	206	303	421
50%	379	360	423	297	254	279	229	172	168	177	234	349
75%	171	200	253	211	176	154	132	117	150	155	172	190
99.9%	80	21	7	5	3	7	4	2	5	96	116	120

Table G.3-3-3-B. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	320	337	373	302	241	235	192	151	175	203	262	317
Wet Water Years	288	278	245	179	141	120	85	60	118	160	167	174
Above Normal Water Years	325	317	380	295	222	212	182	146	155	145	174	194
Below Normal Water Years	275	304	381	308	247	265	208	164	164	176	258	403
Dry Water Years	339	358	455	374	297	287	247	188	169	194	305	388
Critical Water Years	395	462	461	413	346	347	287	244	311	372	443	470

Table G.3-3-3-C. Jones Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	2	9	11	-11	0	-15	-5	-19	1	19	-57	-61
1%	2	12	-18	-7	3	17	-1	-4	-31	11	-25	-24
5%	9	13	-33	-21	-1	-4	0	3	15	-31	-1	11
10%	0	29	-14	-6	-4	3	-1	-3	-14	-43	-4	-12
25%	2	10	4	-7	-5	5	-3	-4	9	5	-11	-2
50%	-18	-18	4	7	3	1	-4	-6	5	3	14	24
75%	0	1	0	2	0	-1	4	-6	3	1	8	12
99.9%	1	0	0	0	0	0	0	0	0	0	-1	-2

Table G.3-3-3-D. Jones Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	1	2	-2	0	0	1	-1	-4	1	-1	4	3
Wet Water Years	-3	-3	-4	-1	-2	-2	0	-1	0	3	6	4
Above Normal Water Years	6	1	-15	4	0	-1	-3	-7	0	-4	12	11
Below Normal Water Years	2	4	-10	-3	1	1	1	-3	3	1	11	-4
Dry Water Years	2	0	4	-1	-1	2	-1	-2	7	4	8	14
Critical Water Years	1	13	11	3	2	6	-4	-6	-7	-17	-24	-13

Table G.3-3-4-A. Jones Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	537	597	671	604	565	443	314	264	387	518	461	507
1%	525	577	623	588	556	441	299	256	347	446	461	495
5%	512	562	591	555	455	404	288	233	255	319	406	452
10%	479	548	548	503	384	345	273	223	236	272	363	440
25%	445	464	478	389	307	305	252	194	186	202	280	402
50%	395	356	420	299	254	280	231	172	168	177	230	347
75%	171	200	253	211	176	155	132	117	150	155	172	188
99.9%	80	21	7	5	3	7	4	2	5	96	116	120

Table G.3-3-4-B. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	322	337	372	303	242	237	190	148	166	191	242	305
Wet Water Years	288	277	245	179	141	121	85	61	118	160	167	174
Above Normal Water Years	324	318	379	296	223	212	182	146	155	145	174	194
Below Normal Water Years	277	307	387	311	247	262	208	165	165	177	255	394
Dry Water Years	341	358	448	370	297	287	247	188	169	194	304	388
Critical Water Years	402	461	460	417	346	361	274	221	259	293	327	410

Table G.3-3-4-C. Jones Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	13	3	11	-10	0	-23	-23	-78	-97	2	-141	-91
1%	3	-9	-18	-3	3	33	-20	-63	-113	-69	-101	-47
5%	28	13	-32	-21	27	21	-21	-20	-79	-122	-104	-43
10%	8	32	-10	6	-4	6	-16	-11	-39	-113	-92	-42
25%	0	16	5	-7	-10	5	-5	-4	8	2	-35	-22
50%	-2	-22	1	9	3	2	-1	-6	5	2	10	22
75%	0	1	0	2	0	1	4	-6	3	1	8	11
99.9%	1	0	0	0	0	1	0	0	0	0	-1	-2

Table G.3-3-4-D. Jones Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	3	2	-3	1	0	3	-3	-7	-7	-14	-16	-8
Wet Water Years	-4	-4	-5	-1	-2	-1	1	-1	0	3	6	4
Above Normal Water Years	4	2	-16	6	1	0	-3	-7	0	-4	12	11
Below Normal Water Years	5	6	-4	0	1	-2	0	-2	4	3	7	-13
Dry Water Years	4	-1	-3	-5	-1	2	-1	-2	7	4	8	14
Critical Water Years	8	11	10	7	2	19	-17	-29	-59	-96	-140	-73

Table G.3-3-5-A. Jones Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	586	613	673	604	713	464	328	269	389	528	461	495
1%	540	606	663	590	567	456	313	258	345	449	460	486
5%	525	576	595	537	455	421	304	238	257	319	410	472
10%	501	551	552	482	384	400	296	228	236	271	356	455
25%	445	450	480	391	307	362	275	204	186	200	294	412
50%	398	363	423	300	256	291	243	183	171	177	237	353
75%	171	203	250	211	176	160	133	121	153	156	171	185
99.9%	80	21	7	5	3	7	4	2	5	96	116	120

Table G.3-3-5-B. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	325	339	375	301	245	260	201	153	168	192	245	310
Wet Water Years	292	282	247	179	141	126	86	62	118	160	166	173
Above Normal Water Years	328	322	381	296	223	236	196	154	158	151	176	191
Below Normal Water Years	285	303	391	313	249	308	224	171	167	177	259	403
Dry Water Years	339	358	451	364	298	323	269	200	171	195	313	400
Critical Water Years	408	463	460	411	362	370	277	223	260	294	328	414

Table G.3-3-5-C. Jones Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	62	19	13	-10	148	-2	-8	-73	-96	12	-141	-102
1%	18	21	22	-1	14	48	-7	-62	-115	-67	-102	-57
5%	42	27	-28	-39	27	38	-5	-15	-77	-122	-101	-23
10%	30	36	-6	-16	-4	61	7	-5	-39	-113	-99	-27
25%	0	2	7	-5	-10	62	18	6	8	0	-20	-12
50%	0	-15	4	11	5	14	10	5	7	3	16	28
75%	-1	4	-3	2	0	6	4	-2	5	2	7	8
99.9%	1	0	0	0	0	0	0	0	0	0	-1	-2

Table G.3-3-5-D. Jones Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	6	4	-1	-1	3	26	8	-1	-6	-12	-13	-3
Wet Water Years	1	1	-2	0	-2	4	2	0	0	3	5	4
Above Normal Water Years	8	6	-14	6	1	23	11	1	3	3	14	8
Below Normal Water Years	13	2	1	3	3	44	16	4	6	3	11	-3
Dry Water Years	2	0	0	-11	0	38	21	9	9	5	16	26
Critical Water Years	14	14	10	2	18	29	-14	-28	-58	-96	-138	-68

Table G.3-3-6-A. Jones Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	613	614	672	609	714	464	328	267	365	509	470	489
1%	596	608	660	592	567	458	313	257	290	382	464	482
5%	531	577	591	537	454	419	304	237	244	297	405	472
10%	482	551	534	465	387	400	296	226	227	268	357	456
25%	448	449	480	391	307	361	273	206	183	202	292	414
50%	393	380	418	302	255	296	243	184	167	178	233	350
75%	170	203	251	211	176	160	132	121	153	159	170	185
99.9%	80	21	7	5	3	7	4	2	5	96	116	120

Table G.3-3-6-B. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	326	339	372	301	245	261	201	153	164	191	244	310
Wet Water Years	293	282	247	180	141	125	86	61	118	161	166	173
Above Normal Water Years	324	321	382	296	223	236	196	155	156	150	168	188
Below Normal Water Years	288	310	384	311	249	308	223	171	164	181	255	403
Dry Water Years	338	357	449	358	295	325	269	201	167	198	317	401
Critical Water Years	407	457	456	416	368	372	277	221	245	281	323	412

Table G.3-3-6-C. Jones Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	89	19	12	-5	149	-1	-8	-75	-119	-7	-132	-108
1%	74	22	18	1	14	50	-7	-62	-169	-134	-98	-61
5%	48	28	-33	-39	27	36	-5	-17	-90	-143	-106	-23
10%	11	36	-24	-33	-1	61	7	-7	-47	-117	-98	-26
25%	2	1	7	-5	-9	62	16	8	5	2	-22	-10
50%	-4	2	0	12	5	18	10	6	3	3	13	25
75%	-1	4	-2	2	0	6	4	-2	5	4	5	7
99.9%	1	0	0	0	0	0	0	0	0	0	-1	-2

Table G.3-3-6-D. Jones Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	7	4	-3	-2	3	27	8	-1	-10	-13	-15	-4
Wet Water Years	2	1	-2	1	-2	4	2	0	0	3	4	4
Above Normal Water Years	5	5	-13	5	1	23	11	2	1	1	6	5
Below Normal Water Years	16	10	-6	1	3	44	15	4	2	7	8	-3
Dry Water Years	2	-1	-2	-16	-3	40	21	11	5	8	21	27
Critical Water Years	13	7	5	6	24	30	-13	-30	-73	-109	-144	-70

Table G.3-3-7-A. Jones Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	468	549	552	513	551	454	332	289	360	301	334	339
1%	463	548	539	465	478	452	330	288	297	292	324	337
5%	425	518	485	428	390	438	321	282	281	264	313	321
10%	385	492	462	402	376	422	319	277	269	259	251	275
25%	286	385	415	331	331	357	307	265	254	242	218	174
50%	238	317	353	281	257	265	231	188	234	200	173	156
75%	185	207	226	219	195	144	122	120	191	167	158	142
99.9%	76	19	8	5	3	6	5	3	3	98	131	119

Table G.3-3-7-B. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 3

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	249	309	320	271	244	252	205	175	206	203	192	178
Wet Water Years	216	257	272	189	142	119	78	59	132	206	191	152
Above Normal Water Years	258	292	318	278	220	220	175	156	210	213	183	158
Below Normal Water Years	231	288	303	281	276	293	220	198	217	208	183	158
Dry Water Years	255	329	337	307	299	313	285	237	243	166	155	155
Critical Water Years	311	408	396	343	326	372	314	272	263	237	265	295

Table G.3-3-7-C. Jones Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-56	-45	-108	-101	-14	-12	-5	-53	-125	-215	-268	-258
1%	-59	-37	-102	-126	-75	44	11	-31	-162	-223	-238	-206
5%	-59	-31	-139	-148	-38	55	12	29	-53	-177	-198	-174
10%	-85	-23	-96	-95	-12	83	30	43	-5	-125	-204	-208
25%	-159	-64	-58	-65	15	57	50	67	76	42	-97	-249
50%	-160	-61	-66	-8	6	-12	-2	10	71	26	-47	-169
75%	14	8	-27	9	19	-10	-7	-3	43	13	-6	-35
99.9%	-3	-1	0	0	0	-1	1	0	-2	2	14	-3

Table G.3-3-7-D. Jones Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	-70	-26	-56	-31	2	17	12	20	33	-2	-67	-136
Wet Water Years	-75	-24	23	10	-1	-2	-6	-2	15	49	30	-17
Above Normal Water Years	-61	-24	-76	-13	-2	7	-10	3	55	64	21	-26
Below Normal Water Years	-41	-13	-87	-30	30	29	12	31	56	33	-65	-248
Dry Water Years	-81	-30	-114	-68	2	28	37	47	82	-24	-142	-219
Critical Water Years	-83	-42	-54	-67	-18	30	23	22	-55	-153	-202	-187

Table G.3-3-8-A. Jones Pumping Plant, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	526	602	621	583	565	461	357	342	433	544	555	540
1%	524	592	591	578	561	412	320	321	433	525	536	530
5%	499	564	547	547	423	368	309	254	332	426	506	502
10%	476	542	508	490	381	340	287	233	266	345	450	479
25%	448	468	469	389	308	302	254	194	180	206	300	421
50%	386	374	412	287	243	271	228	171	168	172	232	349
75%	172	200	254	213	174	153	132	118	151	155	172	187
99.9%	80	21	7	5	3	7	4	2	5	96	116	120

Table G.3-3-8-B. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), Alternative 4

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	322	338	364	296	236	232	192	151	173	203	261	318
Wet Water Years	293	282	246	181	138	117	84	60	118	160	167	174
Above Normal Water Years	323	315	369	287	215	207	181	145	155	145	174	193
Below Normal Water Years	277	309	370	299	239	263	208	164	163	174	258	407
Dry Water Years	338	357	438	364	291	285	246	188	167	193	303	391
Critical Water Years	400	463	448	400	340	342	289	246	305	377	442	471

Table G.3-3-8-C. Jones Pumping Plant, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	2	8	-39	-31	1	-5	21	0	-51	28	-47	-57
1%	2	6	-50	-13	7	4	0	2	-27	9	-27	-13
5%	16	16	-77	-29	-4	-15	0	1	-2	-14	-4	7
10%	5	26	-50	-8	-7	1	-1	-1	-8	-39	-5	-3
25%	3	19	-4	-7	-9	3	-3	-4	2	5	-14	-2
50%	-11	-4	-6	-2	-7	-6	-4	-7	4	-2	12	24
75%	0	0	1	3	-2	-2	4	-6	3	1	8	10
99.9%	1	0	0	0	0	0	0	0	0	0	-1	-2

Table G.3-3-8-D. Jones Pumping Plant, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	3	3	-12	-6	-6	-2	-1	-3	-1	-1	3	5
Wet Water Years	2	0	-3	1	-4	-4	0	-2	0	3	6	4
Above Normal Water Years	4	-1	-26	-3	-7	-6	-4	-7	0	-4	12	10
Below Normal Water Years	5	8	-21	-11	-7	-1	0	-4	1	0	10	0
Dry Water Years	1	-1	-13	-10	-7	0	-2	-2	5	3	7	17
Critical Water Years	5	13	-2	-9	-4	0	-2	-4	-13	-12	-24	-12

Table G.3-4-1-A. San Joaquin River at Antioch, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	7462	7677	6113	4964	3743	2409	4204	5611	5008	6034	6663	6813
1%	7451	7473	5948	4819	2636	1951	3651	5455	4941	5810	6023	6476
5%	6779	6913	5168	4259	1809	1103	2185	4007	4680	5419	5671	6249
10%	6505	6458	4765	3739	1255	781	1327	2598	4137	4821	5486	6080
25%	5898	5787	4064	2006	573	183	433	823	1411	2635	4028	5801
50%	4850	3067	2495	440	91	89	98	281	958	1715	3037	4603
75%	811	2399	639	79	71	71	73	87	461	907	1774	1137
99.9%	102	62	51	43	50	43	38	37	47	126	597	265

Table G.3-4-1-B. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	3562	3912	2459	1205	442	266	445	798	1345	2066	3117	3687
Wet Water Years	2903	2801	780	115	71	69	69	122	398	763	1637	1086
Above Normal Water Years	3447	3833	2255	606	121	75	84	203	627	924	1796	1085
Below Normal Water Years	2762	3487	2769	949	294	122	203	386	1128	1844	3237	4917
Dry Water Years	3868	4539	3399	1991	613	289	332	632	1287	2538	3933	5712
Critical Water Years	5258	5463	3821	2748	1282	906	1862	3214	3964	4886	5503	6096

Table G.3-4-2-A. San Joaquin River at Antioch, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	6849	7862	6151	5607	3607	1974	1997	3421	5068	5153	5092	6353
1%	6766	7749	5994	5333	2883	1710	1955	3357	4887	4710	4985	6253
5%	6512	6905	5550	4650	2244	1249	1545	2727	3952	4231	4783	5881
10%	6177	6303	5277	4318	1657	925	969	1767	2119	3369	4694	5789
25%	5502	5759	4808	3412	1050	268	449	916	1420	2529	4040	5401
50%	4939	5238	3387	871	103	98	104	417	884	1689	2981	4681
75%	4112	4344	885	76	72	67	70	89	414	1014	2604	3944
99.9%	121	61	51	43	50	43	38	37	46	122	598	347

Table G.3-4-2-B. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), Alternative 1

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	4715	4692	2905	1626	613	283	351	697	1135	1874	3273	4567
Wet Water Years	4131	3613	1024	187	80	70	73	151	321	808	2395	3615
Above Normal Water Years	4928	4753	2636	761	155	79	87	266	505	986	2585	3990
Below Normal Water Years	4557	4390	3219	1472	483	165	241	513	895	1713	3036	4356
Dry Water Years	4945	5348	4129	2799	921	355	385	719	1332	2496	3928	5347
Critical Water Years	5381	5882	4241	3315	1629	858	1143	2202	3083	3763	4693	5803

Table G.3-4-2-C. San Joaquin River at Antioch, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-613	185	38	643	-136	-436	-2208	-2189	59	-881	-1571	-459
1%	-685	276	46	514	247	-241	-1696	-2098	-54	-1099	-1038	-223
5%	-267	-8	382	391	435	147	-640	-1279	-729	-1189	-887	-369
10%	-328	-155	512	579	402	144	-358	-831	-2018	-1452	-792	-292
25%	-396	-28	745	1406	477	84	16	93	9	-106	11	-400
50%	90	2171	891	431	12	9	6	136	-75	-26	-56	78
75%	3301	1945	246	-3	1	-4	-3	2	-47	107	830	2807
99.9%	19	-1	0	0	0	0	0	0	-1	-4	2	82

Table G.3-4-2-D. San Joaquin River at Antioch, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	1152	780	446	421	170	17	-94	-101	-211	-192	156	879
Wet Water Years	1228	813	244	72	9	0	4	29	-77	44	758	2529
Above Normal Water Years	1481	920	381	155	33	4	3	63	-121	63	789	2905
Below Normal Water Years	1796	903	451	523	189	43	38	127	-233	-131	-200	-561
Dry Water Years	1077	809	731	808	307	66	53	87	45	-42	-5	-365
Critical Water Years	123	420	420	567	347	-48	-718	-1012	-881	-1123	-810	-293

Table G.3-4-3-A. San Joaquin River at Antioch, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	7683	7531	6721	5043	3810	2244	4230	5167	5180	5656	6038	6826
1%	7449	7135	6601	4974	2677	2095	3656	5110	5153	5613	5819	6583
5%	6939	7004	5122	3878	1550	1074	2049	4138	4613	5329	5677	6304
10%	6574	6372	4733	3519	1141	785	1155	2454	4104	4850	5081	6124
25%	5910	5767	4205	1712	527	167	488	920	1515	2679	4081	5868
50%	4693	3025	2175	419	91	89	100	420	936	1720	3031	4896
75%	831	2381	617	79	71	71	72	91	448	990	1855	1192
99.9%	129	62	51	43	50	43	38	37	47	126	605	352

Table G.3-4-3-B. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	3579	3847	2459	1117	405	266	445	837	1338	2065	3139	3743
Wet Water Years	2863	2766	747	102	71	69	71	150	399	794	1742	1133
Above Normal Water Years	3516	3518	2096	599	121	75	85	262	611	977	1885	1151
Below Normal Water Years	2759	3482	2789	957	276	119	218	513	1143	1821	3130	4988
Dry Water Years	3893	4510	3460	1856	526	279	353	709	1326	2563	4008	5800
Critical Water Years	5340	5441	3898	2421	1203	924	1809	3097	3855	4766	5391	6093

Table G.3-4-3-C. San Joaquin River at Antioch, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	221	-146	608	78	67	-165	26	-443	172	-378	-625	13
1%	-1	-337	654	155	41	144	5	-345	212	-197	-203	106
5%	159	91	-46	-381	-259	-29	-136	132	-67	-90	6	55
10%	69	-86	-32	-220	-114	4	-172	-144	-33	29	-405	44
25%	13	-21	141	-293	-45	-16	55	97	104	44	53	67
50%	-157	-42	-320	-21	0	0	2	139	-22	4	-6	294
75%	20	-19	-22	0	0	0	-2	5	-13	82	81	55
99.9%	27	0	0	0	0	0	0	0	0	0	9	87

Table G.3-4-3-D. San Joaquin River at Antioch, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	17	-65	-1	-88	-37	0	0	38	-7	-1	22	56
Wet Water Years	-40	-35	-33	-12	0	0	1	28	1	30	104	47
Above Normal Water Years	69	-314	-159	-7	0	0	1	58	-16	53	89	65
Below Normal Water Years	-3	-5	21	8	-17	-3	15	127	15	-22	-106	71
Dry Water Years	26	-29	61	-135	-87	-10	21	77	39	25	75	88
Critical Water Years	81	-21	78	-328	-79	18	-53	-116	-109	-120	-113	-3

Table G.3-4-4-A. San Joaquin River at Antioch, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	7727	7064	6416	7099	3817	2074	2200	3301	4982	5179	5150	6827
1%	7661	6955	6201	5074	2744	1917	1872	3148	4729	4702	4910	6591
5%	7228	6400	5228	4005	1781	1034	1375	2515	3759	4222	4777	6462
10%	6969	6077	4725	3577	1149	507	906	1583	2119	3351	4598	6226
25%	5942	5739	4150	1702	495	162	364	920	1496	2576	4074	5900
50%	4676	3024	2151	499	91	89	100	419	931	1710	3031	4931
75%	831	2383	617	79	71	71	72	91	448	989	1851	1192
99.9%	129	62	51	43	50	43	38	37	47	126	605	352

Table G.3-4-4-B. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	3618	3777	2439	1160	410	237	331	682	1201	1896	3021	3779
Wet Water Years	2859	2759	746	102	71	69	71	150	399	794	1742	1133
Above Normal Water Years	3534	3500	2069	599	122	75	85	262	611	977	1883	1148
Below Normal Water Years	2836	3403	2873	1000	279	120	218	512	1146	1829	3126	5023
Dry Water Years	3917	4482	3388	1819	523	279	353	709	1327	2560	4008	5803
Critical Water Years	5450	5167	3813	2697	1236	742	1096	2131	2989	3710	4658	6274

Table G.3-4-4-C. San Joaquin River at Antioch, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	265	-613	303	2135	74	-335	-2004	-2310	-26	-856	-1513	14
1%	210	-517	254	255	108	-34	-1779	-2307	-213	-1107	-1113	115
5%	449	-513	60	-254	-27	-69	-810	-1491	-922	-1197	-893	213
10%	464	-381	-40	-162	-105	-274	-421	-1015	-2018	-1469	-887	146
25%	44	-48	86	-304	-77	-21	-69	97	85	-59	46	99
50%	-174	-43	-344	59	0	0	2	138	-27	-5	-6	328
75%	20	-17	-22	0	0	0	-2	5	-13	82	77	55
99.9%	27	0	0	0	0	0	0	0	0	0	9	87

Table G.3-4-4-D. San Joaquin River at Antioch, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	56	-134	-20	-45	-32	-29	-114	-116	-145	-169	-96	91
Wet Water Years	-44	-42	-34	-13	0	0	1	28	1	31	104	47
Above Normal Water Years	87	-332	-186	-7	1	0	1	58	-16	53	87	63
Below Normal Water Years	74	-83	105	51	-15	-3	15	126	18	-14	-111	105
Dry Water Years	50	-57	-11	-172	-90	-10	21	77	40	22	75	91
Critical Water Years	192	-295	-8	-51	-46	-164	-765	-1083	-975	-1176	-845	177

Table G.3-4-5-A. San Joaquin River at Antioch, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	7800	7200	6514	7195	6060	2147	2247	3284	5001	5253	5187	6919
1%	7742	7067	6455	5017	3877	2071	1943	3173	4752	4750	5035	6729
5%	7337	6439	5268	4177	1479	999	1359	2483	3839	4161	4832	6501
10%	6974	6128	4658	3583	1146	553	845	1593	2100	3378	4701	6270
25%	5922	5737	4078	1785	496	132	306	928	1545	2679	4130	5910
50%	4774	3042	2162	550	91	89	98	400	940	1708	3027	4908
75%	830	2432	621	79	71	73	76	93	455	964	1858	1189
99.9%	130	62	51	43	50	43	38	37	47	136	598	345

Table G.3-4-5-B. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	3632	3787	2429	1179	445	226	311	669	1210	1905	3036	3788
Wet Water Years	2914	2786	762	106	71	70	71	151	407	780	1730	1133
Above Normal Water Years	3553	3521	2071	600	122	78	84	229	628	962	1847	1148
Below Normal Water Years	2833	3364	2822	1010	287	106	184	508	1166	1838	3134	5013
Dry Water Years	3897	4491	3352	1850	539	224	295	676	1333	2596	4074	5816
Critical Water Years	5460	5188	3835	2745	1417	767	1097	2132	2990	3738	4698	6321

Table G.3-4-5-C. San Joaquin River at Antioch, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	338	-477	401	2231	2317	-262	-1957	-2327	-7	-781	-1476	106
1%	291	-405	508	198	1240	119	-1708	-2282	-189	-1060	-988	253
5%	558	-474	100	-82	-330	-104	-826	-1524	-842	-1258	-839	252
10%	469	-330	-107	-156	-108	-227	-482	-1005	-2037	-1443	-784	190
25%	24	-50	15	-220	-77	-51	-128	105	134	44	101	109
50%	-75	-25	-333	110	1	0	1	119	-18	-8	-10	306
75%	18	33	-18	0	0	2	2	6	-5	57	84	51
99.9%	28	0	0	0	0	0	0	0	0	10	1	80

Table G.3-4-5-D. San Joaquin River at Antioch, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	70	-125	-30	-26	3	-40	-134	-129	-135	-161	-81	100
Wet Water Years	11	-15	-18	-8	0	0	2	28	9	16	92	47
Above Normal Water Years	106	-311	-184	-6	1	3	0	26	1	38	52	63
Below Normal Water Years	71	-123	54	61	-6	-16	-19	122	38	-5	-103	96
Dry Water Years	29	-48	-47	-141	-74	-65	-36	44	45	58	140	105
Critical Water Years	202	-275	15	-3	135	-140	-765	-1081	-974	-1148	-805	225

Table G.3-4-6-A. San Joaquin River at Antioch, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	7804	8443	6509	7147	6103	2164	2162	3078	4796	5233	5029	6914
1%	7735	7395	6434	4974	3839	2035	1959	2996	4112	4466	4899	6856
5%	7223	6651	5213	4187	1894	963	1252	2100	3332	4127	4808	6492
10%	6977	6161	4500	3637	1200	543	771	1430	1940	3457	4678	6253
25%	5953	5754	4023	1788	453	143	251	730	1463	2662	4117	5896
50%	4840	3044	2252	569	91	88	93	259	948	1765	2970	4904
75%	828	2388	619	78	71	73	75	90	479	923	1859	1191
99.9%	130	62	51	43	50	43	38	37	47	136	597	345

Table G.3-4-6-B. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	3618	3815	2419	1177	457	224	272	551	1143	1894	3017	3770
Wet Water Years	2947	2824	773	109	71	70	71	144	407	776	1719	1130
Above Normal Water Years	3531	3496	2060	597	122	78	82	169	603	940	1798	1140
Below Normal Water Years	2773	3498	2810	967	288	106	132	354	1121	1841	3103	4939
Dry Water Years	3871	4483	3306	1790	546	220	235	538	1258	2611	4081	5809
Critical Water Years	5443	5182	3844	2868	1484	763	1002	1839	2756	3670	4660	6320

Table G.3-4-6-C. San Joaquin River at Antioch, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	342	767	396	2183	2360	-246	-2042	-2533	-212	-801	-1633	101
1%	285	-77	487	155	1203	84	-1692	-2459	-829	-1344	-1124	380
5%	443	-262	45	-72	85	-140	-933	-1907	-1348	-1292	-862	243
10%	472	-297	-265	-101	-55	-238	-556	-1168	-2197	-1363	-808	172
25%	55	-33	-40	-218	-120	-40	-182	-92	52	27	88	95
50%	-9	-23	-244	129	0	-1	-5	-22	-10	50	-67	301
75%	16	-12	-20	0	0	2	1	3	18	15	85	54
99.9%	28	0	0	0	0	0	0	0	0	10	1	80

Table G.3-4-6-D. San Joaquin River at Antioch, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	56	-97	-41	-29	15	-42	-173	-247	-202	-172	-100	83
Wet Water Years	43	23	-7	-5	0	0	2	22	8	13	81	43
Above Normal Water Years	84	-336	-195	-9	1	3	-2	-34	-24	16	2	54
Below Normal Water Years	11	12	41	18	-6	-16	-71	-32	-7	-2	-133	22
Dry Water Years	3	-56	-93	-201	-67	-69	-97	-94	-29	73	148	98
Critical Water Years	184	-281	23	120	202	-143	-860	-1374	-1208	-1216	-843	224

Table G.3-4-7-A. San Joaquin River at Antioch, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	7397	7464	6494	3567	2203	2144	4037	4605	3264	3910	4206	5586
1%	7171	7379	5710	3460	1470	1012	1777	3515	2924	3908	4150	5535
5%	6926	6432	4993	2389	1083	518	1271	2468	2556	3229	3976	5441
10%	6347	6107	4769	1757	454	454	583	1258	2089	2558	3337	4838
25%	4528	5540	2033	774	169	113	201	516	1215	1877	1825	2839
50%	3112	2496	794	112	90	87	93	142	818	1439	1574	2410
75%	694	790	210	77	72	76	76	79	522	852	1132	791
99.9%	75	61	49	43	47	41	36	32	38	90	273	101

Table G.3-4-7-B. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), Alternative 3

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	2884	3130	1503	575	228	172	272	507	966	1531	1735	2230
Wet Water Years	2154	2250	407	82	73	73	72	80	414	637	939	750
Above Normal Water Years	2762	2694	795	137	78	77	89	115	652	1258	1297	749
Below Normal Water Years	2343	2368	1512	432	129	89	119	274	1045	1842	1773	2486
Dry Water Years	3060	3711	2051	745	236	144	173	408	858	1542	1635	2707
Critical Water Years	4614	5035	3208	1726	727	566	1105	2008	2279	2966	3621	5111

Table G.3-4-7-C. San Joaquin River at Antioch, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-66	-213	380	-1397	-1540	-265	-167	-1006	-1745	-2124	-2457	-1227
1%	-280	-94	-237	-1358	-1166	-939	-1874	-1940	-2017	-1902	-1873	-942
5%	147	-481	-175	-1870	-726	-584	-914	-1539	-2124	-2191	-1694	-808
10%	-158	-350	4	-1981	-801	-327	-744	-1340	-2048	-2262	-2149	-1243
25%	-1370	-247	-2031	-1231	-403	-70	-232	-306	-196	-758	-2203	-2962
50%	-1737	-571	-1702	-328	-1	-2	-5	-139	-141	-277	-1463	-2192
75%	-118	-1609	-429	-2	1	5	3	-7	61	-55	-642	-347
99.9%	-27	-1	-2	0	-3	-1	-2	-5	-8	-36	-323	-164

Table G.3-4-7-D. San Joaquin River at Antioch, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	-678	-782	-956	-630	-214	-94	-173	-291	-380	-535	-1382	-1458
Wet Water Years	-749	-550	-373	-32	3	3	3	-43	16	-126	-698	-336
Above Normal Water Years	-685	-1139	-1460	-469	-44	2	5	-88	25	334	-499	-337
Below Normal Water Years	-419	-1119	-1256	-517	-165	-33	-84	-112	-83	-2	-1464	-2432
Dry Water Years	-807	-828	-1347	-1246	-377	-145	-159	-224	-429	-996	-2298	-3005
Critical Water Years	-644	-427	-613	-1022	-555	-340	-757	-1206	-1685	-1920	-1882	-986

Table G.3-4-8-A. San Joaquin River at Antioch, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	7682	7546	6631	5010	3977	2856	4366	5307	5295	5756	5974	6867
1%	7450	7503	6451	4659	3787	2063	3696	5219	5061	5644	5748	6440
5%	6774	6897	4924	3842	1834	1056	1906	3946	4675	5379	5685	6324
10%	6550	6361	4609	3565	1260	853	1157	2464	4124	4860	5050	6161
25%	6049	5818	4117	2001	558	181	479	915	1514	2561	3988	5786
50%	4917	3027	2132	415	89	88	100	417	936	1702	2995	4945
75%	831	2391	615	78	70	70	71	91	448	989	1844	1192
99.9%	128	62	51	43	50	43	38	37	47	125	603	350

Table G.3-4-8-B. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), Alternative 4

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	3619	3881	2356	1136	464	285	451	832	1342	2044	3109	3734
Wet Water Years	2975	2853	725	100	71	69	70	150	398	793	1740	1136
Above Normal Water Years	3501	3522	2025	560	118	75	84	261	612	980	1886	1150
Below Normal Water Years	2808	3508	2686	913	285	121	218	520	1154	1790	3109	5001
Dry Water Years	3910	4498	3322	1979	618	280	350	708	1323	2493	3912	5750
Critical Water Years	5327	5486	3679	2441	1428	1041	1853	3061	3870	4779	5368	6093

Table G.3-4-8-C. San Joaquin River at Antioch, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	219	-131	517	45	234	447	162	-304	286	-278	-688	54
1%	-1	31	503	-160	1150	112	45	-236	120	-166	-275	-37
5%	-5	-16	-244	-417	26	-47	-279	-61	-5	-41	14	75
10%	44	-96	-156	-174	6	72	-170	-134	-13	40	-435	80
25%	151	31	53	-5	-14	-3	45	92	103	-74	-41	-15
50%	67	-40	-364	-25	-2	-1	2	136	-22	-14	-42	343
75%	20	-8	-24	-1	0	-1	-2	5	-13	82	70	55
99.9%	26	0	0	0	0	0	0	0	0	-1	6	85

Table G.3-4-8-D. San Joaquin River at Antioch, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	57	-31	-104	-69	22	19	6	34	-4	-22	-8	47
Wet Water Years	72	52	-55	-14	0	0	1	28	0	30	103	49
Above Normal Water Years	54	-310	-230	-46	-3	0	0	57	-15	56	90	64
Below Normal Water Years	46	22	-83	-35	-9	-1	15	134	26	-54	-128	84
Dry Water Years	42	-41	-76	-12	4	-10	19	77	36	-46	-21	38
Critical Water Years	69	23	-142	-307	146	135	-9	-153	-95	-107	-135	-3

Table G.3-5-1-A. Contra Costa Water District Pumping Plant #1, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	816	863	928	889	746	465	440	603	582	609	724	727
1%	784	840	926	868	713	421	296	496	578	599	659	613
5%	661	793	863	808	551	237	246	275	452	541	552	595
10%	649	762	785	758	404	174	192	211	289	451	497	578
25%	584	606	732	498	263	136	153	137	100	180	331	497
50%	475	470	601	269	132	109	126	112	91	124	200	400
75%	77	138	299	100	96	94	103	97	82	84	107	133
99.9%	64	68	42	24	24	21	19	18	48	57	68	65

Table G.3-5-1-B. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	360	395	510	325	199	127	135	135	130	170	245	335
Wet Water Years	315	309	282	132	125	96	96	80	70	79	106	120
Above Normal Water Years	339	364	528	263	134	111	144	117	86	88	112	133
Below Normal Water Years	269	313	526	337	159	115	135	120	91	131	245	465
Dry Water Years	386	434	648	453	246	128	126	122	95	168	300	445
Critical Water Years	520	610	666	514	357	206	207	285	370	449	525	574

Table G.3-5-2-A. Contra Costa Water District Pumping Plant #1, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	862	1112	1177	911	897	445	288	289	483	588	507	630
1%	790	969	992	868	855	411	277	273	468	495	470	583
5%	747	910	882	838	757	341	234	226	325	366	429	536
10%	661	825	836	766	613	222	174	158	191	288	369	517
25%	598	674	785	635	392	160	123	117	100	164	311	495
50%	536	591	629	321	126	97	102	100	86	112	238	465
75%	491	505	374	97	85	83	89	83	75	84	176	424
99.9%	62	63	40	24	23	20	19	18	49	57	68	67

Table G.3-5-2-B. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), Alternative 1

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	532	574	565	373	254	131	116	108	111	145	247	446
Wet Water Years	484	467	335	139	121	94	86	69	66	78	153	395
Above Normal Water Years	580	613	595	298	122	90	109	97	79	84	192	474
Below Normal Water Years	517	542	561	376	218	107	102	99	87	122	257	429
Dry Water Years	538	608	707	556	361	137	113	109	96	167	305	460
Critical Water Years	585	712	736	573	482	251	193	195	266	309	361	509

Table G.3-5-2-C. Contra Costa Water District Pumping Plant #1, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	46	249	250	22	151	-20	-152	-314	-99	-21	-217	-97
1%	7	129	66	0	141	-10	-19	-222	-110	-104	-190	-29
5%	86	117	19	30	206	104	-12	-49	-127	-175	-123	-59
10%	11	62	51	8	209	47	-18	-54	-98	-163	-128	-61
25%	15	68	53	137	129	24	-30	-21	1	-16	-21	-3
50%	62	121	28	51	-6	-12	-24	-12	-6	-12	38	65
75%	415	367	75	-2	-11	-11	-13	-14	-7	1	69	291
99.9%	-2	-5	-2	0	-1	-2	-1	0	1	0	0	1

Table G.3-5-2-D. Contra Costa Water District Pumping Plant #1, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 1 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	173	178	56	48	55	4	-19	-27	-19	-25	2	111
Wet Water Years	169	158	53	8	-3	-2	-10	-11	-4	-1	47	274
Above Normal Water Years	240	250	67	35	-12	-20	-35	-20	-7	-3	80	341
Below Normal Water Years	248	229	35	38	59	-8	-33	-21	-4	-9	12	-36
Dry Water Years	152	174	59	103	115	10	-13	-13	0	-1	5	14
Critical Water Years	65	102	69	60	125	44	-14	-91	-105	-140	-164	-65

Table G.3-5-3-A. Contra Costa Water District Pumping Plant #1, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	815	853	943	958	759	429	388	568	606	611	605	632
1%	784	852	942	878	716	376	319	489	578	600	605	609
5%	714	826	828	806	440	227	209	295	459	527	571	585
10%	665	767	813	687	396	178	167	178	284	440	504	570
25%	580	609	723	517	242	133	134	120	102	171	325	490
50%	490	411	595	241	135	111	109	101	91	122	207	414
75%	77	137	292	100	95	95	94	85	80	85	117	142
99.9%	65	67	41	24	24	21	19	18	47	57	68	66

Table G.3-5-3-B. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	365	395	503	321	191	126	121	121	128	167	251	342
Wet Water Years	317	303	275	124	125	92	85	69	69	80	111	128
Above Normal Water Years	355	357	480	259	144	113	112	97	84	84	129	150
Below Normal Water Years	272	316	518	330	159	116	115	100	91	132	258	468
Dry Water Years	389	434	657	454	233	126	118	111	97	169	311	465
Critical Water Years	527	619	673	512	323	206	203	271	356	432	504	561

Table G.3-5-3-C. Contra Costa Water District Pumping Plant #1, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-1	-11	15	70	12	-36	-52	-35	24	1	-119	-95
1%	0	12	15	10	3	-46	23	-6	0	1	-55	-4
5%	53	33	-34	-2	-112	-10	-37	19	7	-14	18	-10
10%	16	5	28	-71	-8	4	-25	-33	-6	-11	7	-8
25%	-4	3	-9	19	-21	-4	-19	-17	2	-9	-6	-7
50%	15	-59	-6	-28	3	3	-17	-10	-1	-1	7	14
75%	1	-1	-7	0	-1	1	-8	-12	-2	2	9	9
99.9%	1	-1	-1	0	0	0	0	0	-1	0	0	1

Table G.3-5-3-D. Contra Costa Water District Pumping Plant #1, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 With TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	5	0	-7	-4	-7	-1	-14	-14	-3	-3	5	8
Wet Water Years	2	-6	-7	-8	0	-4	-11	-10	-1	0	5	8
Above Normal Water Years	16	-6	-48	-4	10	3	-32	-20	-2	-4	16	17
Below Normal Water Years	3	3	-9	-7	-1	0	-20	-20	0	1	13	2
Dry Water Years	3	1	9	2	-13	-1	-8	-10	1	0	11	19
Critical Water Years	8	10	6	-2	-34	-1	-4	-14	-14	-17	-22	-13

Table G.3-5-4-A. Contra Costa Water District Pumping Plant #1, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	829	841	983	1121	983	428	285	283	452	599	501	603
1%	818	841	942	988	766	357	263	273	424	490	498	584
5%	739	806	818	806	477	248	206	219	298	352	435	548
10%	689	772	764	687	403	202	167	159	185	293	381	521
25%	613	609	707	541	241	137	134	120	102	163	302	485
50%	495	410	581	250	141	111	109	101	91	119	207	403
75%	77	137	291	100	95	94	94	85	80	85	117	142
99.9%	65	67	41	24	24	21	19	18	47	57	68	66

Table G.3-5-4-B. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	374	394	495	325	196	127	118	108	111	146	225	331
Wet Water Years	315	301	273	124	125	92	84	69	69	80	111	128
Above Normal Water Years	358	358	477	258	141	112	112	97	84	84	129	149
Below Normal Water Years	285	318	518	348	160	116	115	101	91	132	251	456
Dry Water Years	395	432	645	443	231	126	118	111	97	169	310	465
Critical Water Years	558	616	645	535	357	216	184	188	252	301	355	507

Table G.3-5-4-C. Contra Costa Water District Pumping Plant #1, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	14	-22	55	233	236	-38	-156	-320	-130	-10	-223	-124
1%	34	2	15	120	53	-64	-33	-223	-154	-109	-162	-29
5%	78	13	-45	-1	-75	11	-40	-56	-154	-189	-117	-46
10%	40	10	-21	-71	-1	27	-25	-52	-105	-158	-116	-57
25%	29	3	-26	43	-22	1	-19	-17	2	-17	-29	-12
50%	20	-60	-20	-20	9	3	-17	-10	-1	-4	7	4
75%	1	-1	-8	0	-1	1	-8	-11	-2	2	9	9
99.9%	1	-1	-1	0	0	0	0	0	-1	0	0	1

Table G.3-5-4-D. Contra Costa Water District Pumping Plant #1, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Without VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	14	-1	-15	0	-3	0	-17	-27	-19	-24	-20	-3
Wet Water Years	1	-9	-9	-8	0	-4	-12	-10	-1	0	5	8
Above Normal Water Years	19	-5	-51	-4	7	2	-32	-20	-2	-4	16	16
Below Normal Water Years	16	5	-8	10	1	0	-20	-19	0	2	6	-10
Dry Water Years	9	-1	-3	-9	-15	-1	-8	-10	1	1	10	19
Critical Water Years	38	7	-21	21	0	10	-24	-97	-119	-148	-170	-66

Table G.3-5-5-A. Contra Costa Water District Pumping Plant #1, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	860	870	1027	1082	1185	510	314	293	455	620	525	610
1%	832	856	939	985	751	426	274	276	427	499	504	599
5%	789	814	814	779	580	261	248	219	296	351	444	577
10%	704	775	774	734	417	209	224	161	183	302	385	540
25%	609	598	710	505	241	166	175	136	105	164	318	500
50%	501	437	564	264	141	137	147	116	90	124	221	414
75%	77	139	296	100	95	99	109	90	82	85	117	141
99.9%	65	68	41	24	24	21	18	18	47	57	68	66

Table G.3-5-5-B. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	378	398	497	325	202	148	150	119	112	148	230	339
Wet Water Years	322	310	277	125	125	96	100	72	69	79	109	128
Above Normal Water Years	364	364	479	259	141	143	181	119	86	90	128	145
Below Normal Water Years	297	320	527	351	164	156	165	115	93	132	257	468
Dry Water Years	391	434	645	431	234	145	151	127	99	173	324	482
Critical Water Years	557	613	642	541	383	237	190	190	252	302	361	520

Table G.3-5-5-C. Contra Costa Water District Pumping Plant #1, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	44	6	99	194	438	45	-126	-310	-127	10	-199	-117
1%	48	16	13	117	38	5	-21	-219	-151	-100	-156	-13
5%	128	22	-48	-28	29	24	1	-56	-156	-190	-109	-18
10%	54	12	-11	-24	13	34	32	-50	-107	-149	-112	-38
25%	26	-8	-22	6	-22	29	22	-1	6	-16	-14	3
50%	26	-33	-37	-5	9	28	21	4	-1	1	21	15
75%	1	1	-3	1	-1	5	6	-7	0	2	9	8
99.9%	1	-1	-1	0	0	0	-1	0	0	0	0	1

Table G.3-5-5-D. Contra Costa Water District Pumping Plant #1, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Delta VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	18	2	-13	-1	3	21	15	-16	-18	-22	-15	5
Wet Water Years	8	1	-5	-6	0	0	4	-8	-1	0	4	7
Above Normal Water Years	25	1	-49	-4	7	32	37	2	0	3	15	12
Below Normal Water Years	28	7	1	14	5	41	30	-4	1	2	12	3
Dry Water Years	5	0	-3	-21	-12	18	25	6	4	4	25	37
Critical Water Years	37	3	-24	27	26	31	-18	-95	-118	-147	-164	-54

Table G.3-5-6-A. Contra Costa Water District Pumping Plant #1, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	911	1018	1361	1089	1192	522	311	280	421	601	530	603
1%	870	878	942	975	741	430	273	271	342	421	509	597
5%	788	814	811	789	573	263	247	193	270	315	416	572
10%	694	767	781	687	412	213	219	157	157	287	387	544
25%	604	597	715	479	243	167	173	132	100	159	308	502
50%	501	478	549	270	138	137	146	113	89	119	213	415
75%	77	141	300	100	95	100	107	89	81	85	111	142
99.9%	64	67	41	24	24	22	18	18	47	57	68	66

Table G.3-5-6-B. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	376	398	501	321	202	148	148	115	106	145	227	338
Wet Water Years	321	312	279	128	126	97	100	72	69	79	108	127
Above Normal Water Years	360	366	481	258	137	141	180	117	85	83	118	141
Below Normal Water Years	300	330	548	336	163	156	161	110	90	133	251	468
Dry Water Years	390	430	642	421	226	144	150	125	96	174	328	483
Critical Water Years	552	604	642	547	399	242	188	177	222	284	353	519

Table G.3-5-6-C. Contra Costa Water District Pumping Plant #1, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	95	155	433	200	445	57	-130	-323	-161	-9	-194	-124
1%	86	39	16	107	28	9	-23	-225	-236	-178	-150	-16
5%	127	21	-51	-18	21	26	1	-82	-183	-226	-136	-22
10%	45	5	-4	-71	8	39	26	-54	-132	-164	-110	-34
25%	21	-9	-17	-19	-20	31	20	-5	1	-20	-24	5
50%	27	7	-52	1	6	28	20	1	-3	-4	13	16
75%	1	3	1	0	-1	6	5	-8	-1	2	3	9
99.9%	1	-1	-1	0	0	0	-1	0	0	0	0	1

Table G.3-5-6-D. Contra Costa Water District Pumping Plant #1, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 2 Without TUCP Systemwide VA minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	16	2	-9	-4	3	22	14	-21	-25	-25	-18	4
Wet Water Years	6	3	-2	-3	1	1	4	-8	-1	0	3	7
Above Normal Water Years	20	2	-47	-5	3	30	36	0	-1	-4	6	8
Below Normal Water Years	31	17	22	-1	4	41	26	-10	-2	2	6	2
Dry Water Years	4	-3	-6	-32	-20	17	24	3	0	6	28	38
Critical Water Years	32	-6	-24	33	42	36	-19	-108	-149	-165	-172	-55

Table G.3-5-7-A. Contra Costa Water District Pumping Plant #1, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	692	841	831	811	683	426	433	523	415	318	326	401
1%	689	841	797	637	382	387	408	329	332	292	324	373
5%	599	755	709	542	338	325	346	295	274	216	283	360
10%	491	732	639	430	296	294	305	285	199	188	210	310
25%	295	488	585	260	188	236	263	247	163	137	113	120
50%	163	310	293	169	154	157	203	210	144	110	98	102
75%	71	84	98	105	107	103	150	157	103	98	90	78
99.9%	65	67	28	24	21	18	15	12	24	57	70	66

Table G.3-5-7-B. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), Alternative 3

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	218	319	345	215	167	173	202	191	141	125	122	133
Wet Water Years	162	243	256	125	133	152	137	99	83	94	90	81
Above Normal Water Years	216	293	280	159	137	174	229	207	134	111	95	82
Below Normal Water Years	186	243	285	208	163	184	227	222	137	130	108	106
Dry Water Years	217	341	387	250	184	160	206	212	149	106	100	115
Critical Water Years	354	529	561	376	233	215	257	273	241	215	249	329

Table G.3-5-7-C. Contra Costa Water District Pumping Plant #1, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	-123	-22	-97	-77	-63	-39	-8	-80	-168	-292	-398	-326
1%	-95	2	-130	-231	-331	-34	112	-167	-246	-307	-336	-239
5%	-62	-38	-154	-266	-214	88	100	19	-178	-325	-270	-235
10%	-158	-30	-146	-327	-108	119	113	74	-90	-263	-287	-268
25%	-289	-118	-147	-238	-75	99	110	109	63	-43	-219	-377
50%	-312	-160	-308	-100	22	48	77	98	53	-14	-102	-298
75%	-5	-54	-201	5	11	9	47	60	21	14	-18	-55
99.9%	1	-1	-15	0	-3	-3	-5	-6	-24	0	1	0

Table G.3-5-7-D. Contra Costa Water District Pumping Plant #1, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 3 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	-142	-76	-165	-110	-31	46	67	56	11	-45	-124	-201
Wet Water Years	-152	-67	-26	-6	8	56	41	20	12	15	-16	-40
Above Normal Water Years	-124	-71	-248	-104	3	63	85	90	47	24	-18	-51
Below Normal Water Years	-82	-70	-241	-129	4	69	92	102	45	-1	-137	-359
Dry Water Years	-169	-93	-261	-203	-62	33	80	90	54	-62	-200	-330
Critical Water Years	-165	-81	-106	-137	-123	8	49	-12	-129	-234	-276	-245

Table G.3-5-8-A. Contra Costa Water District Pumping Plant #1, Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	829	856	972	929	773	532	478	612	577	620	653	609
1%	788	853	870	833	719	432	313	504	548	607	612	609
5%	695	826	824	807	440	242	212	267	455	538	565	592
10%	664	773	747	628	406	178	165	187	295	442	502	572
25%	591	612	690	458	267	135	131	120	102	166	328	491
50%	483	476	515	232	126	107	106	101	90	122	213	410
75%	78	138	290	101	93	93	94	85	80	85	119	141
99.9%	65	67	41	24	24	21	19	18	47	57	68	66

Table G.3-5-8-B. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), Alternative 4

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	367	399	486	303	192	127	121	121	127	168	250	343
Wet Water Years	322	312	272	124	125	93	83	69	69	80	111	128
Above Normal Water Years	353	354	456	237	136	111	110	97	84	84	128	148
Below Normal Water Years	276	325	499	304	151	113	114	100	91	132	257	471
Dry Water Years	388	434	628	432	242	127	117	111	96	167	310	467
Critical Water Years	530	624	661	480	329	215	208	271	353	439	502	561

Table G.3-5-8-C. Contra Costa Water District Pumping Plant #1, Difference in Exceedance Probabilities for Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Probability of Exceedance	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
0.1%	13	-7	45	40	26	67	37	9	-5	11	-71	-118
1%	5	13	-56	-35	5	10	17	8	-30	8	-47	-4
5%	34	34	-38	-1	-111	5	-34	-8	2	-3	13	-3
10%	15	11	-37	-130	2	3	-28	-24	6	-9	5	-6
25%	7	6	-43	-40	4	-1	-23	-18	2	-13	-3	-7
50%	8	6	-86	-37	-6	-1	-19	-11	-1	-2	13	10
75%	1	0	-9	1	-3	-1	-9	-11	-2	2	12	8
99.9%	1	-1	-1	0	0	0	0	0	0	0	0	1

Table G.3-5-8-D. Contra Costa Water District Pumping Plant #1, Difference in Monthly Average Bromide (in micrograms per liter), Alternative 4 minus No Action Alternative

Average	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Full Simulation Period	7	4	-23	-22	-7	0	-14	-14	-3	-2	5	8
Wet Water Years	7	3	-10	-8	0	-3	-13	-10	-1	0	5	8
Above Normal Water Years	14	-10	-72	-26	2	1	-34	-21	-2	-4	15	15
Below Normal Water Years	8	12	-28	-33	-9	-2	-21	-20	0	1	12	6
Dry Water Years	2	1	-20	-21	-4	-1	-9	-10	1	-1	10	21
Critical Water Years	10	15	-5	-34	-28	8	1	-14	-18	-10	-23	-13

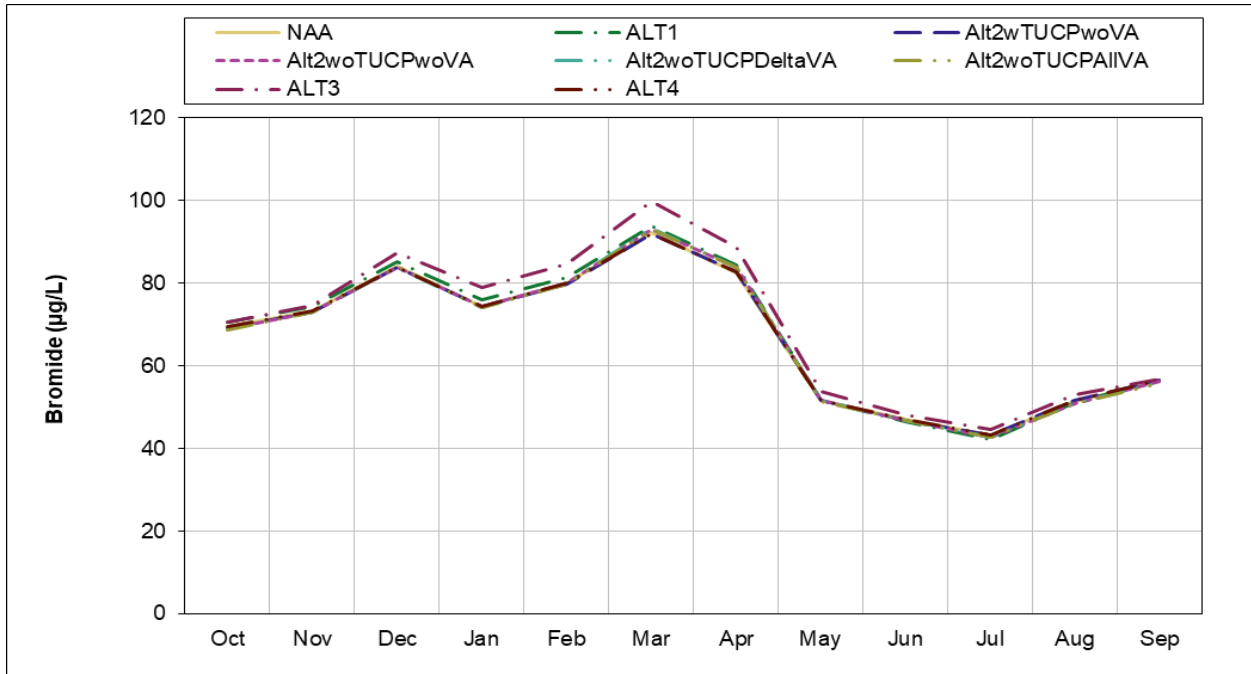


Figure G.3-1-1. Barker Slough at North Bay Aqueduct, Long term Monthly Average Bromide (in micrograms per liter)

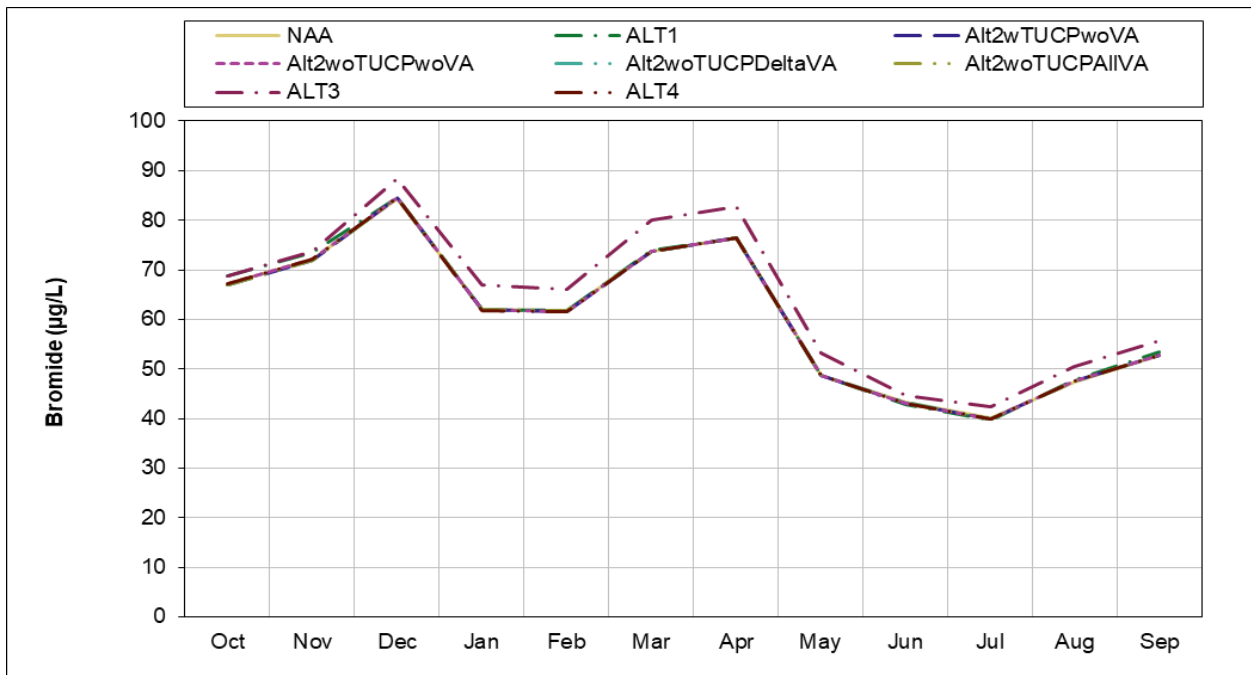


Figure G.3-1-2. Barker Slough at North Bay Aqueduct, Wet Year Monthly Average Bromide (in micrograms per liter)

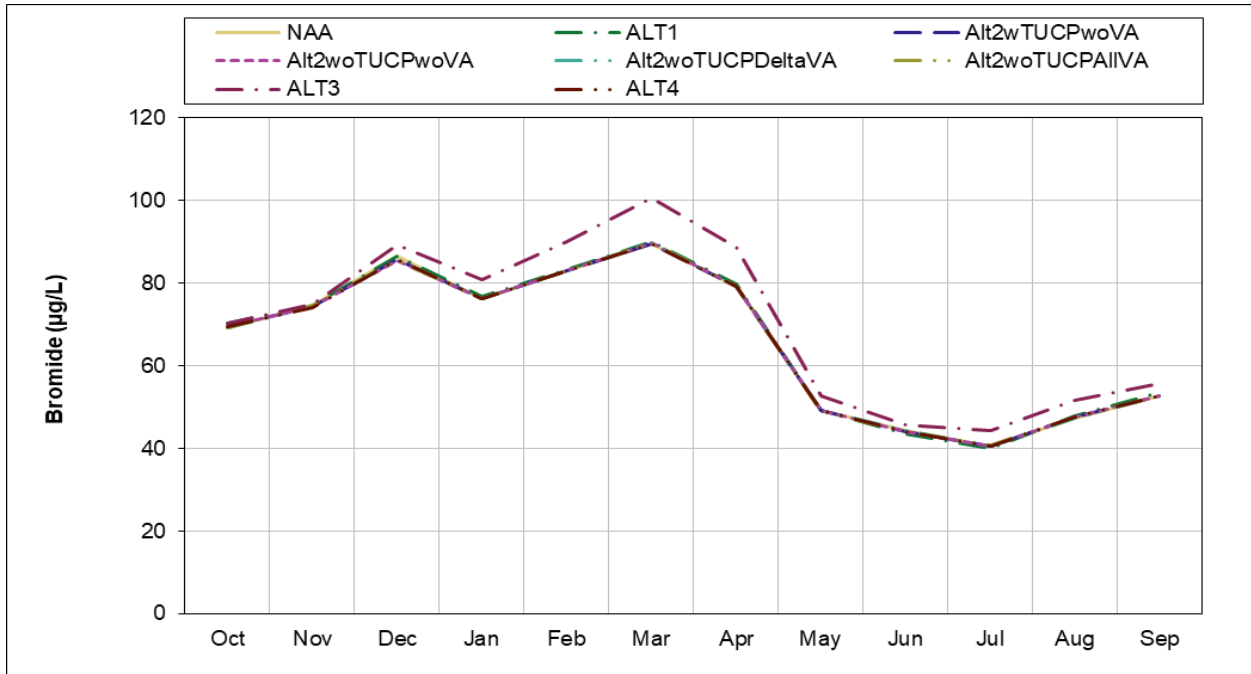


Figure G.3-1-3. Barker Slough at North Bay Aqueduct, Above Normal Year Monthly Average Bromide (in micrograms per liter)

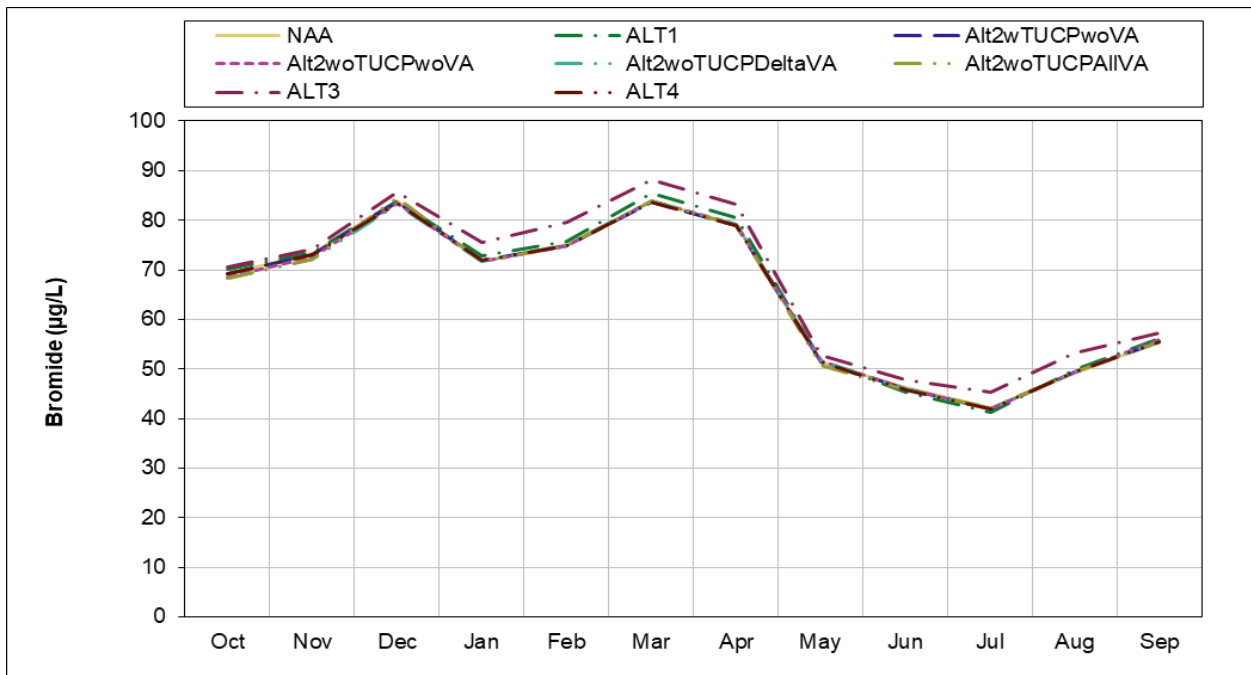


Figure G.3-1-4. Barker Slough at North Bay Aqueduct, Below Normal Year Monthly Average Bromide (in micrograms per liter)

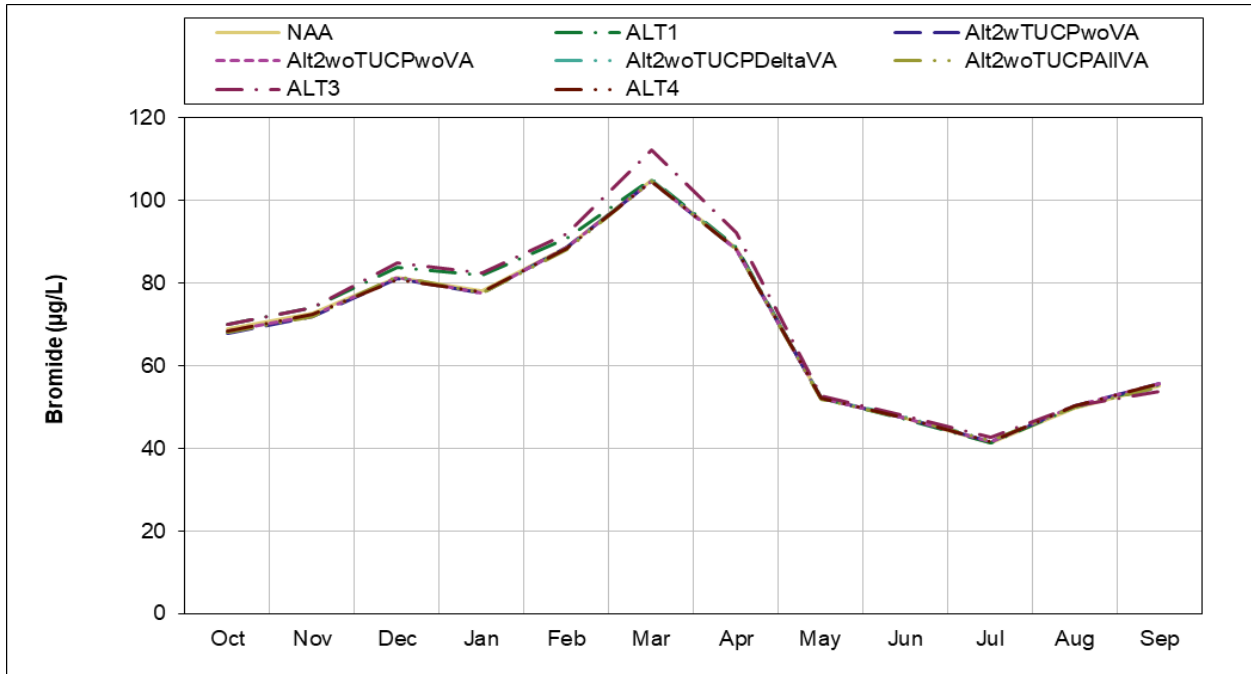


Figure G.3-1-5. Barker Slough at North Bay Aqueduct, Dry Year Monthly Average Bromide (in micrograms per liter)

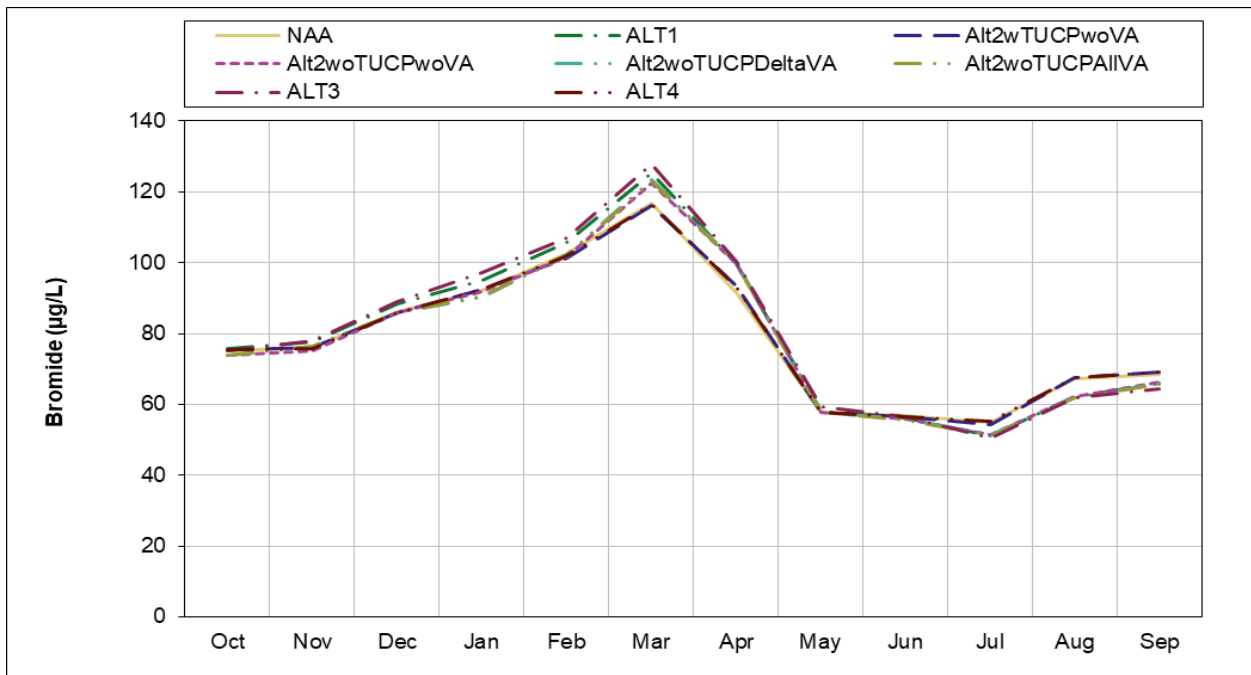


Figure G.3-1-6. Barker Slough at North Bay Aqueduct, Critical Year Monthly Average Bromide (in micrograms per liter)

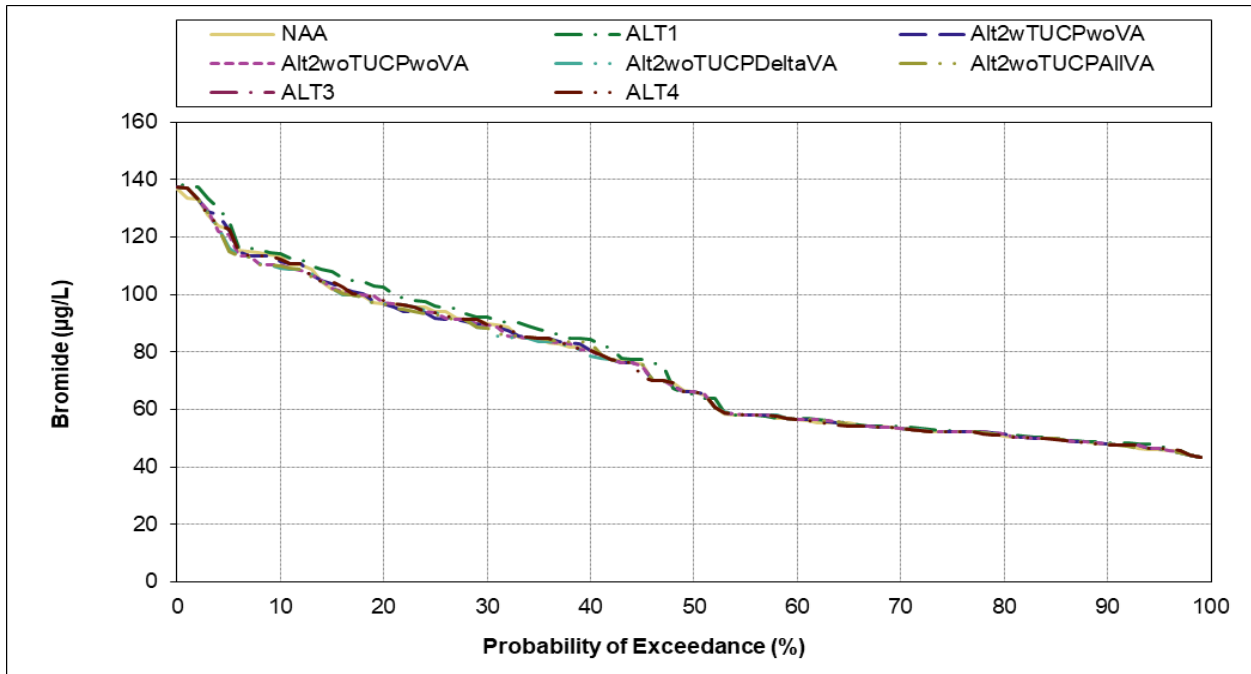


Figure G.3-1-7. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), January

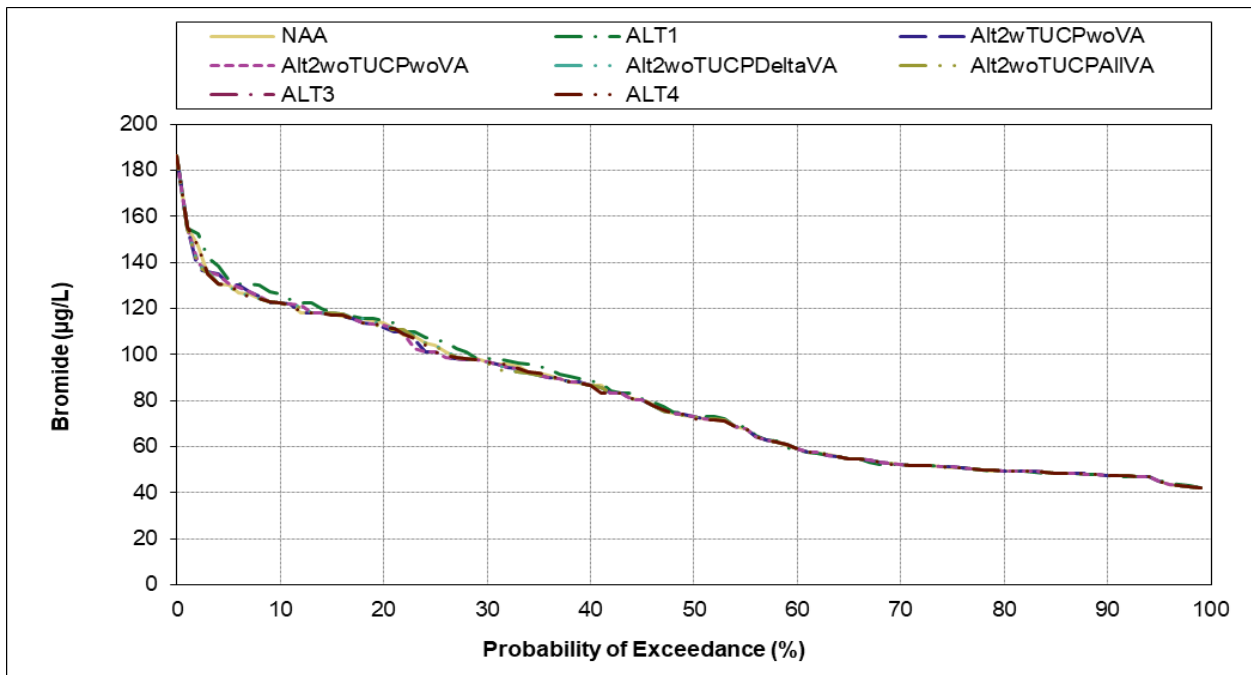


Figure G.3-1-8. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), February

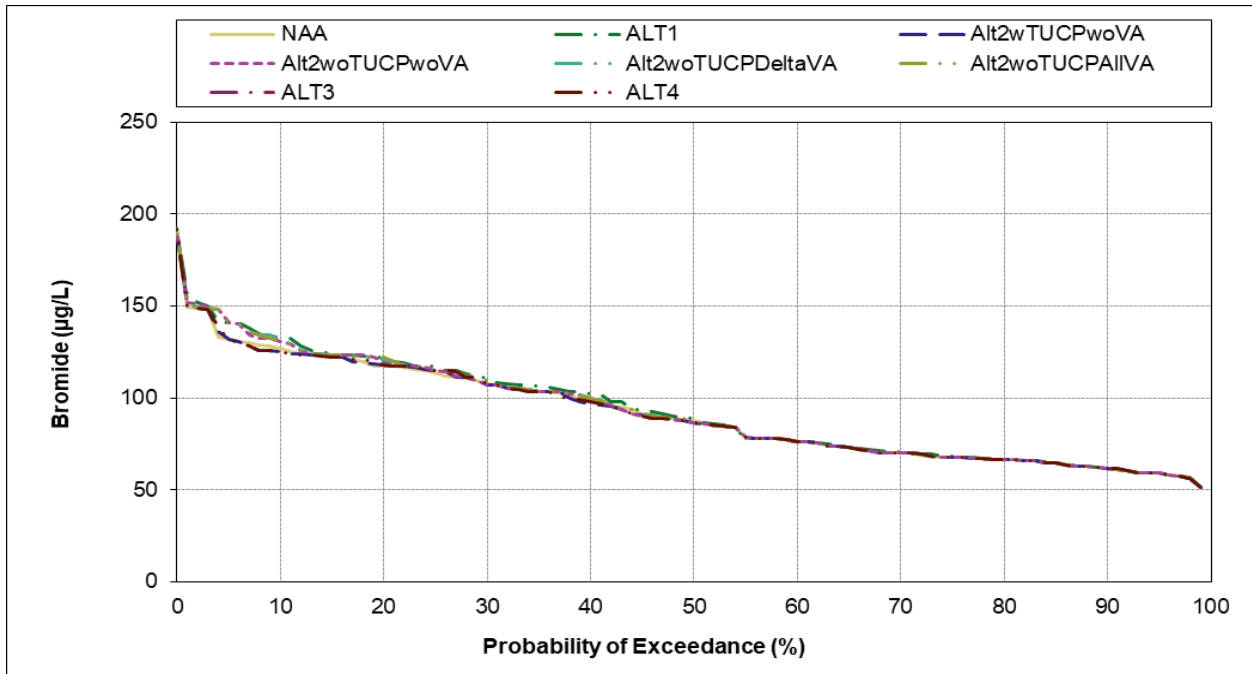


Figure G.3-1-9. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), March

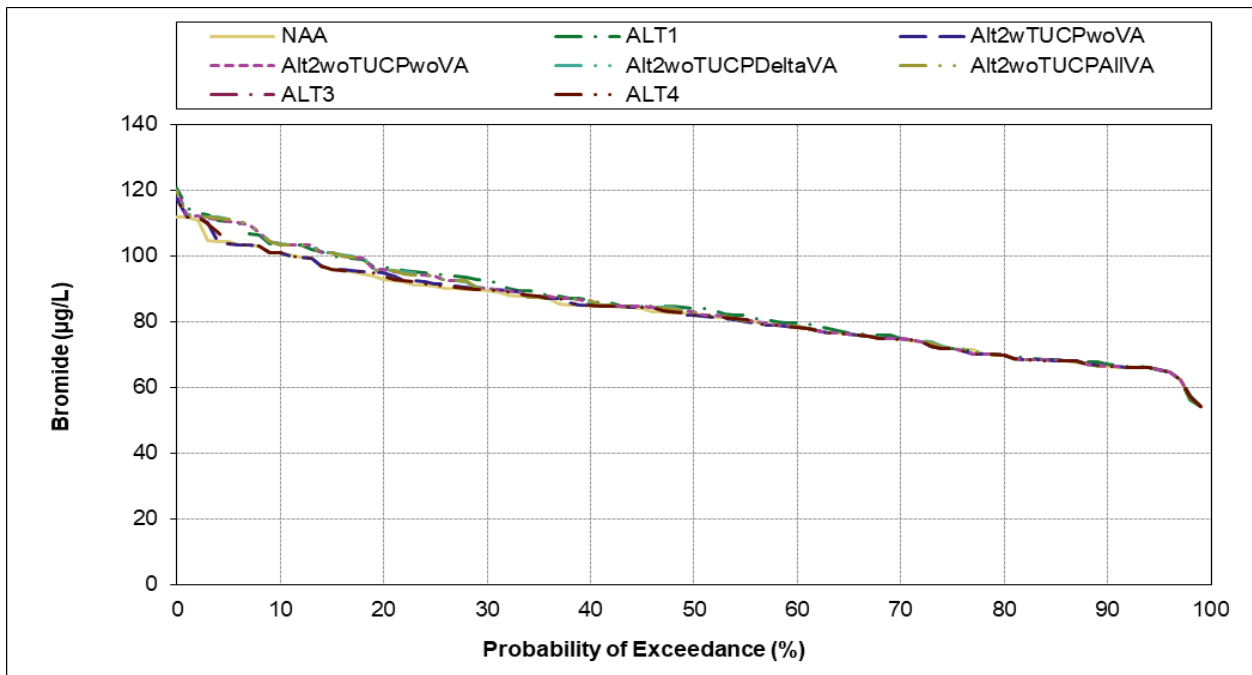


Figure G.3-1-10. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), April

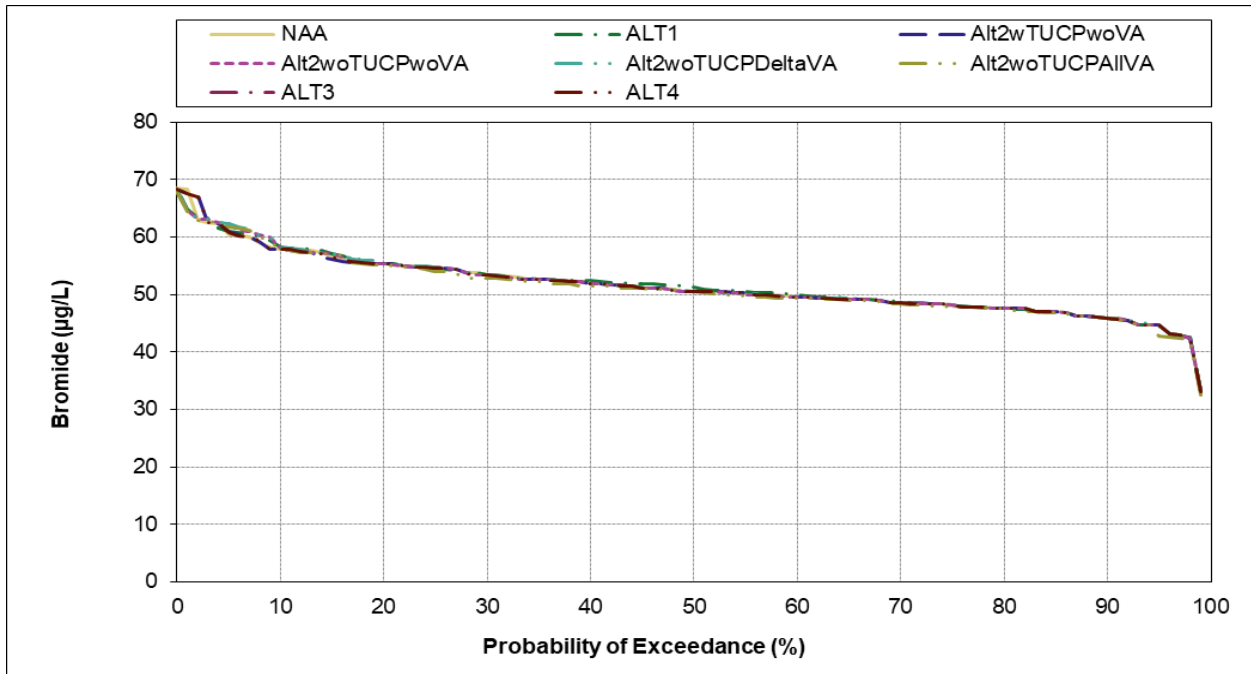


Figure G.3-1-11. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), May

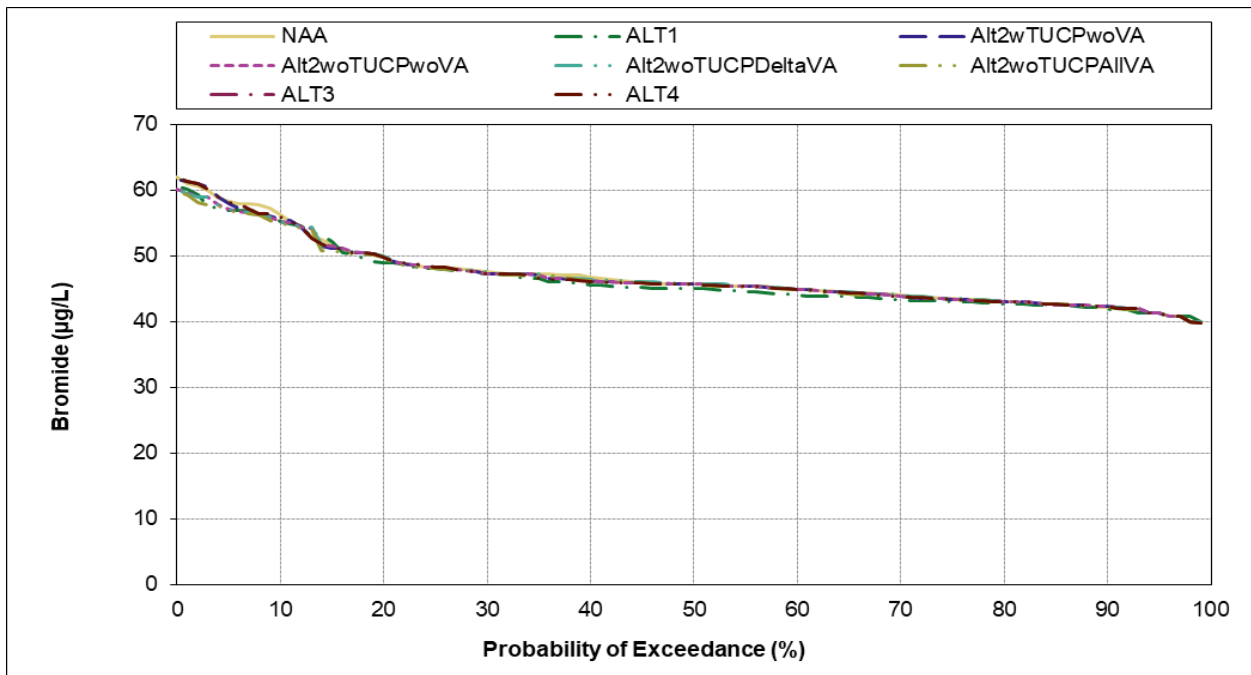


Figure G.3-1-12. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), June

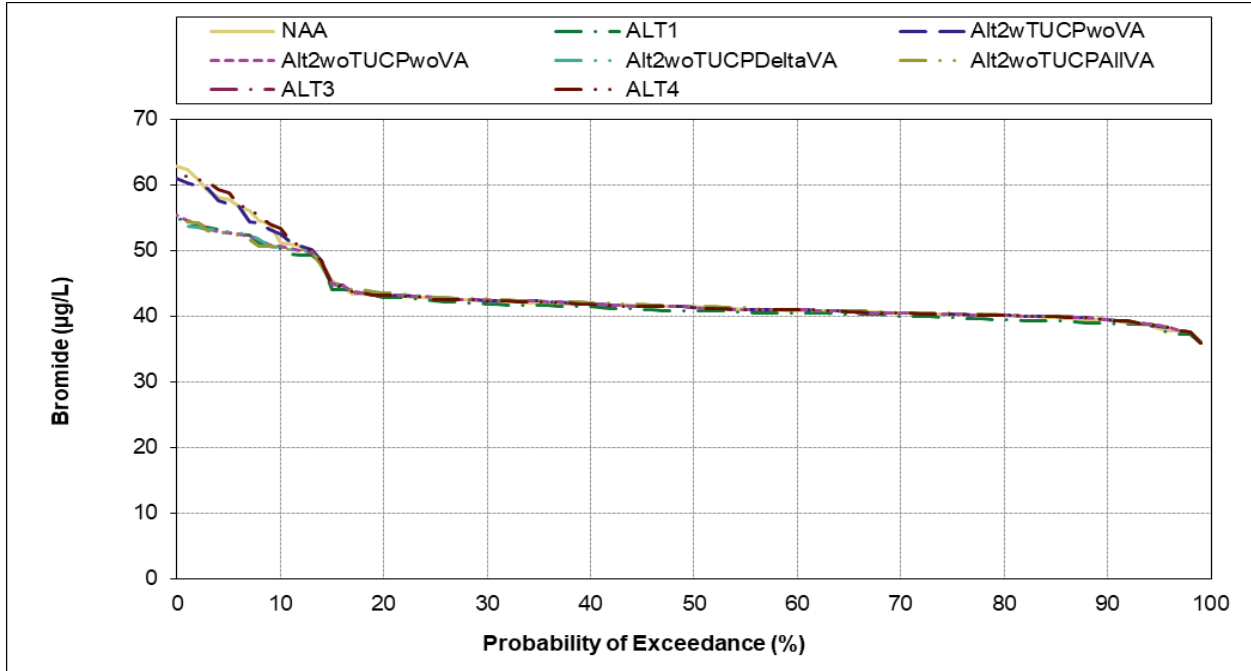


Figure G.3-1-13. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), July

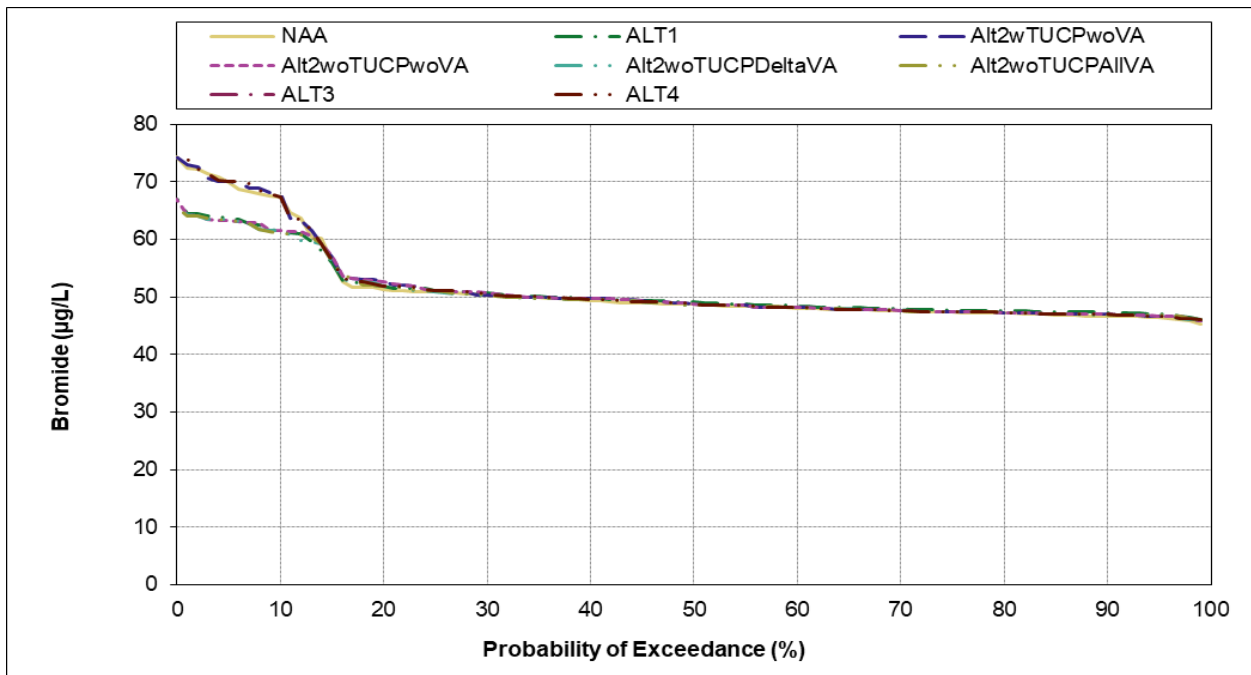


Figure G.3-1-14. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), August

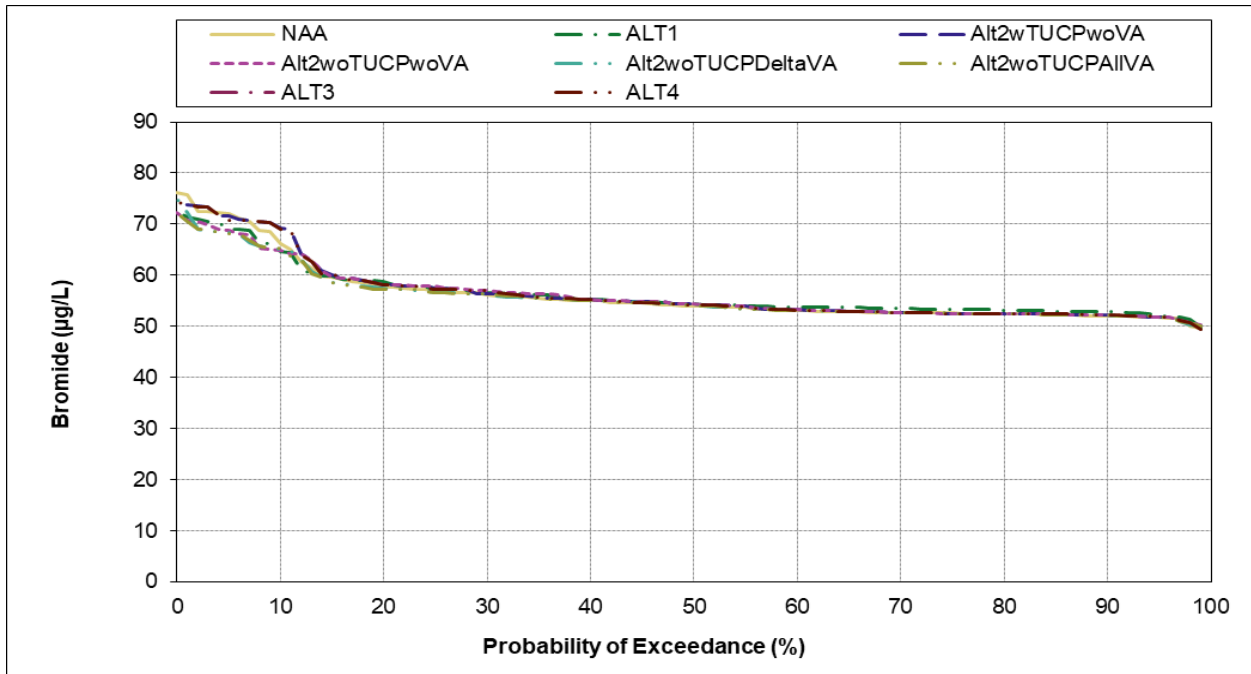


Figure G.3-1-15. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), September

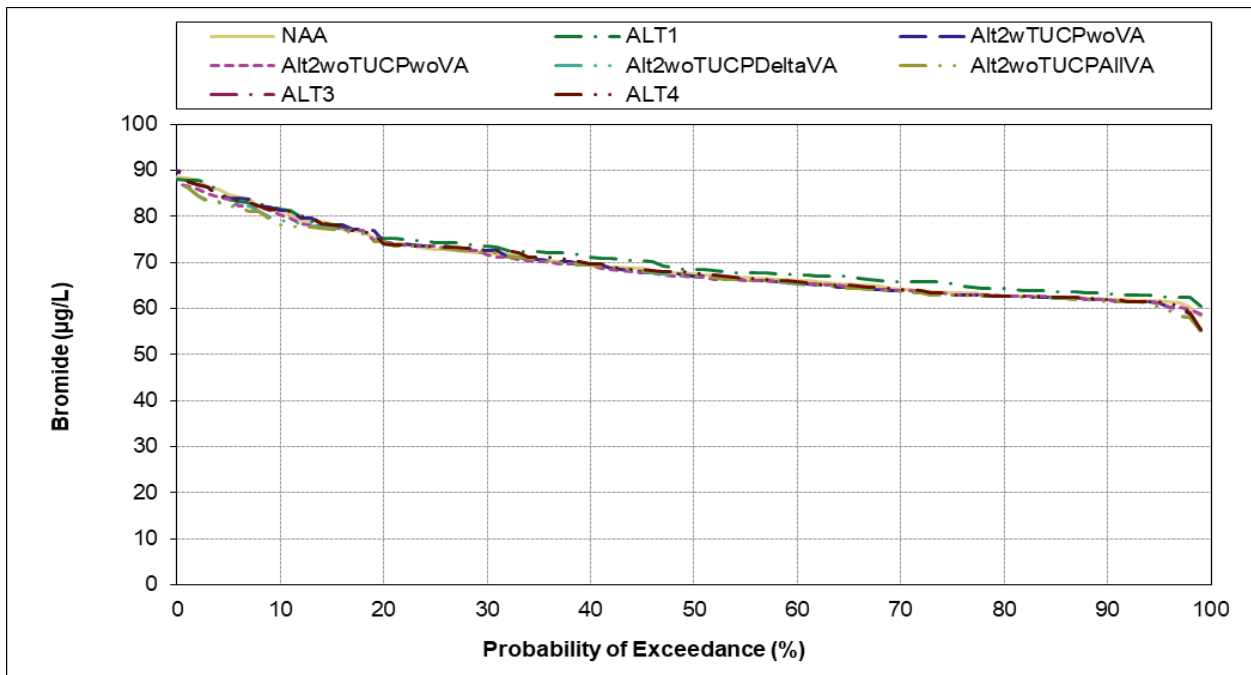


Figure G.3-1-16. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), October

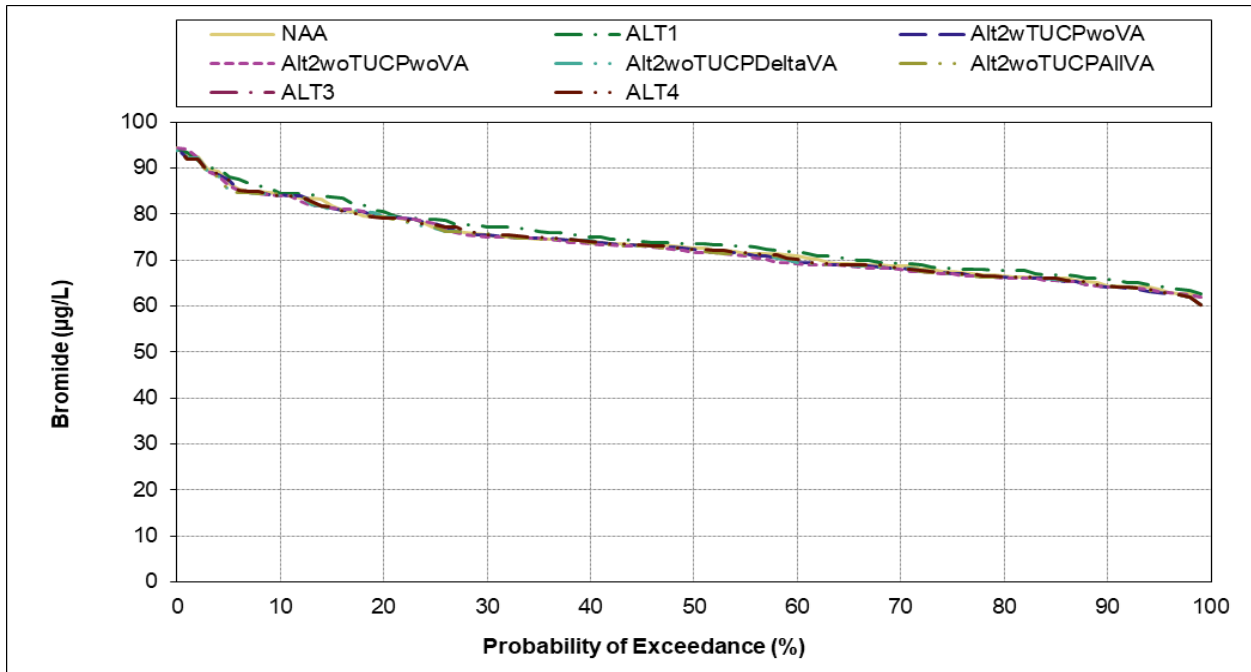


Figure G.3-1-17. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), November

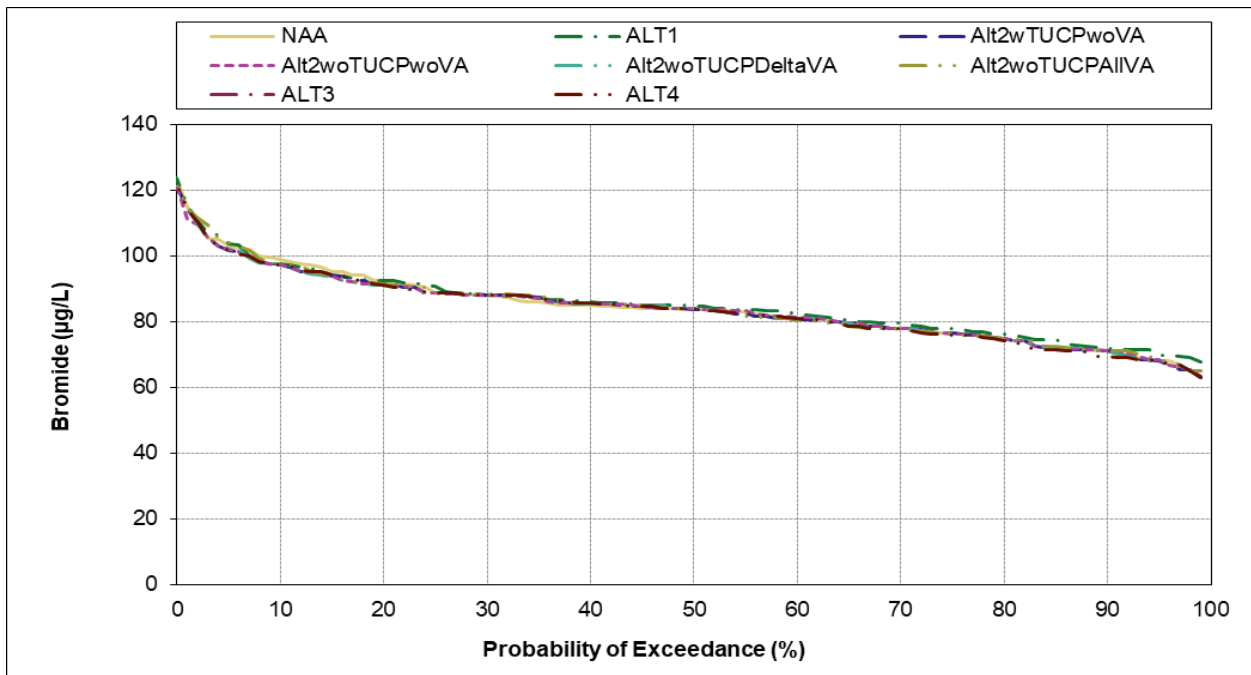


Figure G.3-1-18. Barker Slough at North Bay Aqueduct, Monthly Average Bromide (in micrograms per liter), December

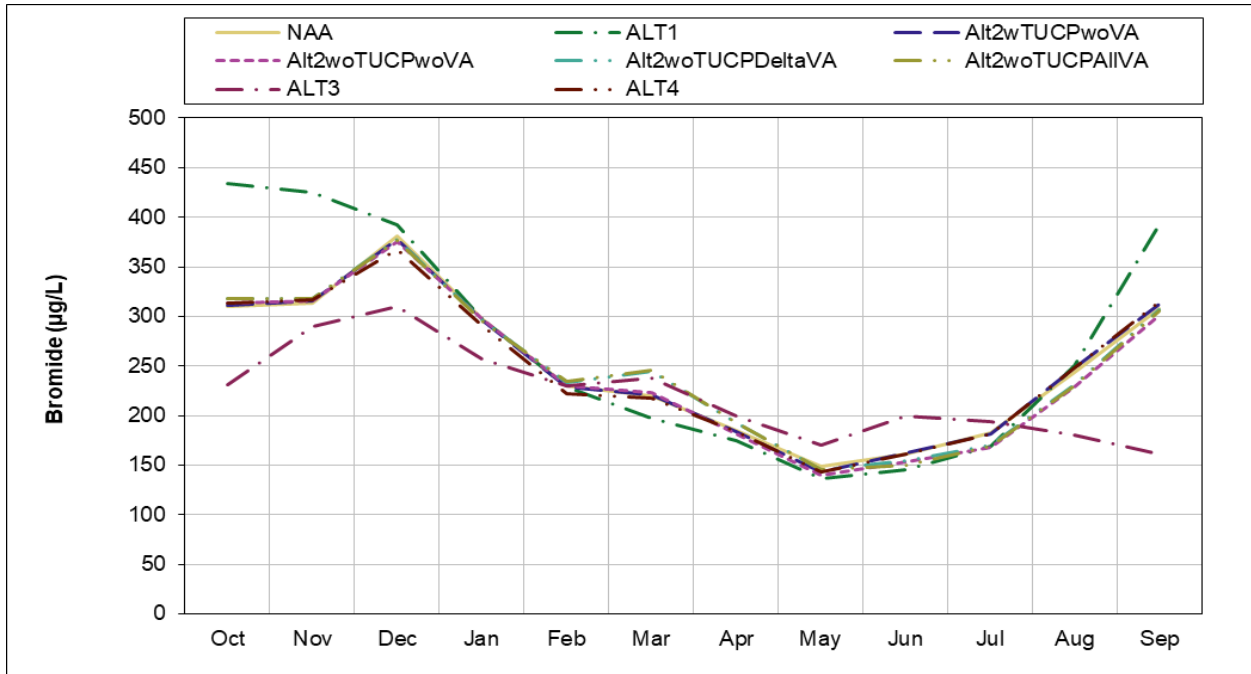


Figure G.3-2-1. Banks Pumping Plant, Long term Monthly Average Bromide (in micrograms per liter)

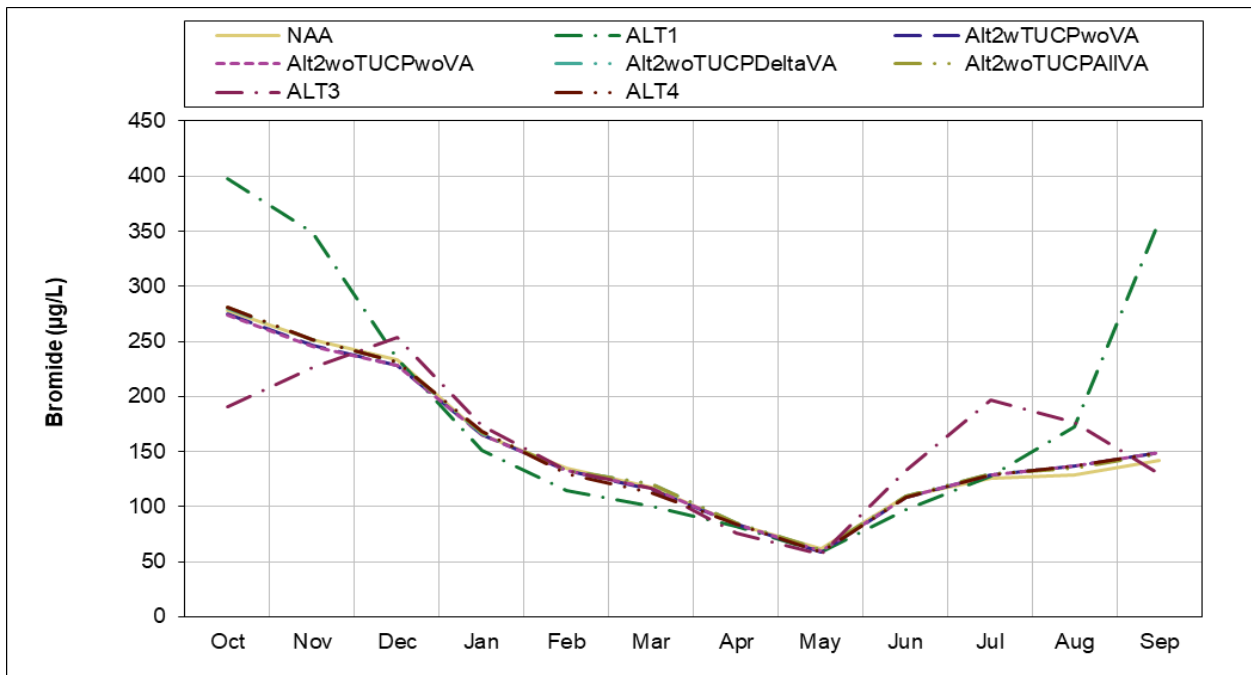


Figure G.3-2-2. Banks Pumping Plant, Wet Year Monthly Average Bromide (in micrograms per liter)

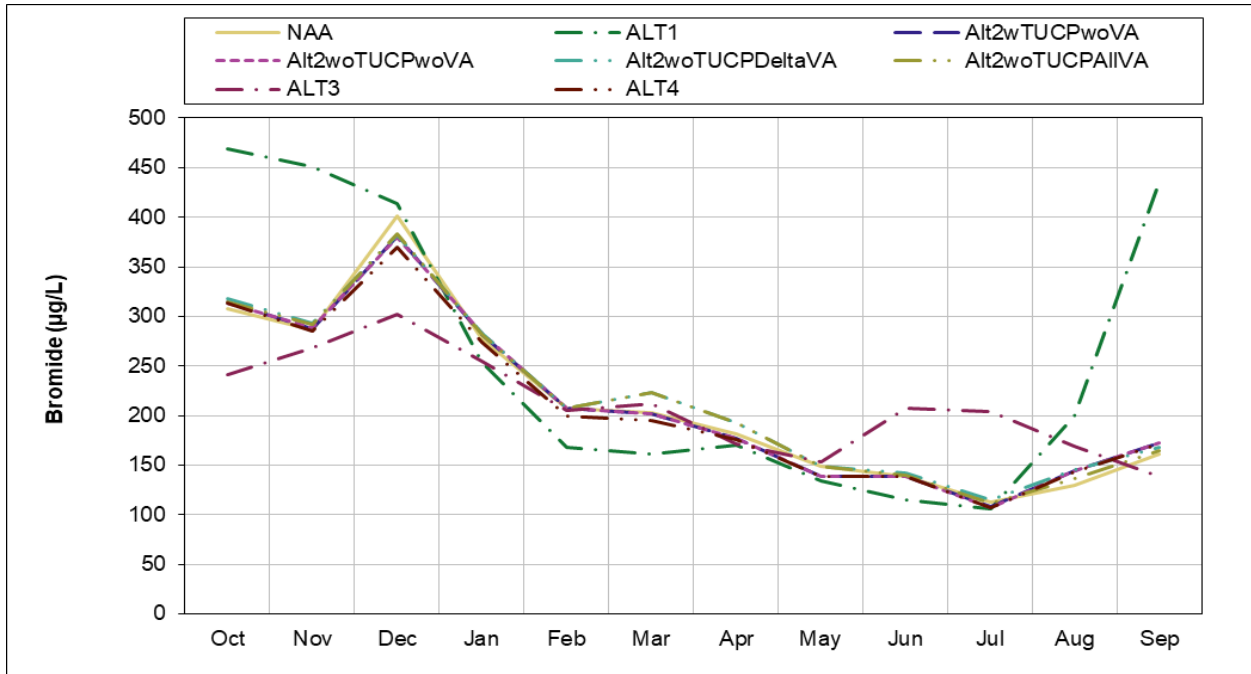


Figure G.3-2-3. Banks Pumping Plant, Above Normal Year Monthly Average Bromide (in micrograms per liter)

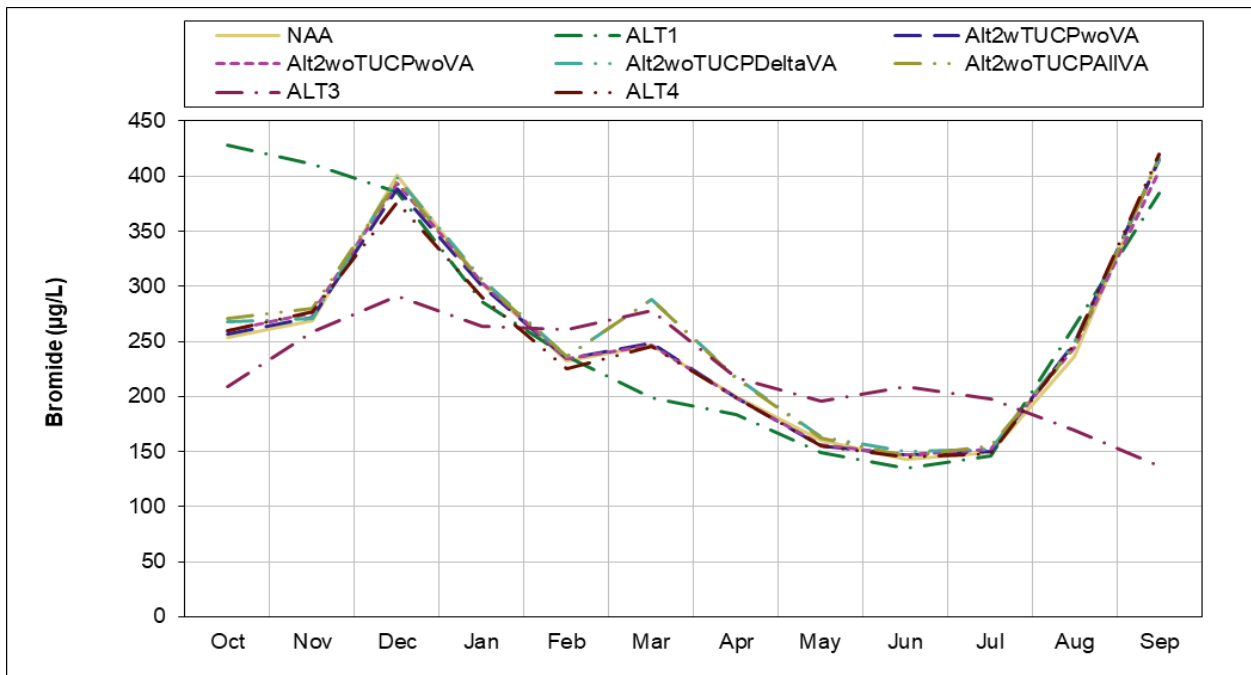


Figure G.3-2-4. Banks Pumping Plant, Below Normal Year Monthly Average Bromide (in micrograms per liter)

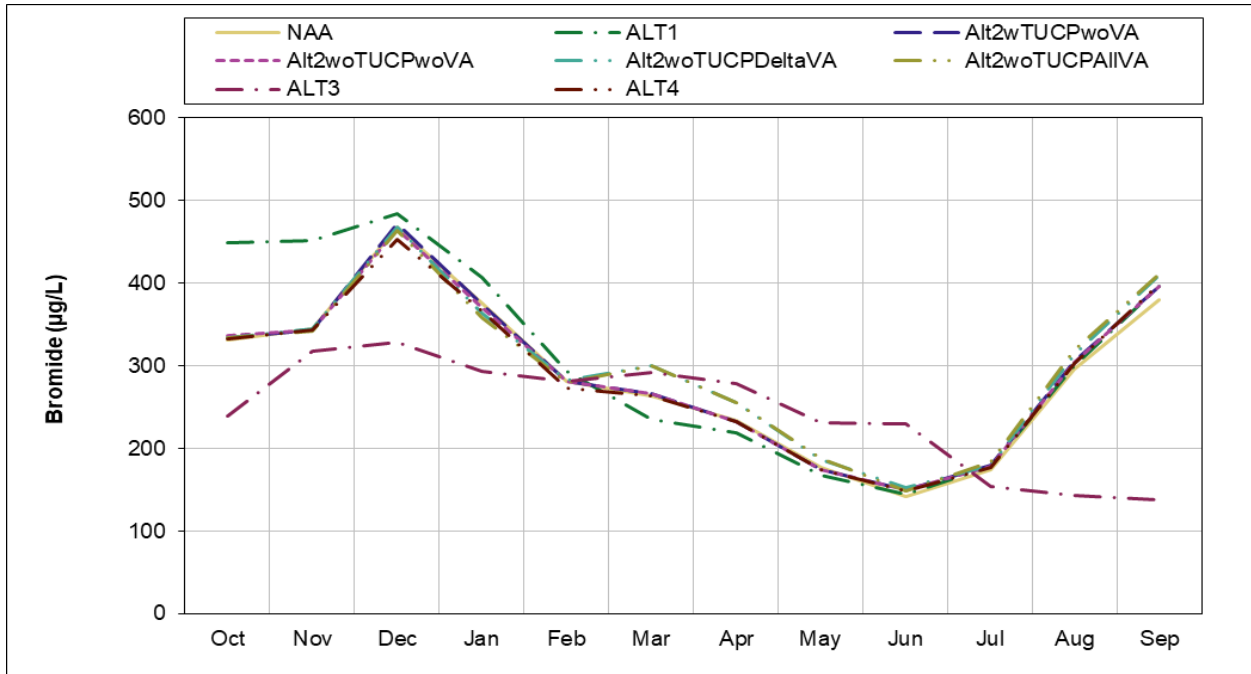


Figure G.3-2-5. Banks Pumping Plant, Dry Year Monthly Average Bromide (in micrograms per liter)

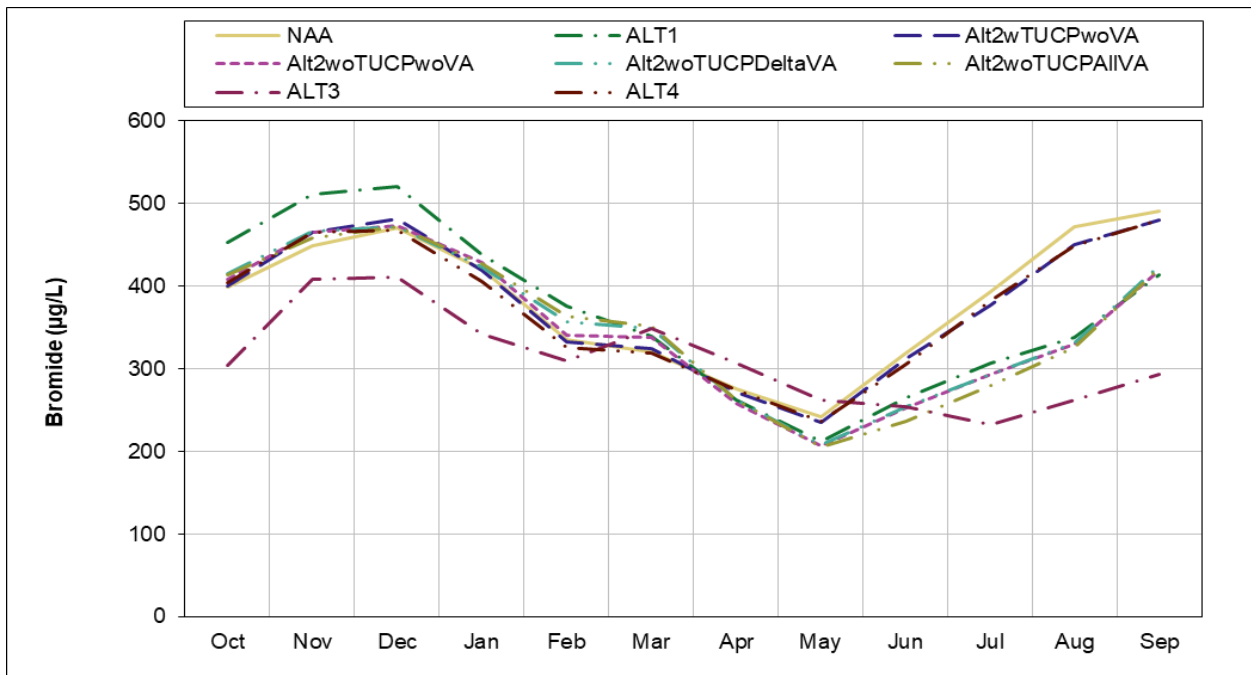


Figure G.3-2-6. Banks Pumping Plant, Critical Year Monthly Average Bromide (in micrograms per liter)

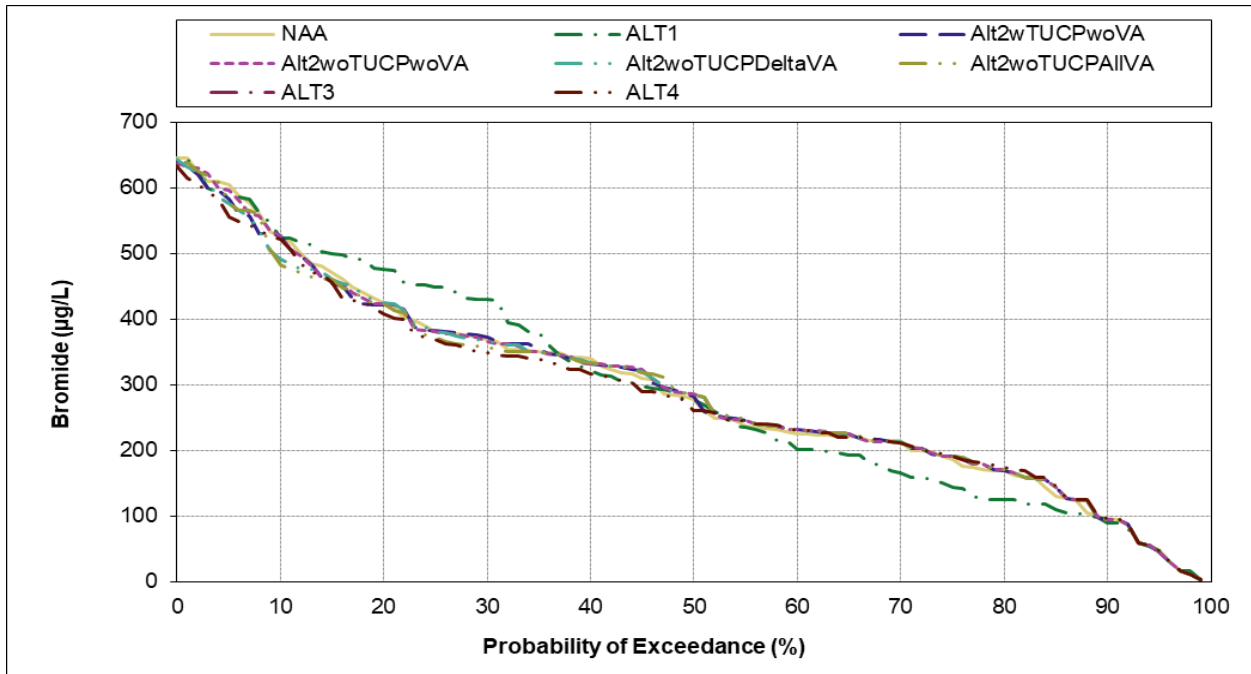


Figure G.3-2-7. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), January

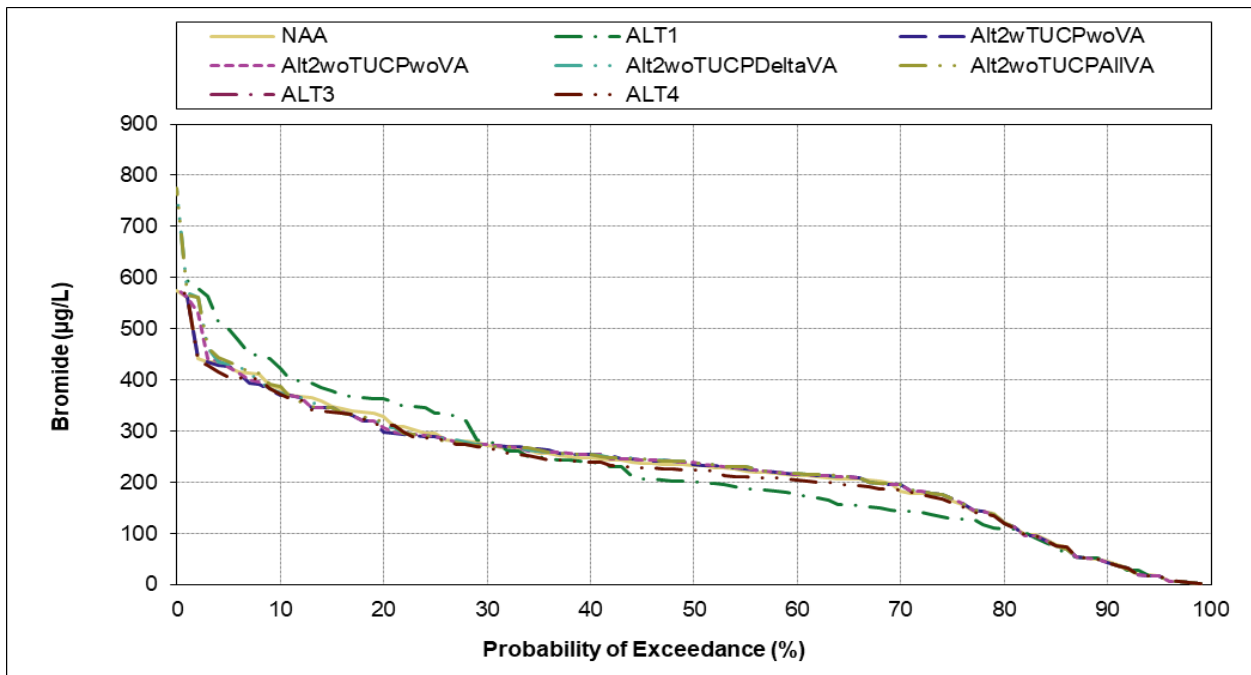


Figure G.3-2-8. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), February

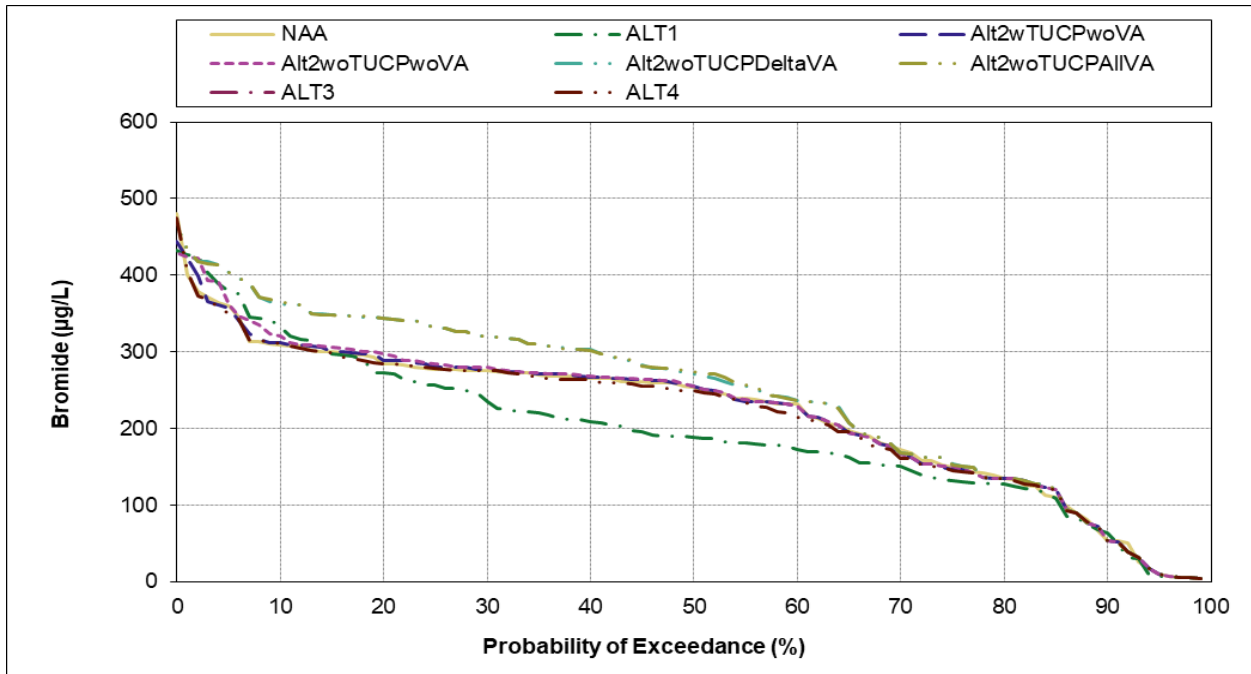


Figure G.3-2-9. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), March

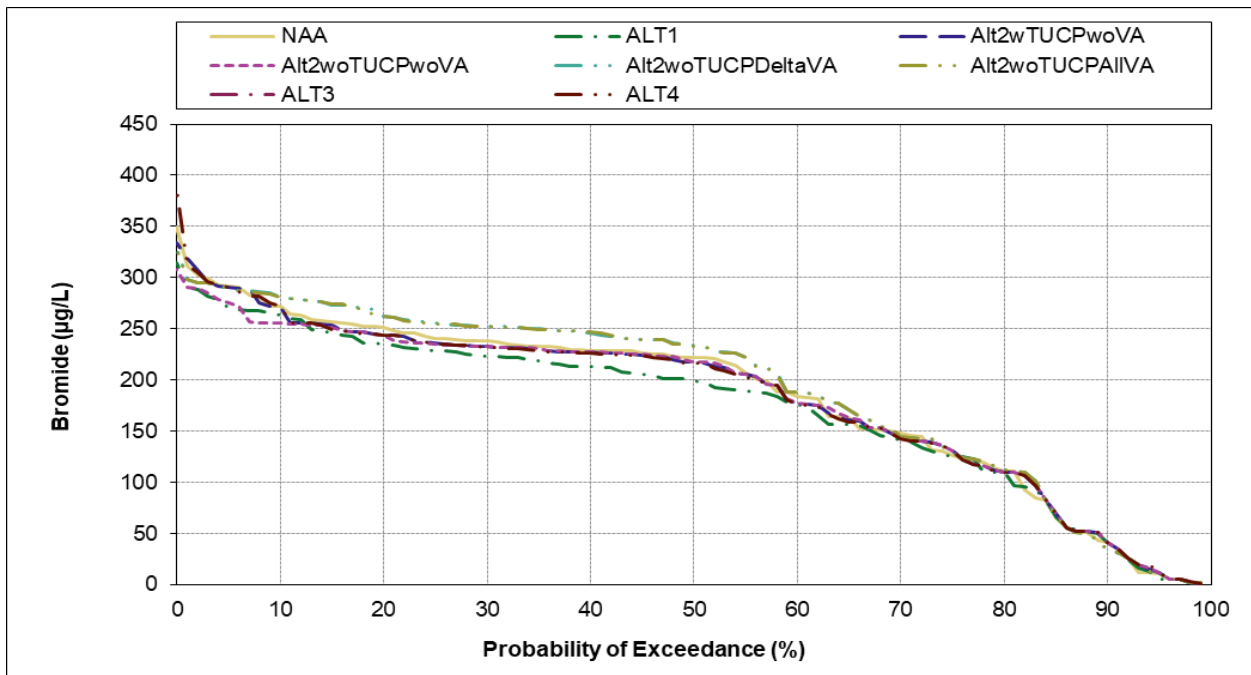


Figure G.3-2-10. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), April

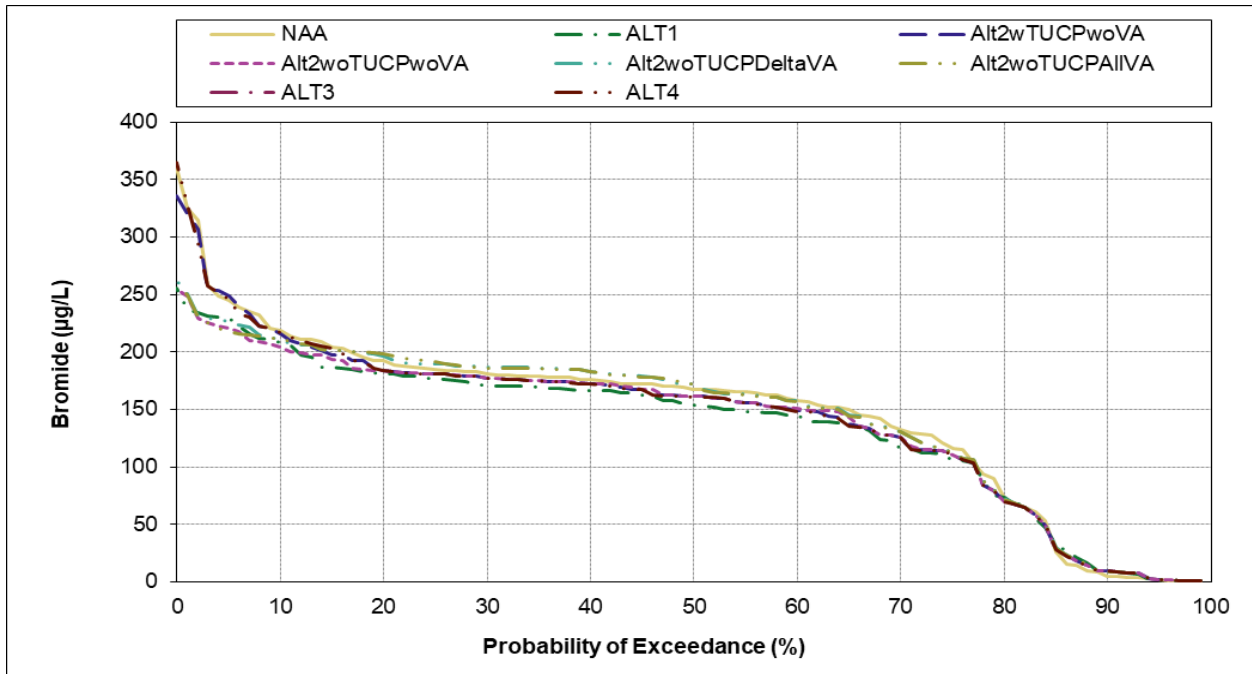


Figure G.3-2-11. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), May

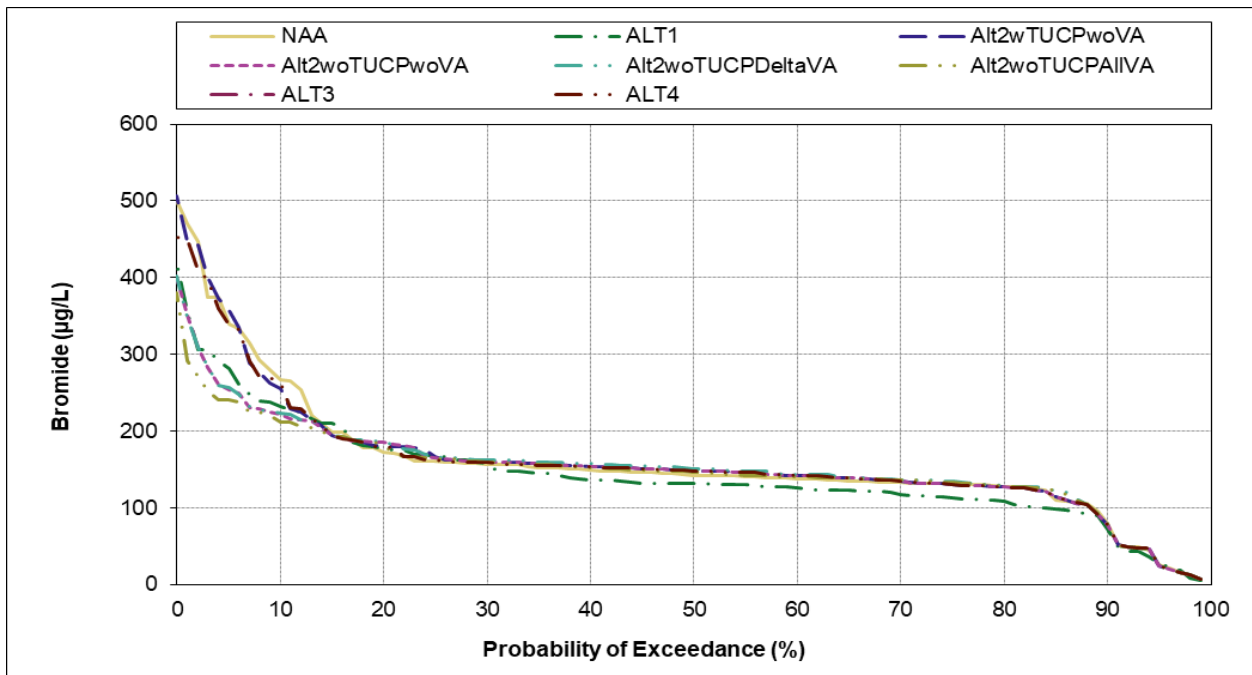


Figure G.3-2-12. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), June

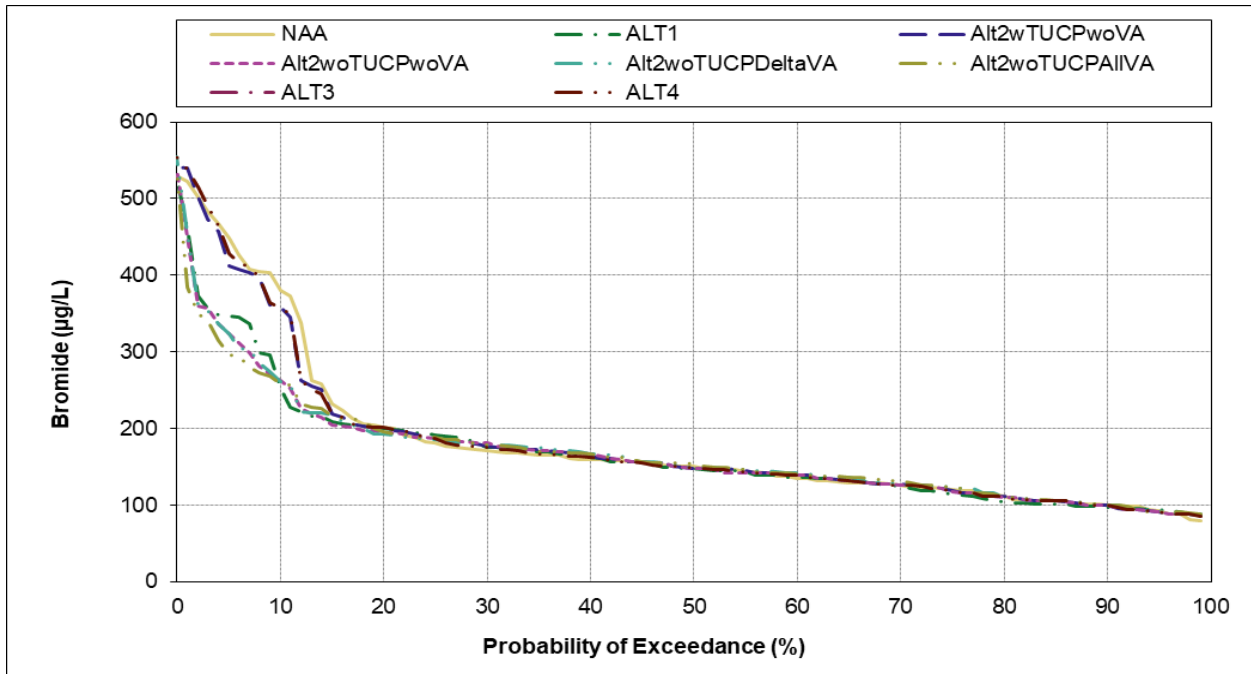


Figure G.3-2-13. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), July

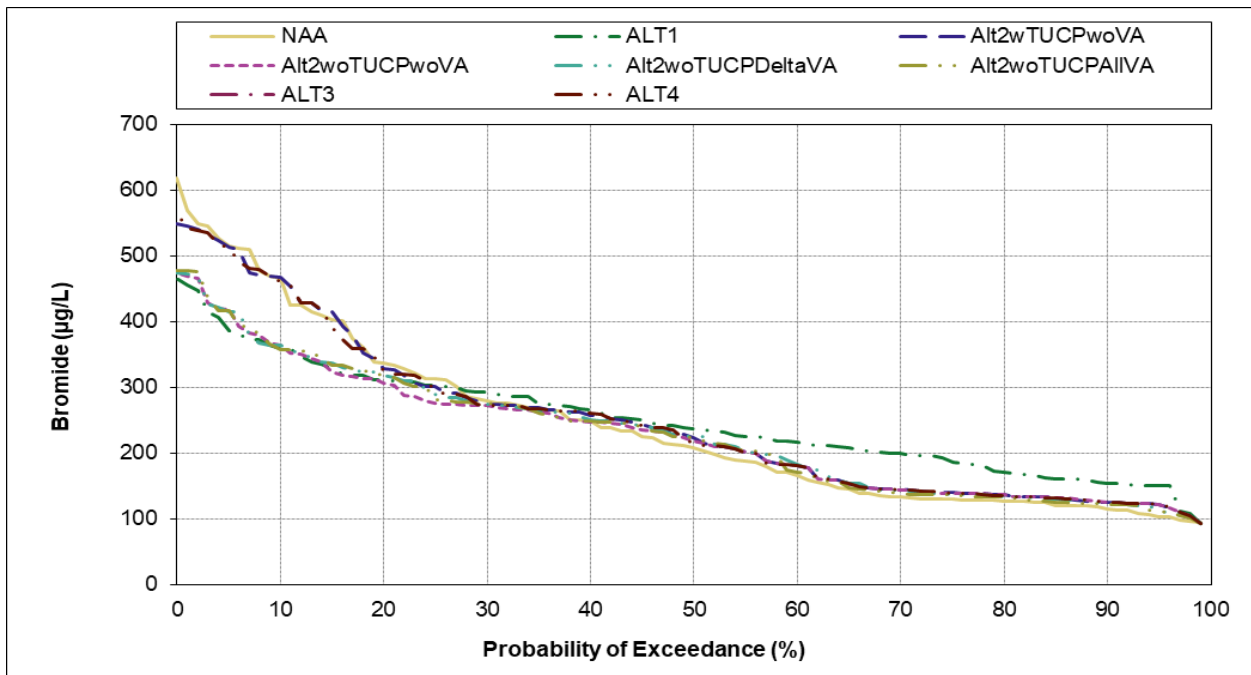


Figure G.3-2-14. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), August

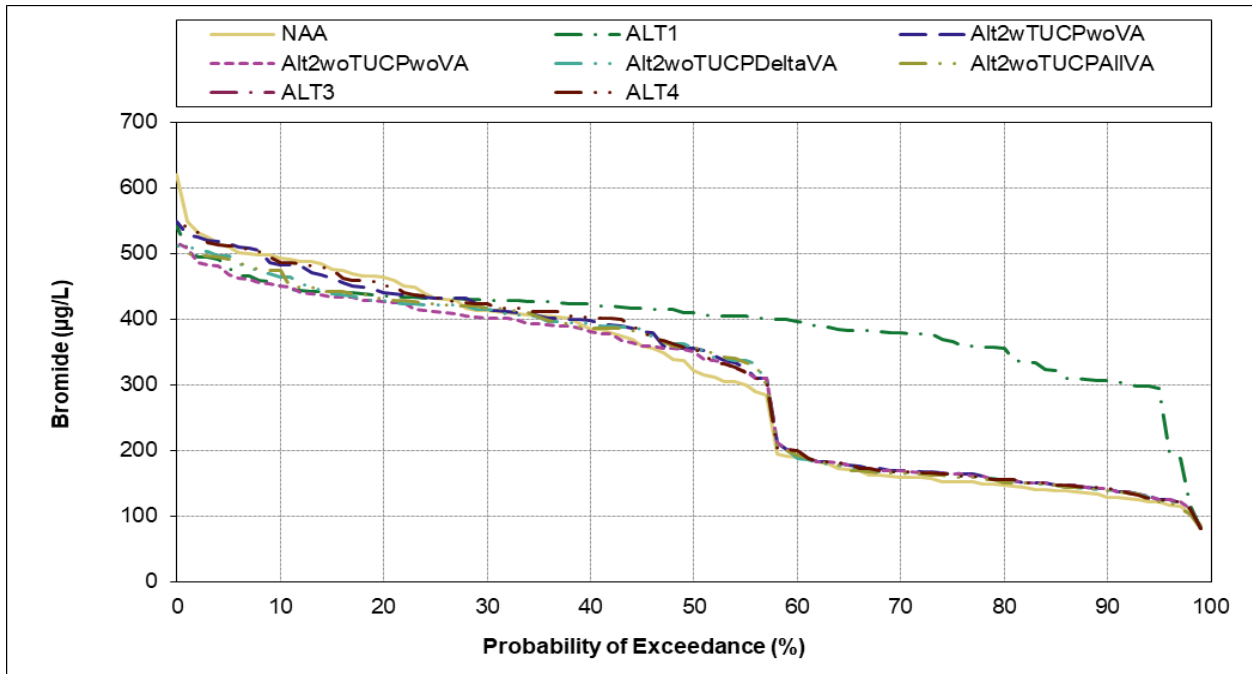


Figure G.3-2-15. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), September

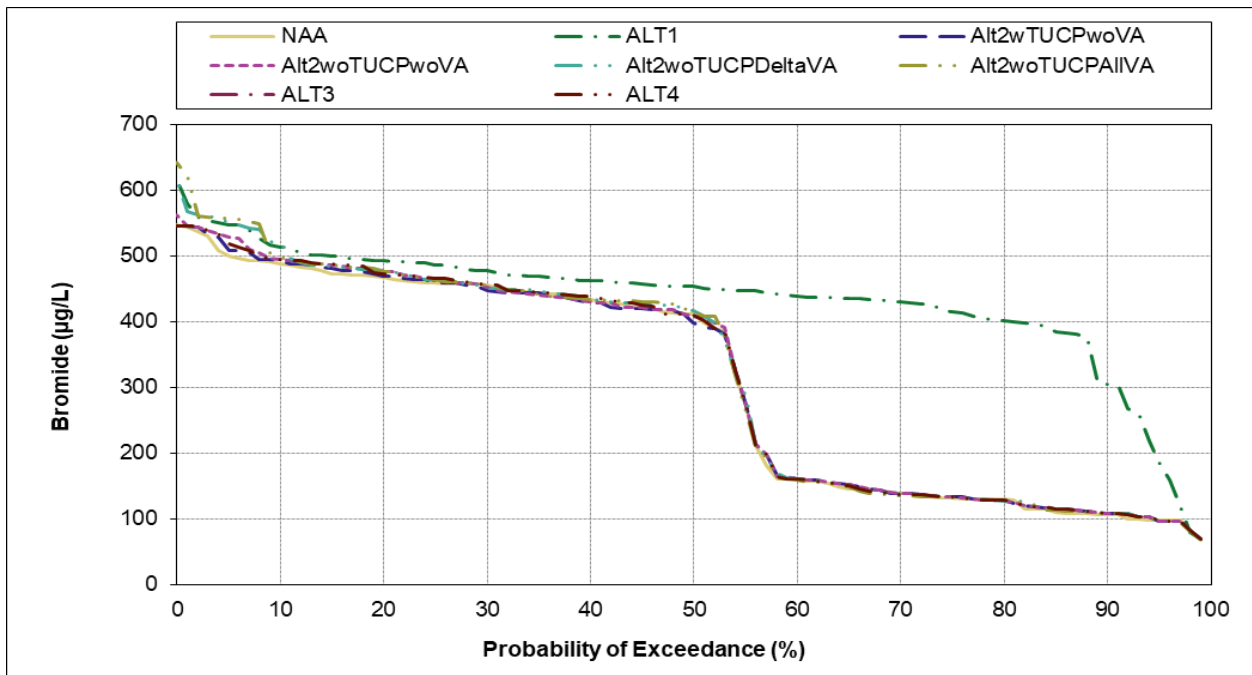


Figure G.3-2-16. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), October

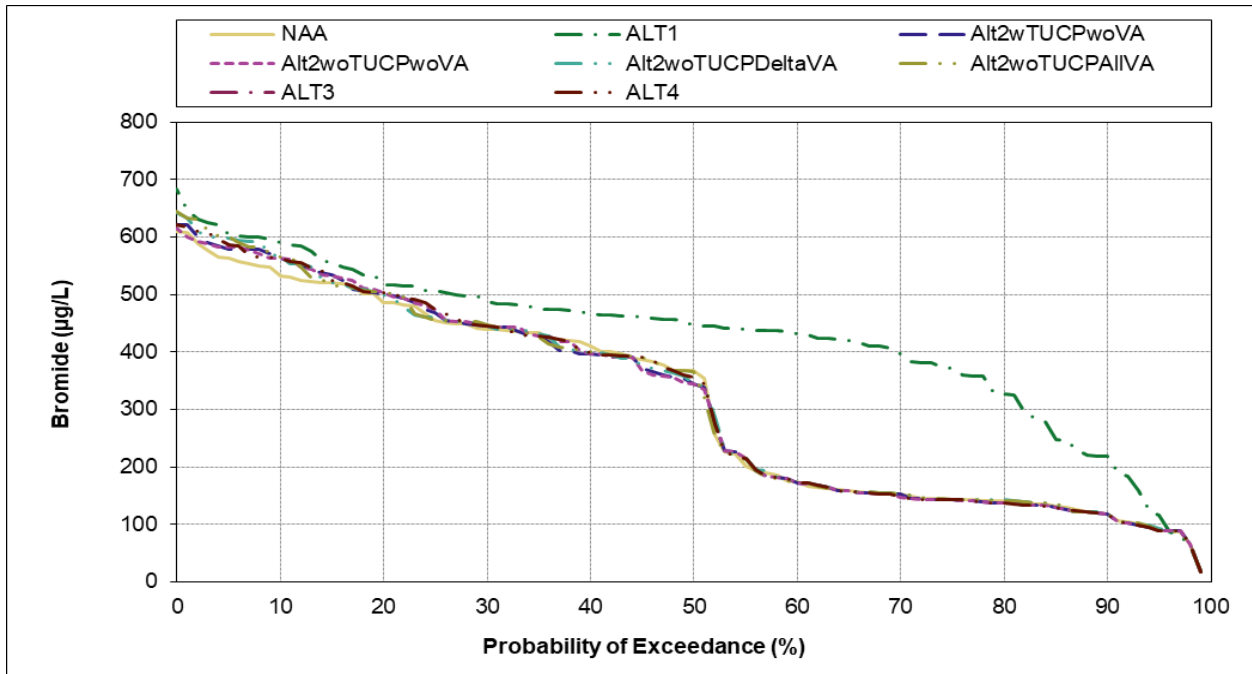


Figure G.3-2-17. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), November

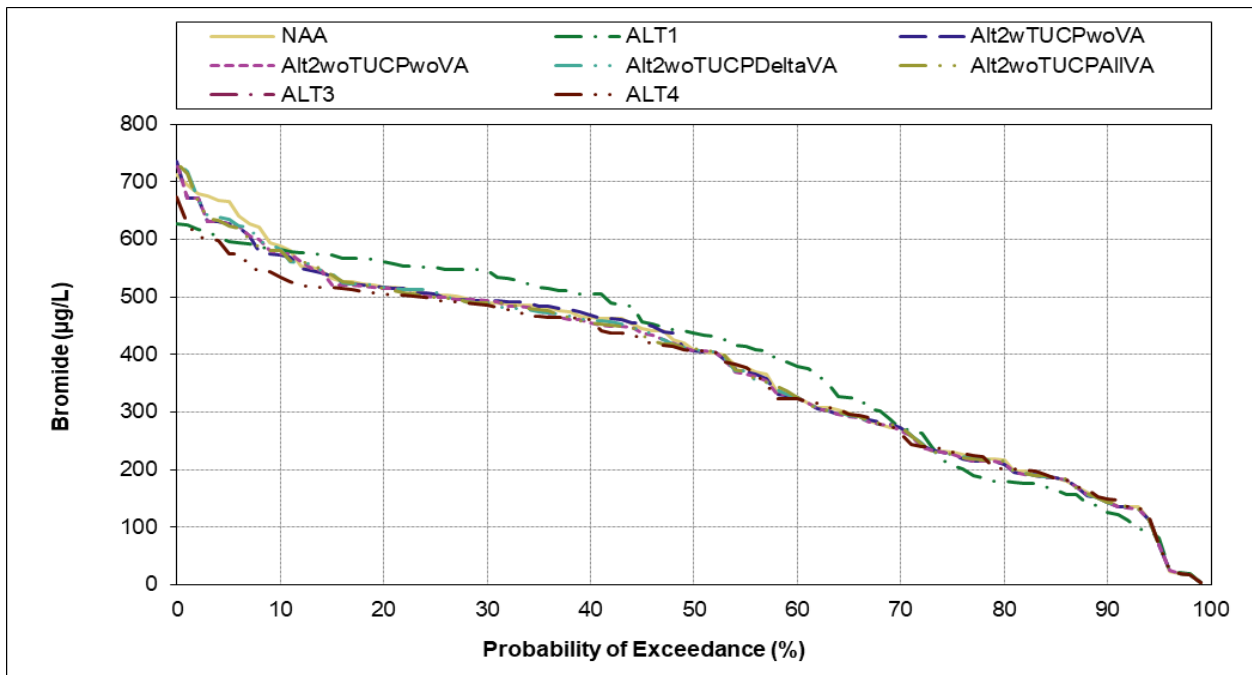


Figure G.3-2-18. Banks Pumping Plant, Monthly Average Bromide (in micrograms per liter), December

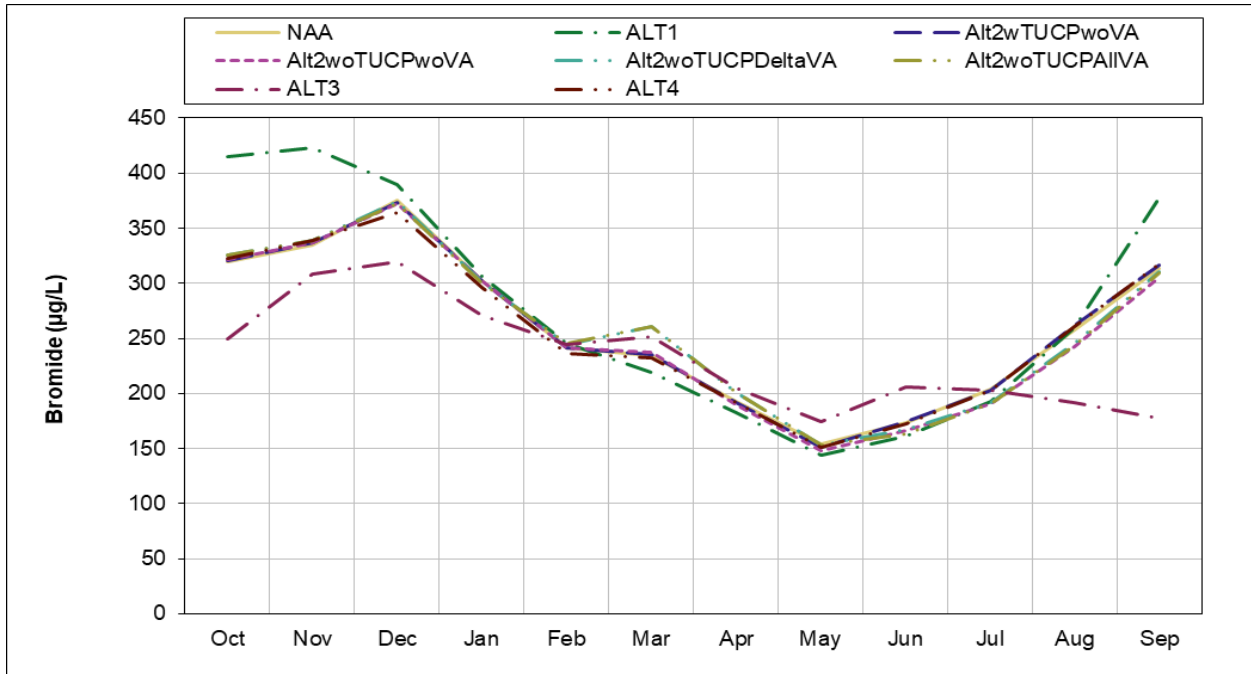


Figure G.3-3-1. Jones Pumping Plant, Long term Monthly Average Bromide (in micrograms per liter)

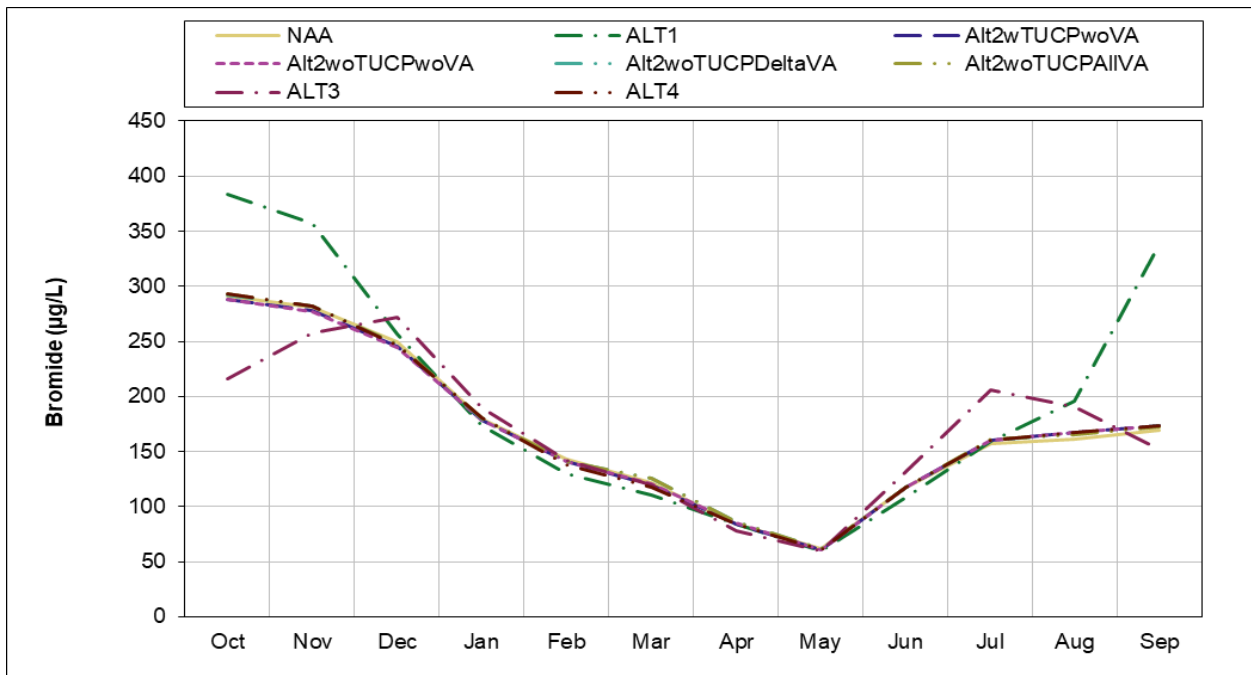


Figure G.3-3-2. Jones Pumping Plant, Wet Year Monthly Average Bromide (in micrograms per liter)

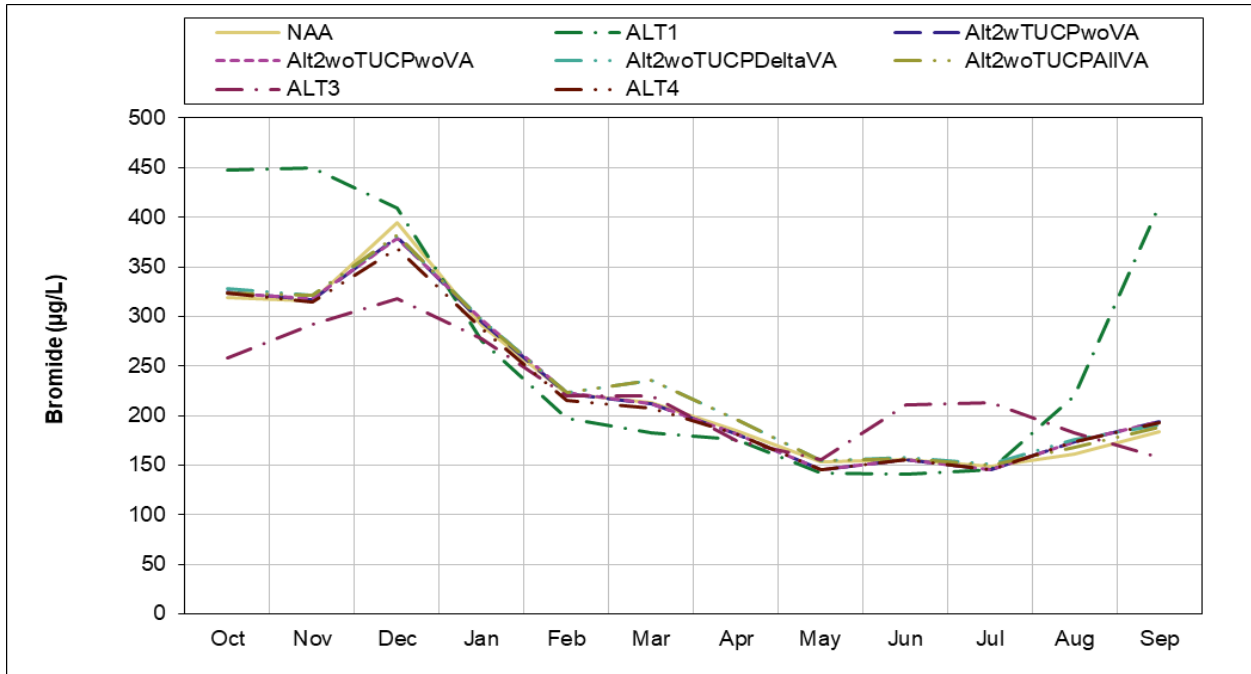


Figure G.3-3-3. Jones Pumping Plant, Above Normal Year Monthly Average Bromide (in micrograms per liter)

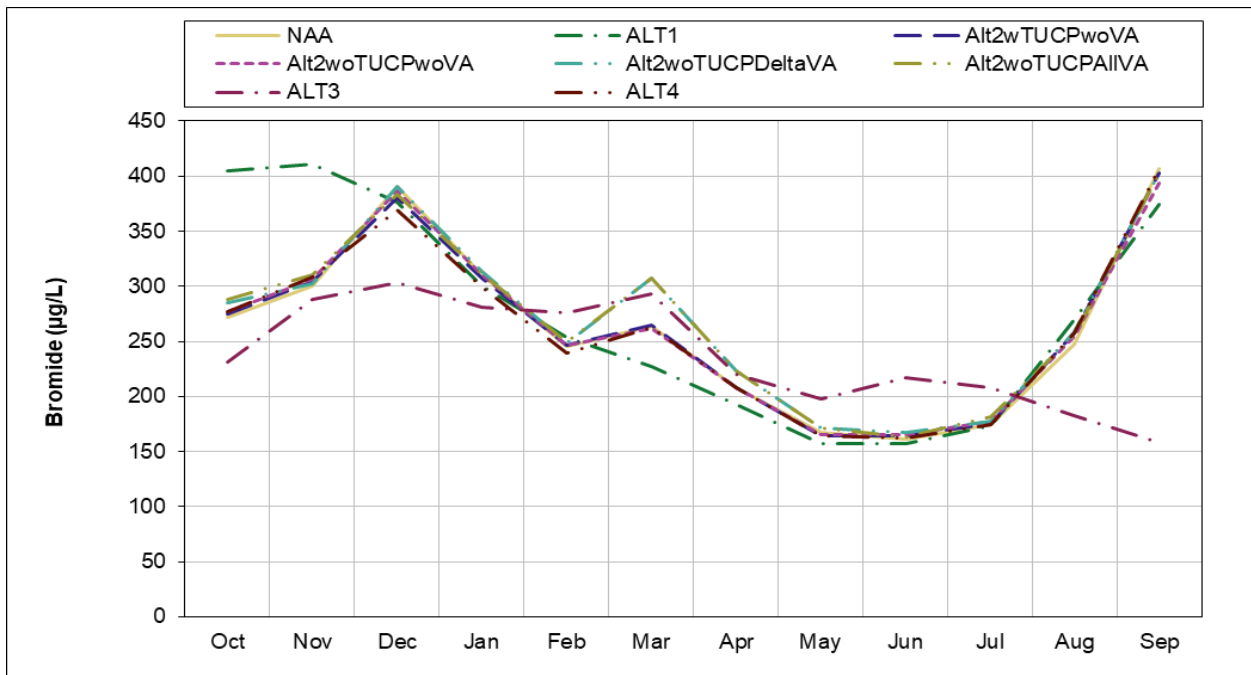


Figure G.3-3-4. Jones Pumping Plant, Below Normal Year Monthly Average Bromide (in micrograms per liter)

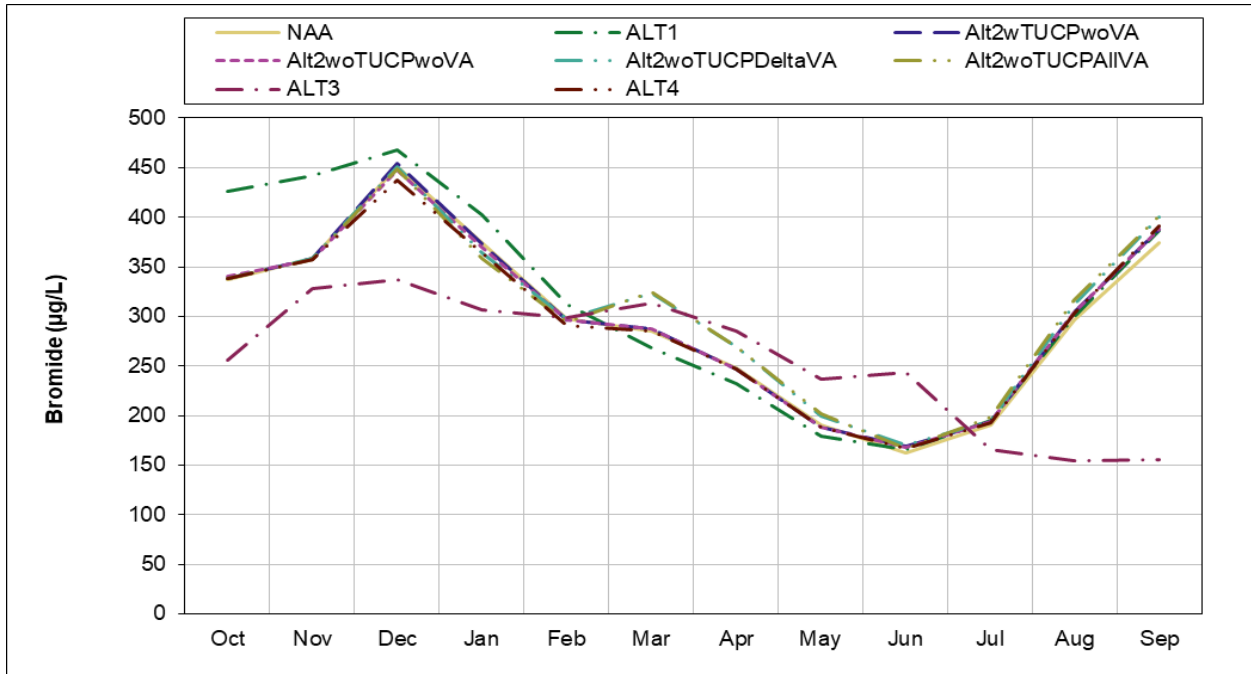


Figure G.3-3-5. Jones Pumping Plant, Dry Year Monthly Average Bromide (in micrograms per liter)

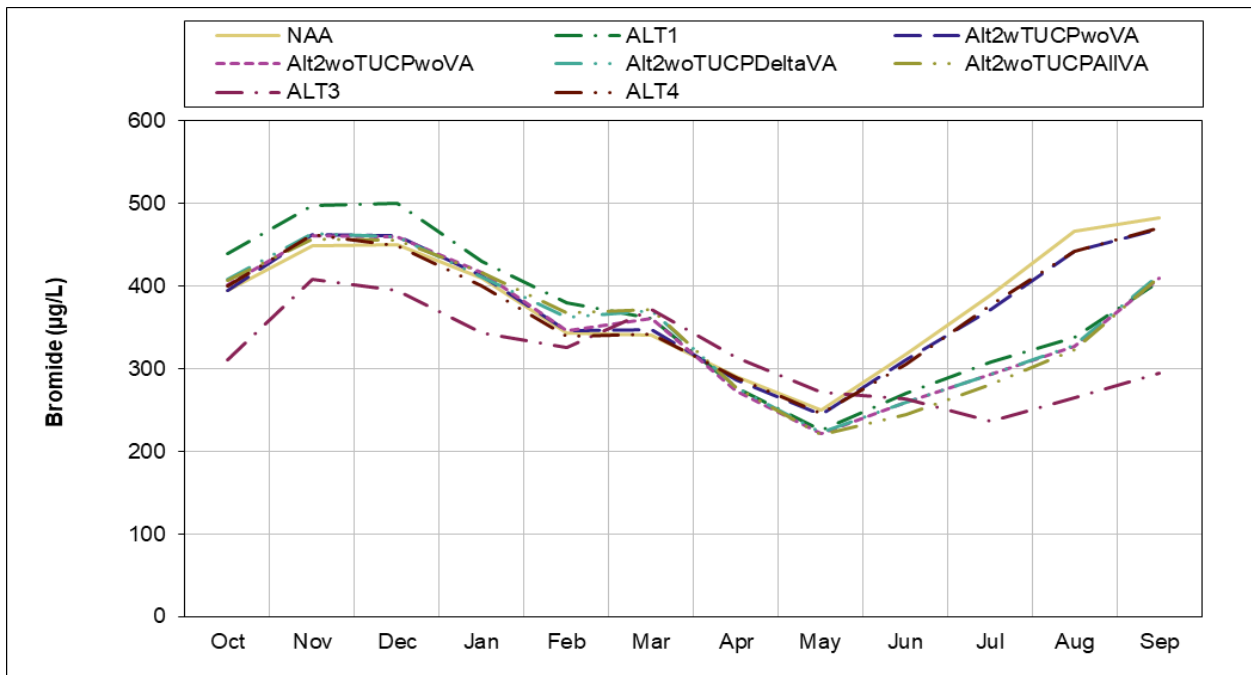


Figure G.3-3-6. Jones Pumping Plant, Critical Year Monthly Average Bromide (in micrograms per liter)

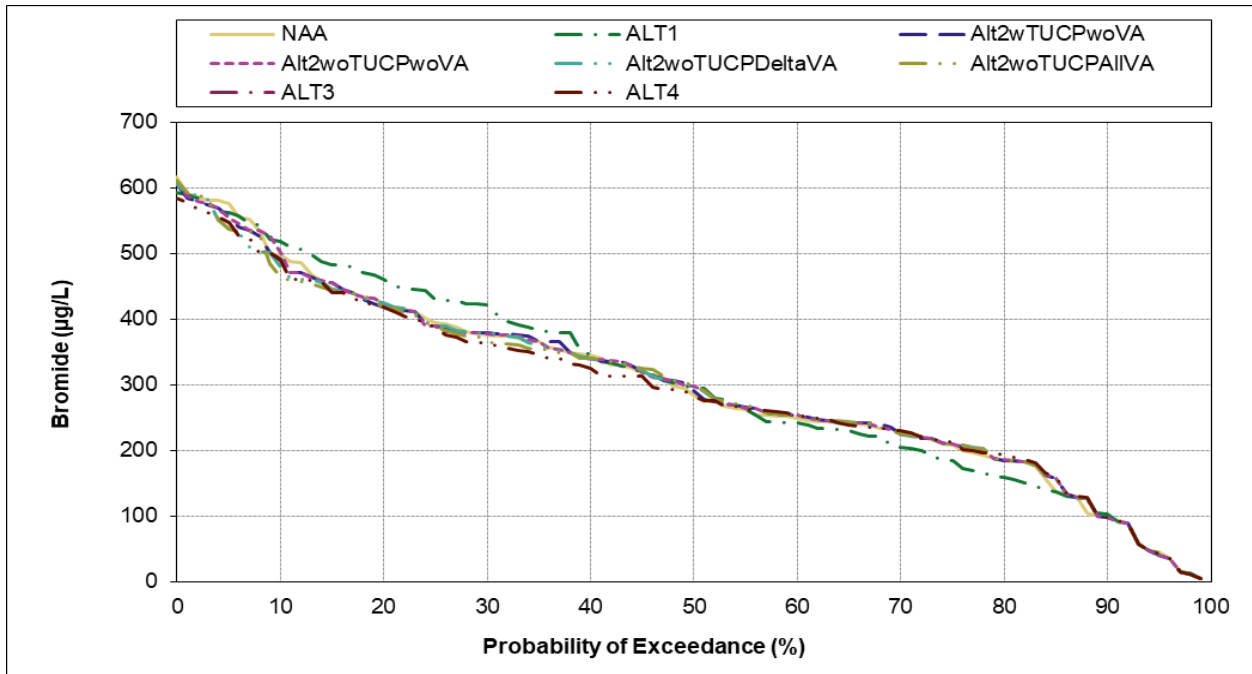


Figure G.3-3-7. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), January

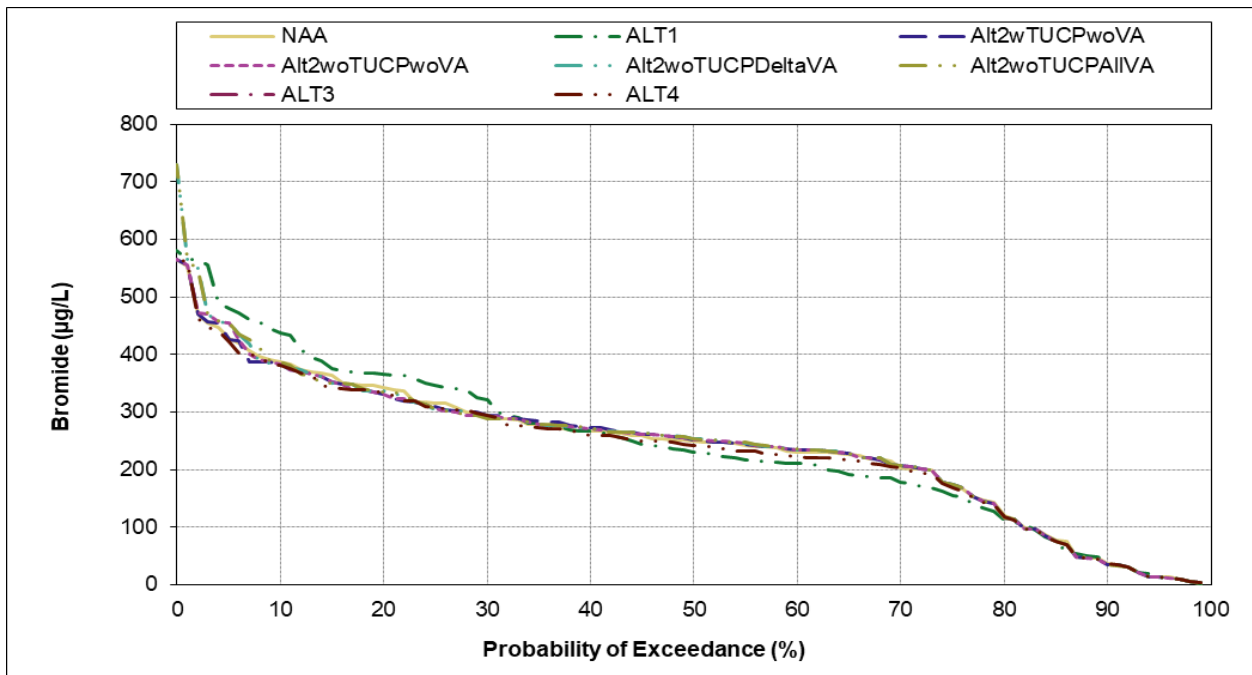


Figure G.3-3-8. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), February

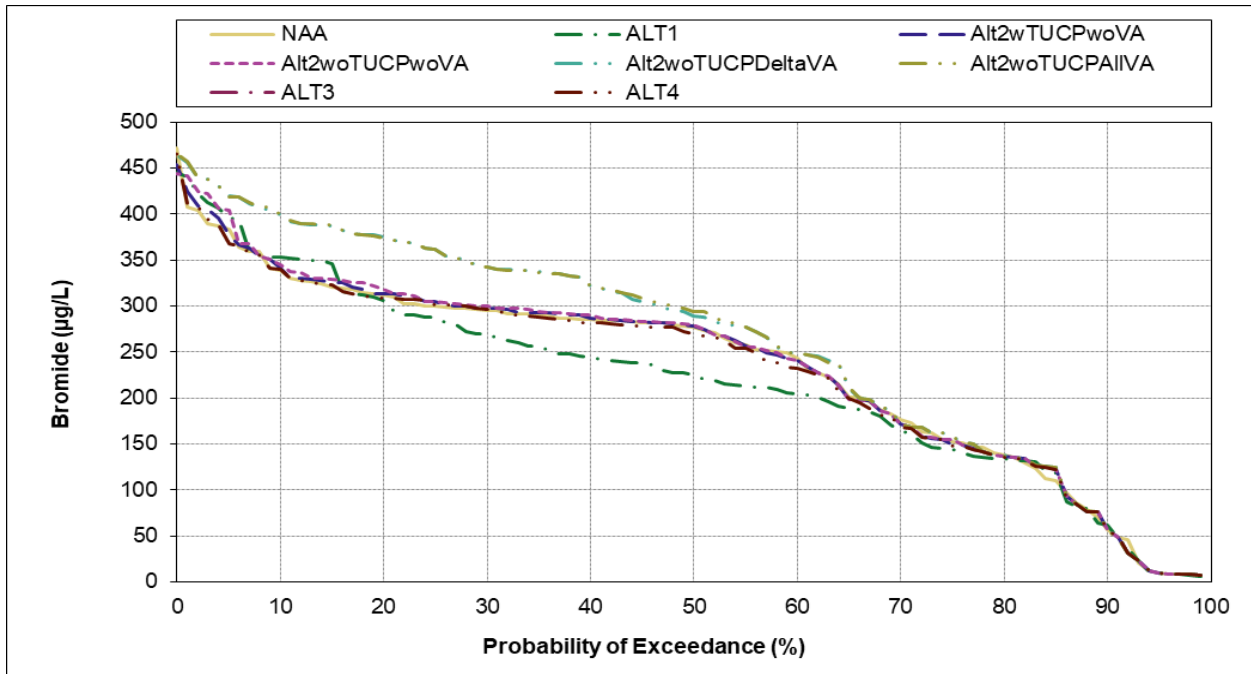


Figure G.3-3-9. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), March

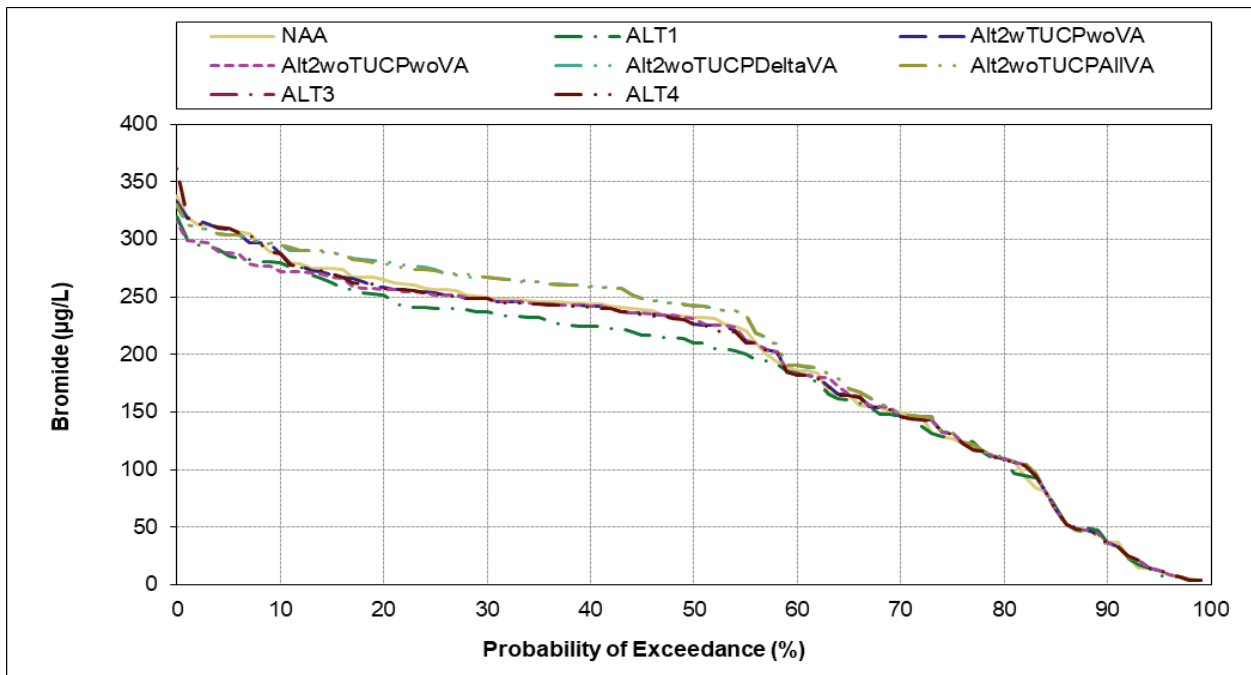


Figure G.3-3-10. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), April

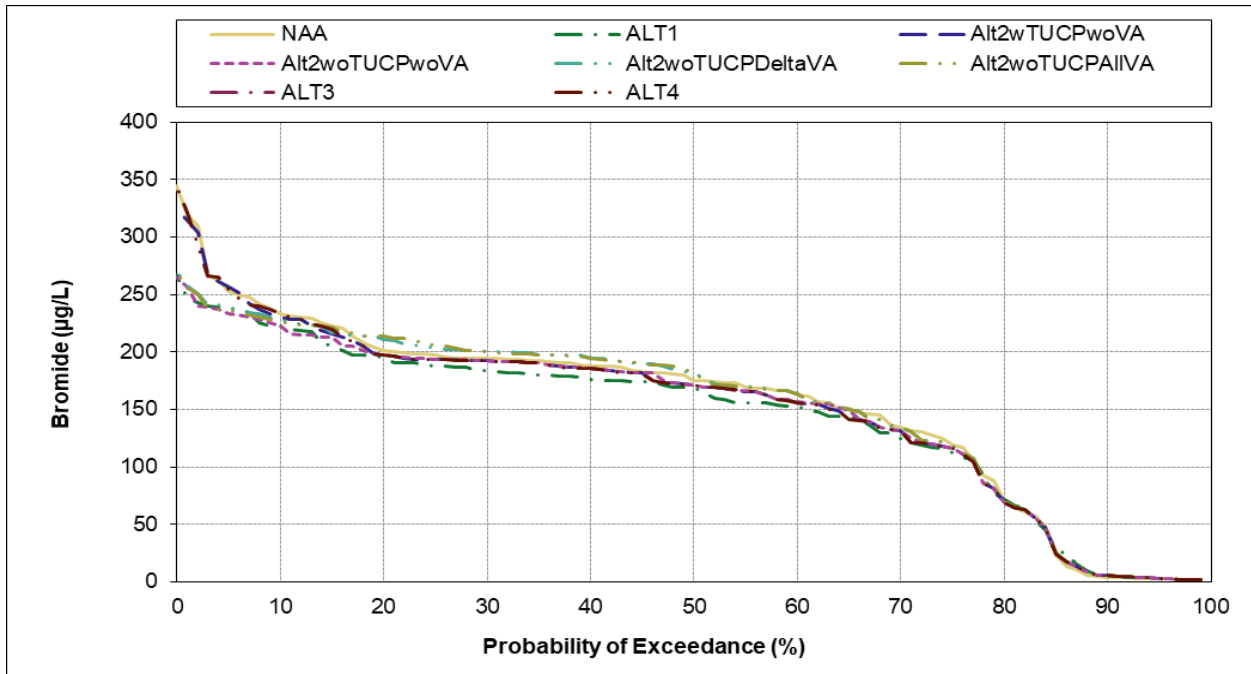


Figure G.3-3-11. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), May

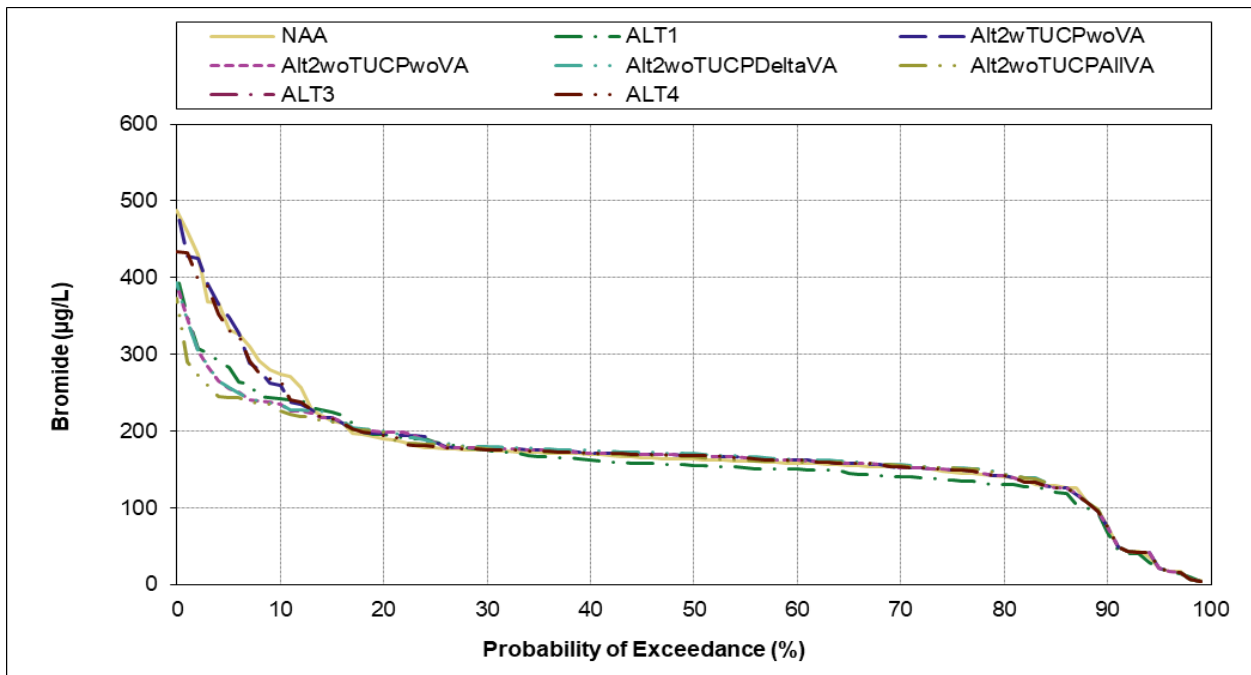


Figure G.3-3-12. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), June

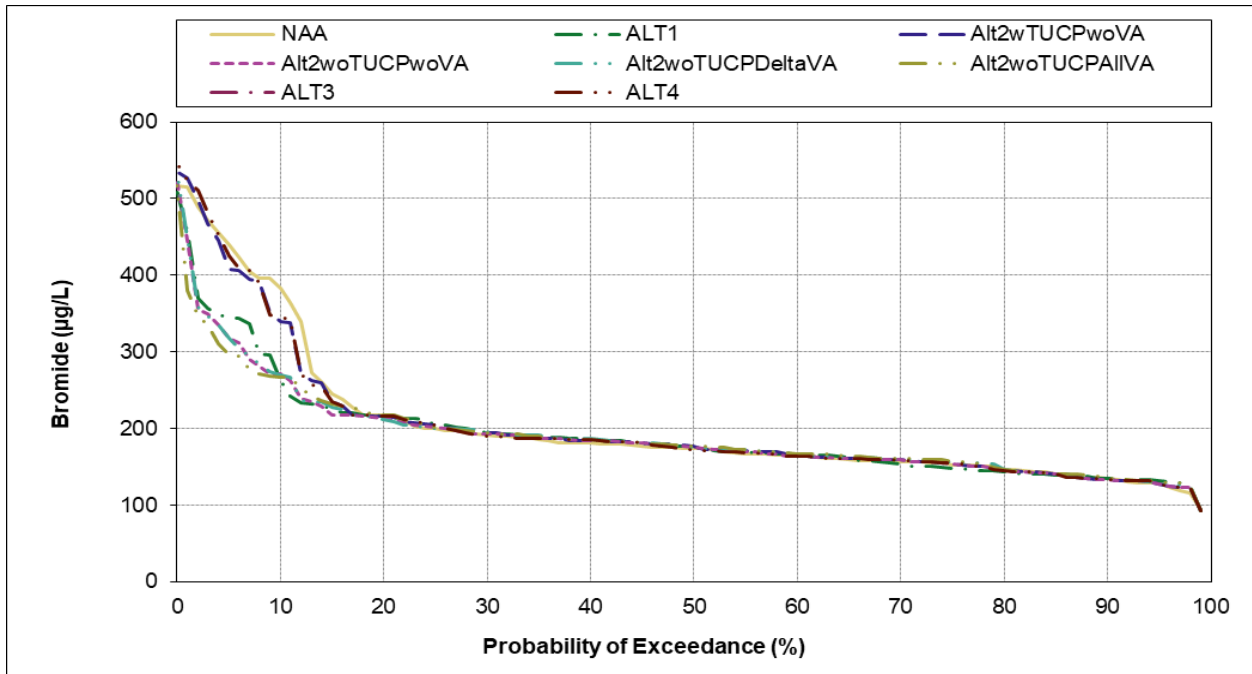


Figure G.3-3-13. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), July

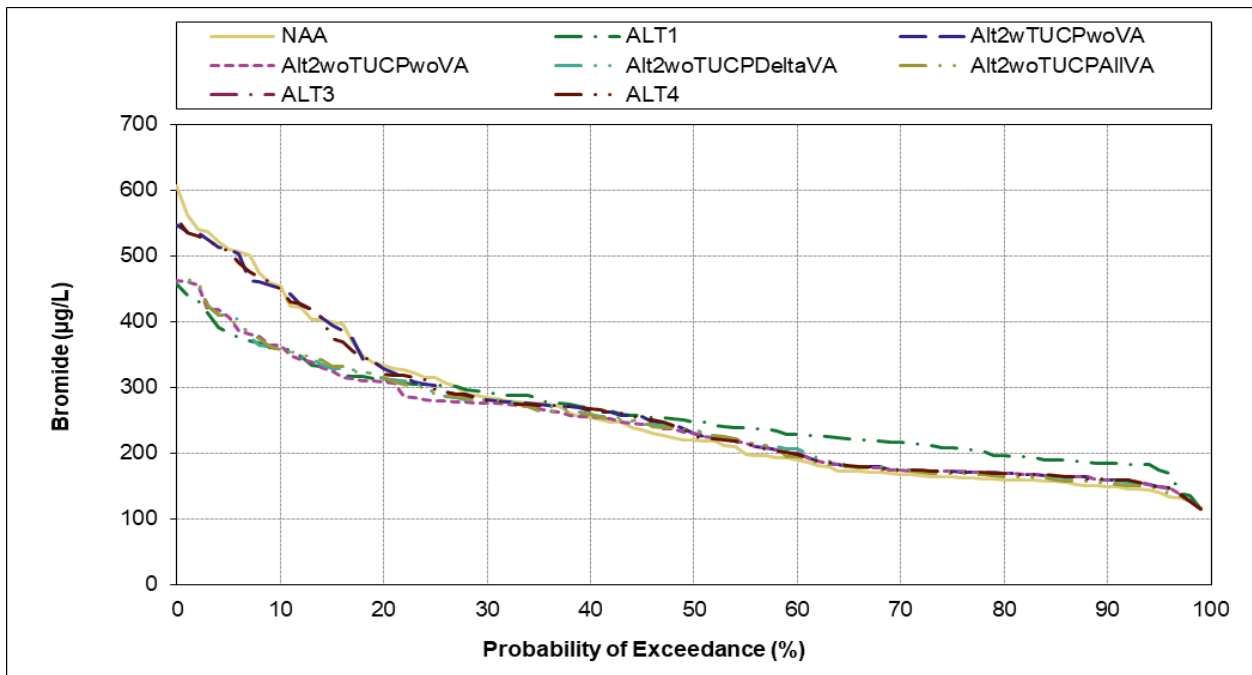


Figure G.3-3-14. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), August

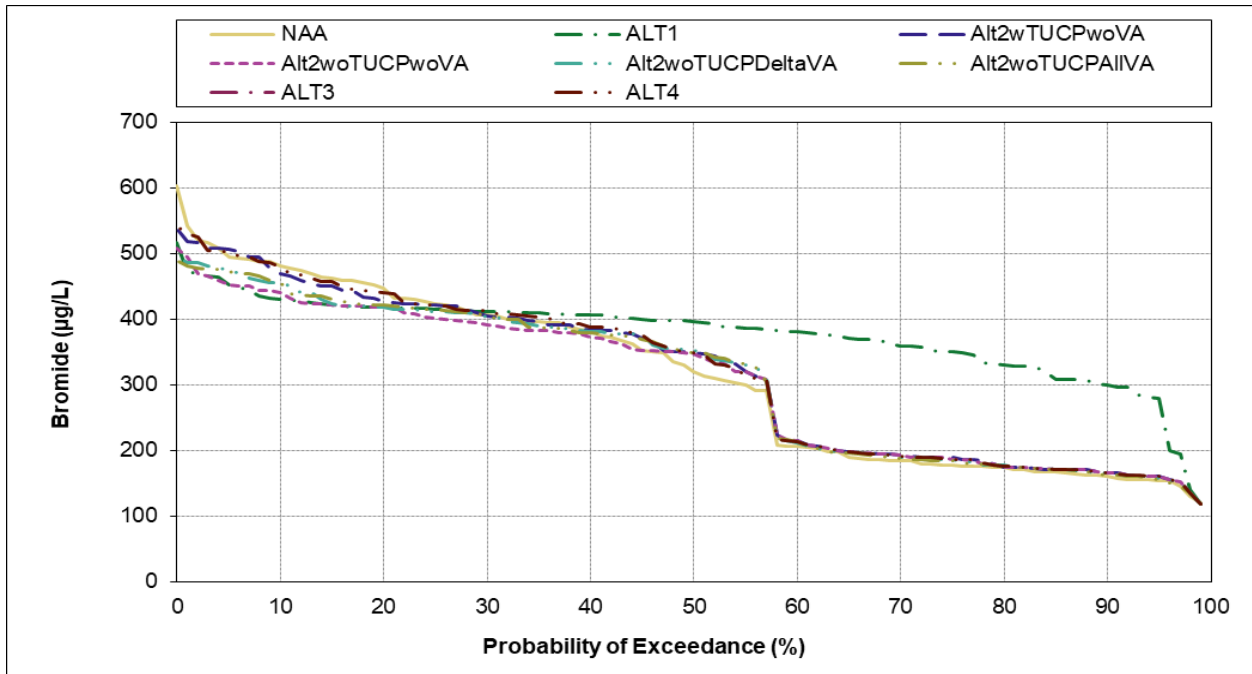


Figure G.3-3-15. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), September

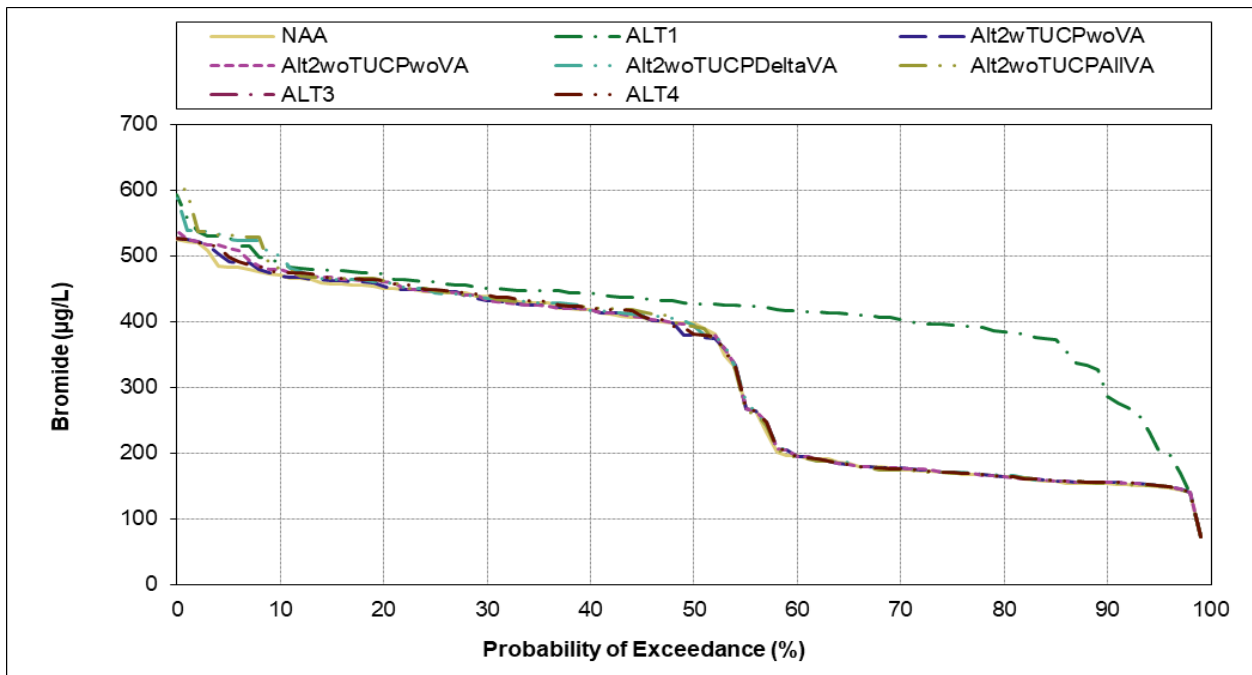


Figure G.3-3-16. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), October

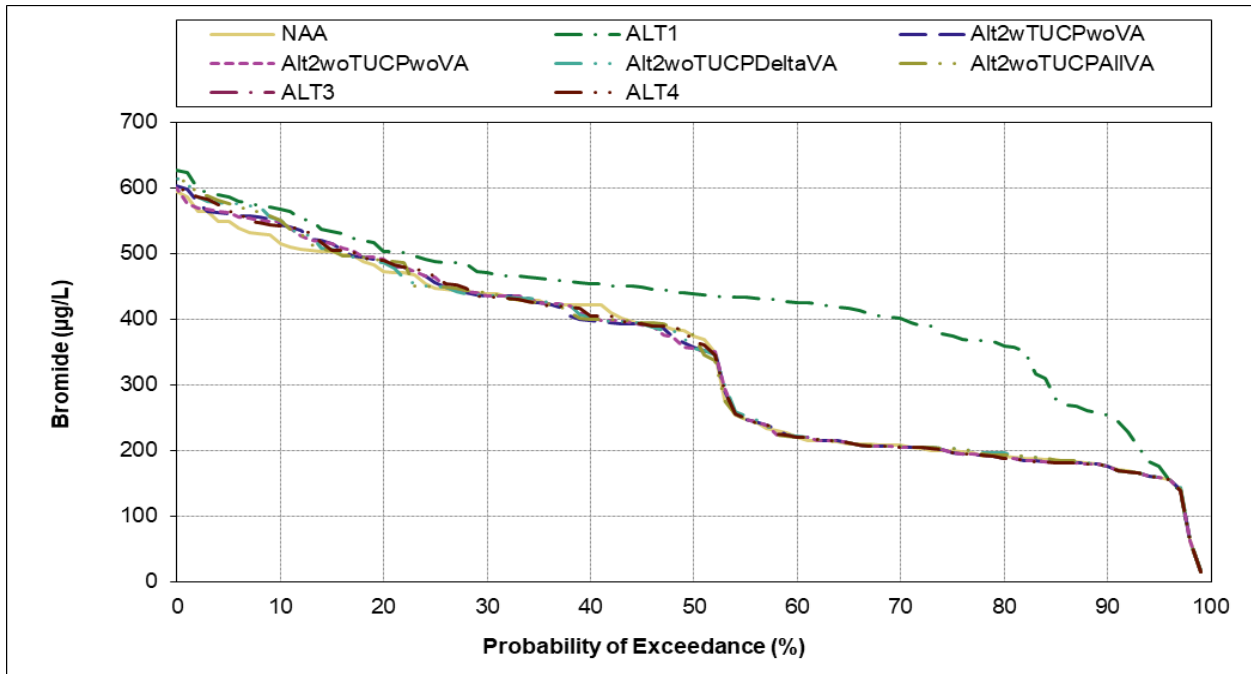


Figure G.3-3-17. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), November

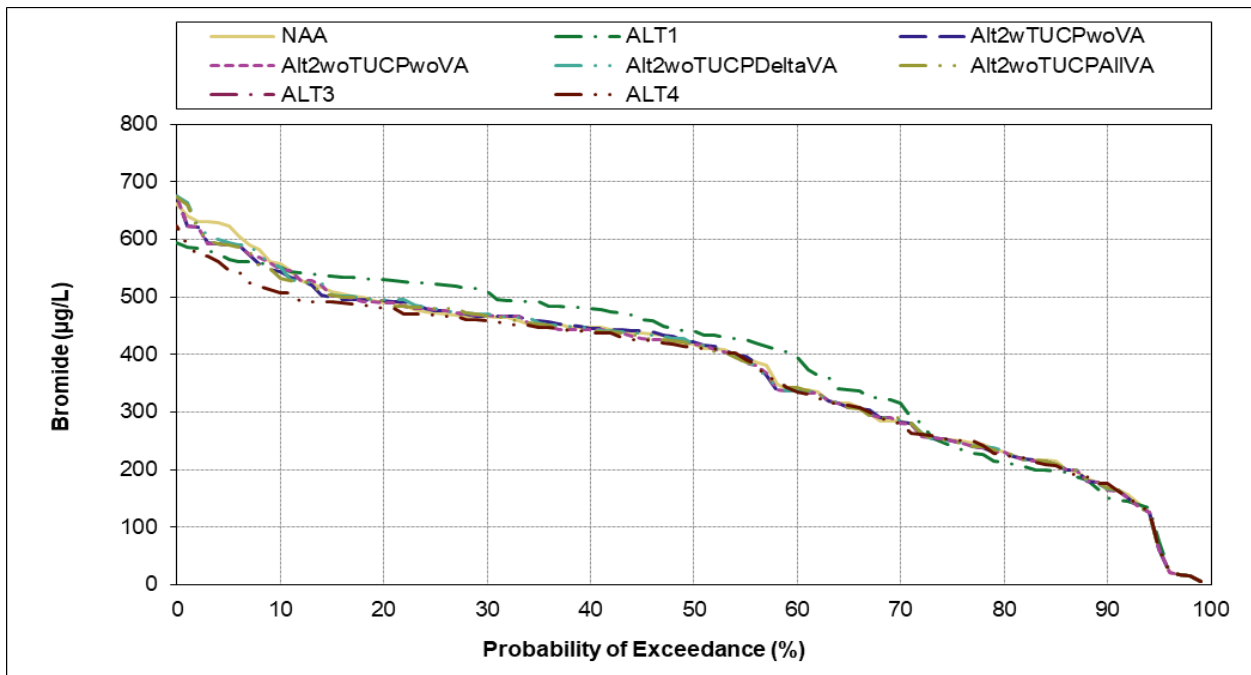


Figure G.3-3-18. Jones Pumping Plant, Monthly Average Bromide (in micrograms per liter), December

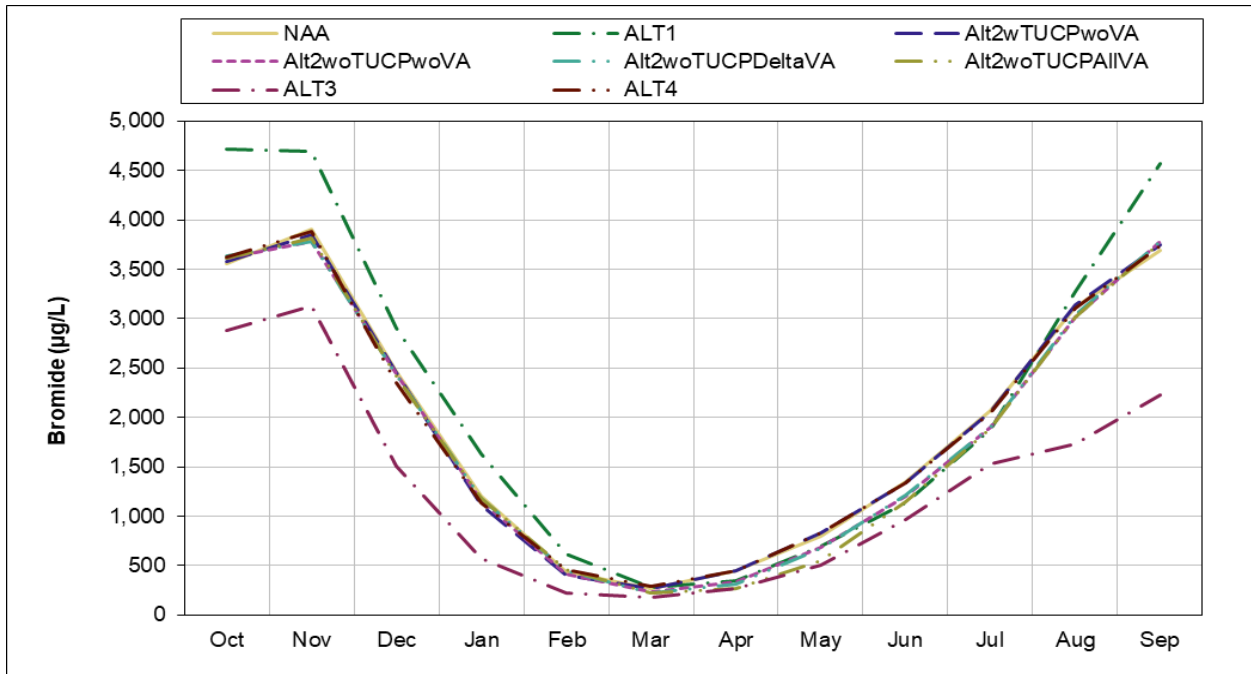


Figure G.3-4-1. San Joaquin River at Antioch, Long term Monthly Average Bromide (in micrograms per liter)

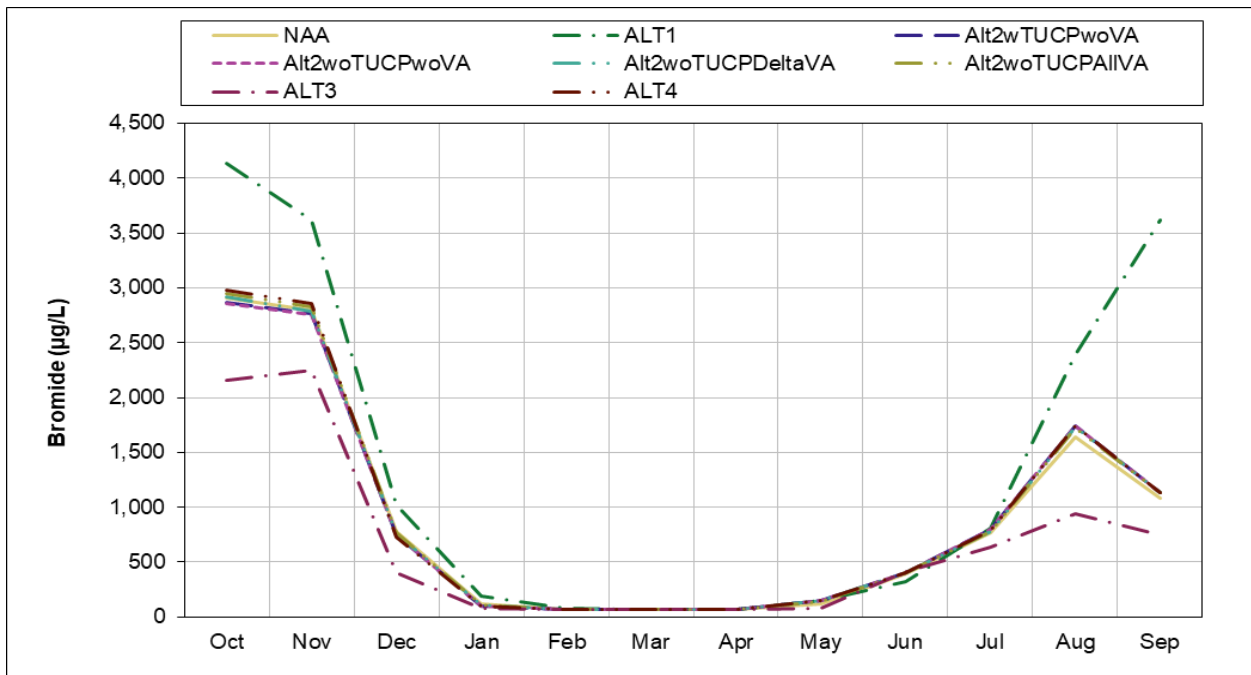


Figure G.3-4-2. San Joaquin River at Antioch, Wet Year Monthly Average Bromide (in micrograms per liter)

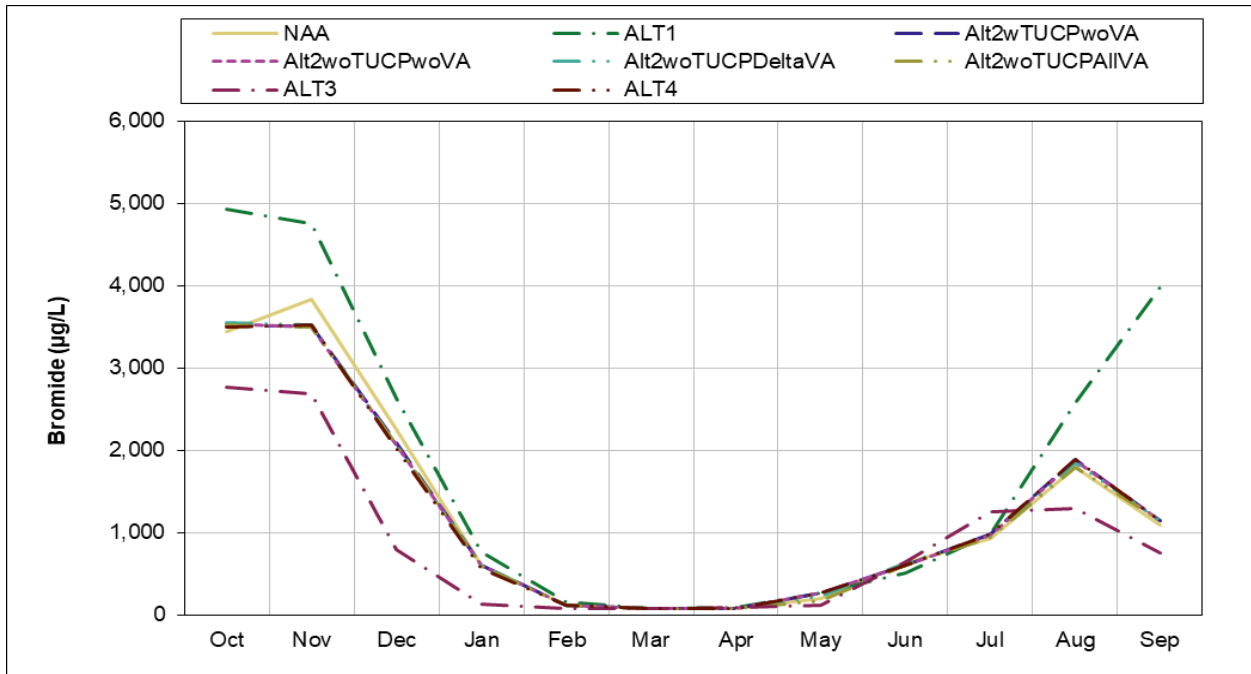


Figure G.3-4-3. San Joaquin River at Antioch, Above Normal Year Monthly Average Bromide (in micrograms per liter)

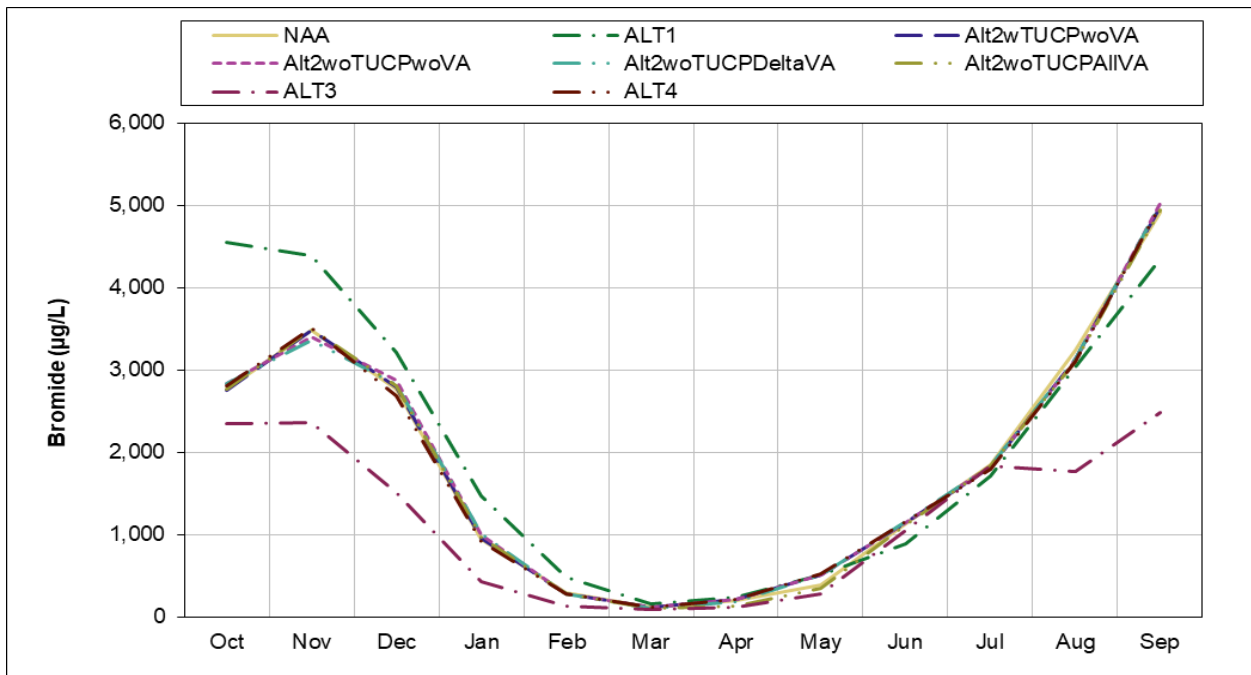


Figure G.3-4-4. San Joaquin River at Antioch, Below Normal Year Monthly Average Bromide (in micrograms per liter)

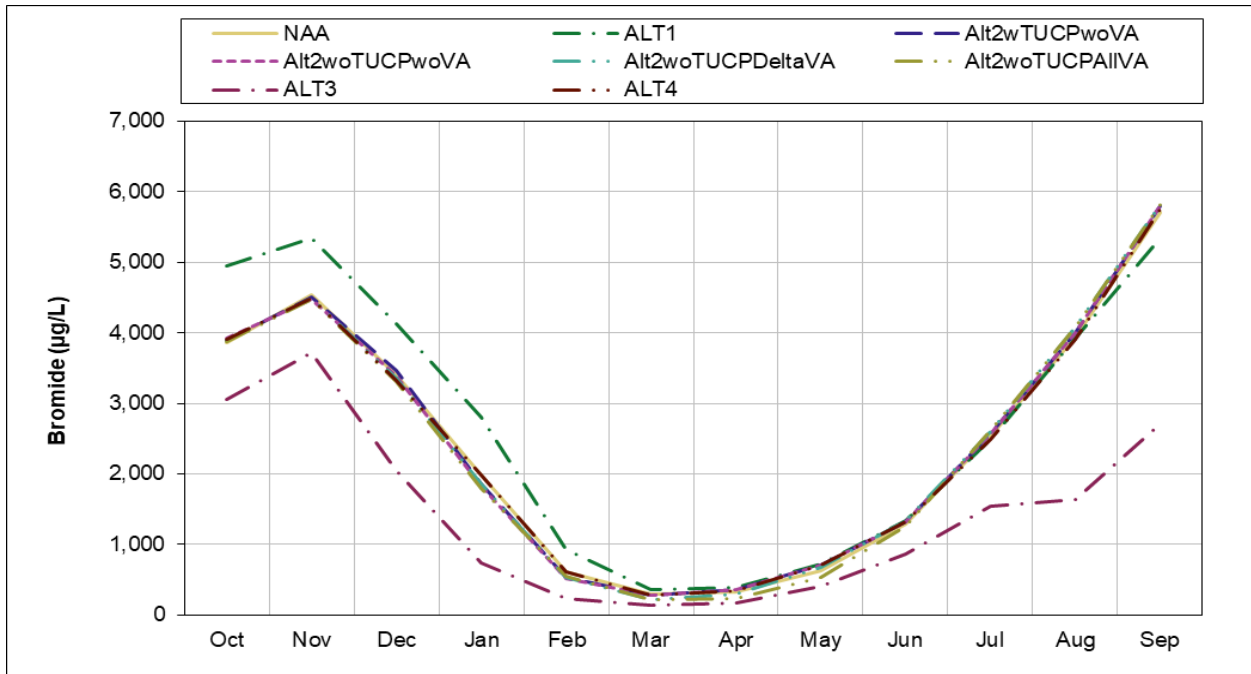


Figure G.3-4-5. San Joaquin River at Antioch, Dry Year Monthly Average Bromide (in micrograms per liter)

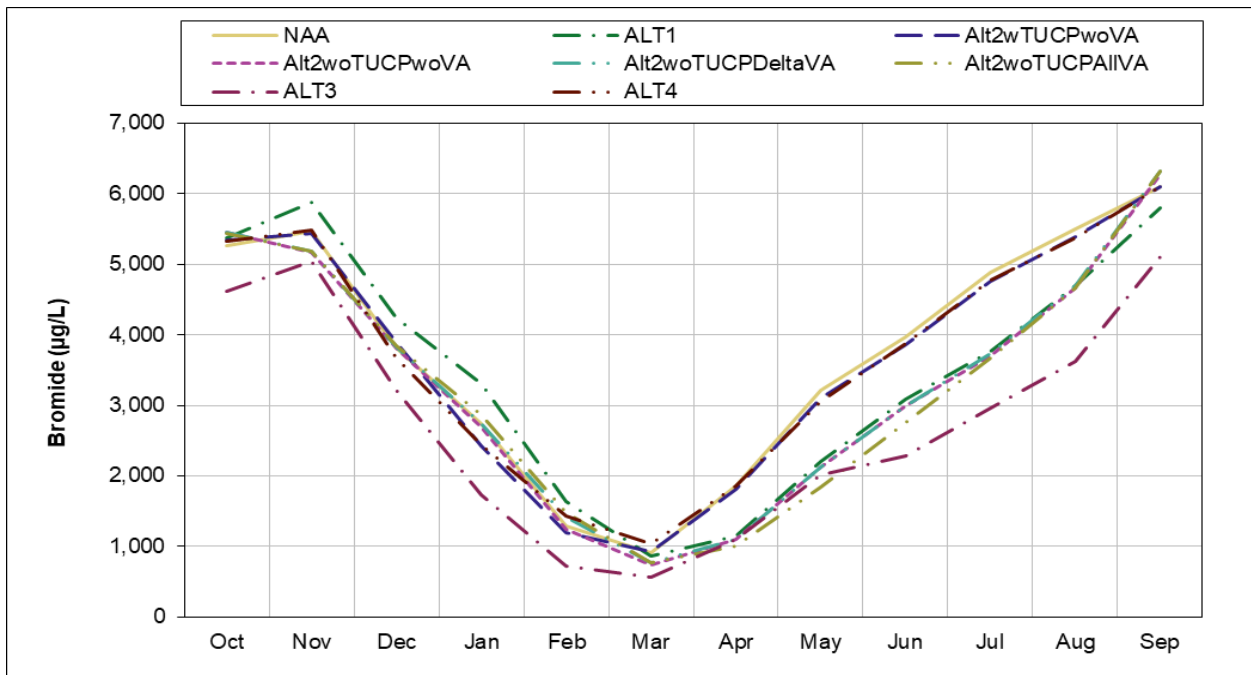


Figure G.3-4-6. San Joaquin River at Antioch, Critical Year Monthly Average Bromide (in micrograms per liter)

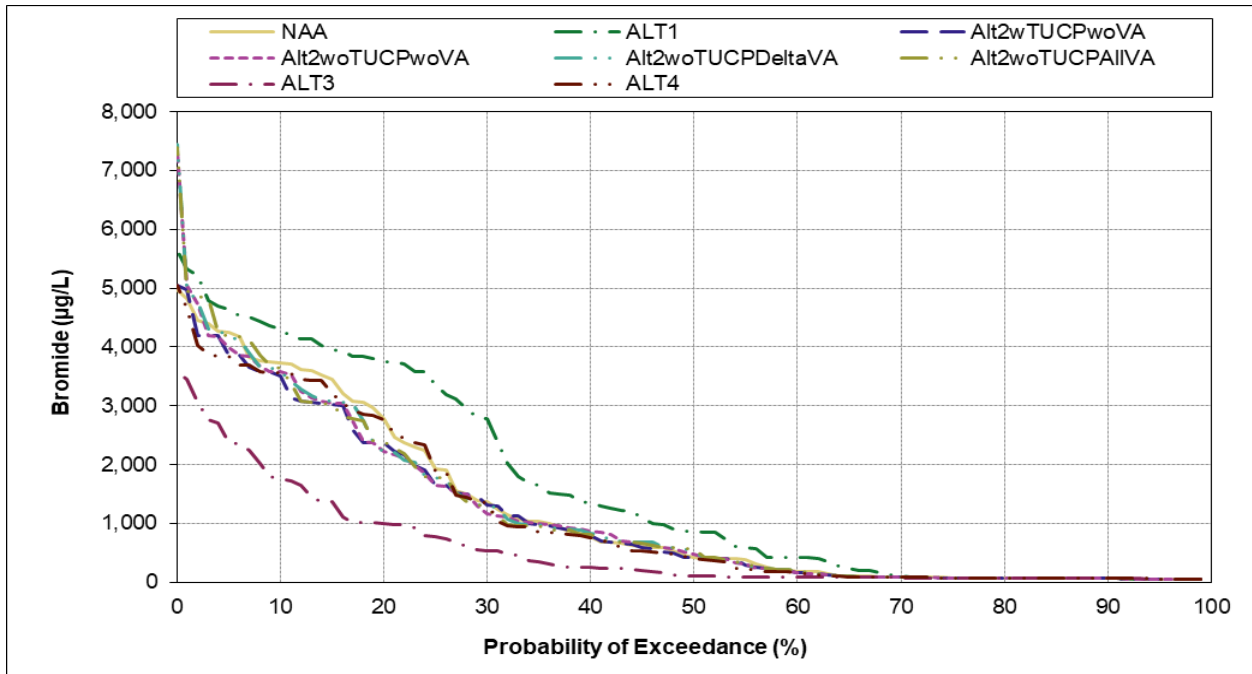


Figure G.3-4-7. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), January

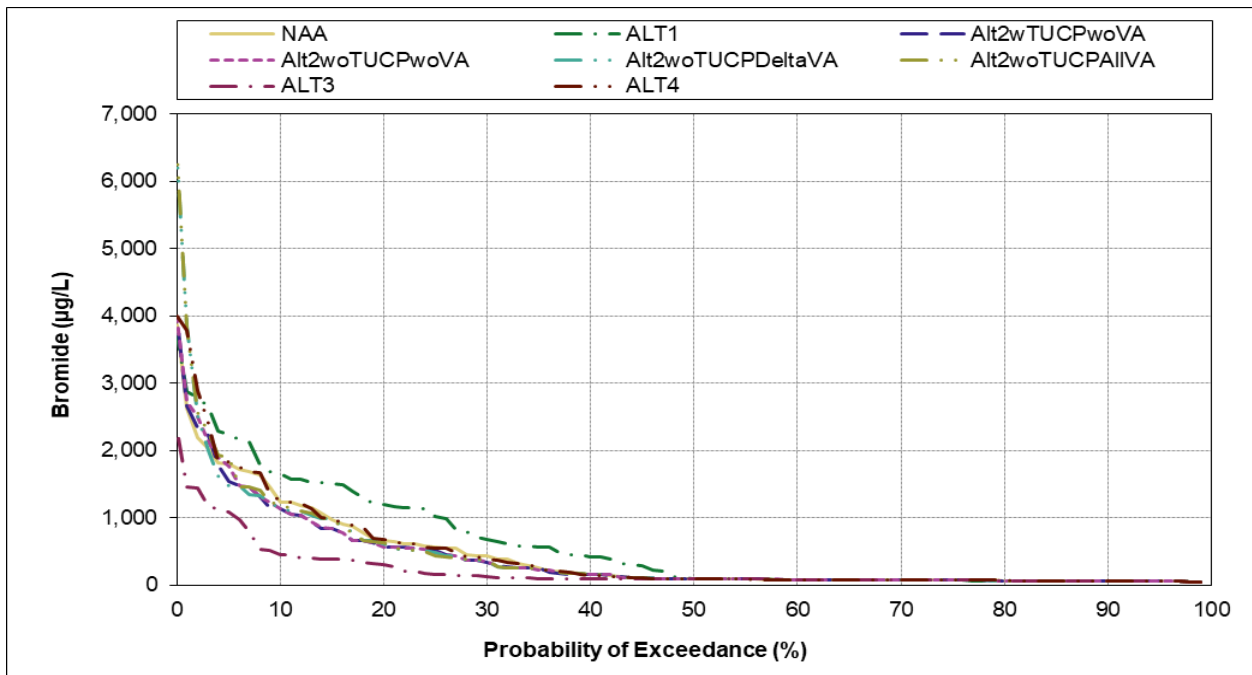


Figure G.3-4-8. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), February

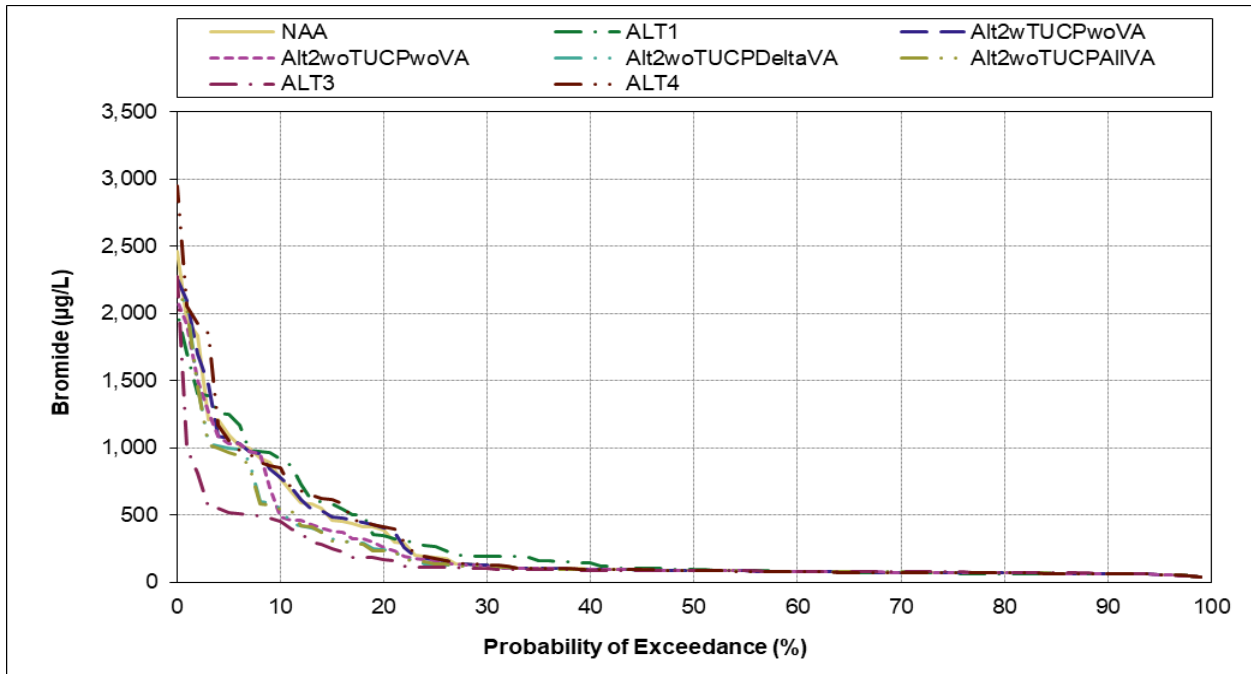


Figure G.3-4-9. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), March

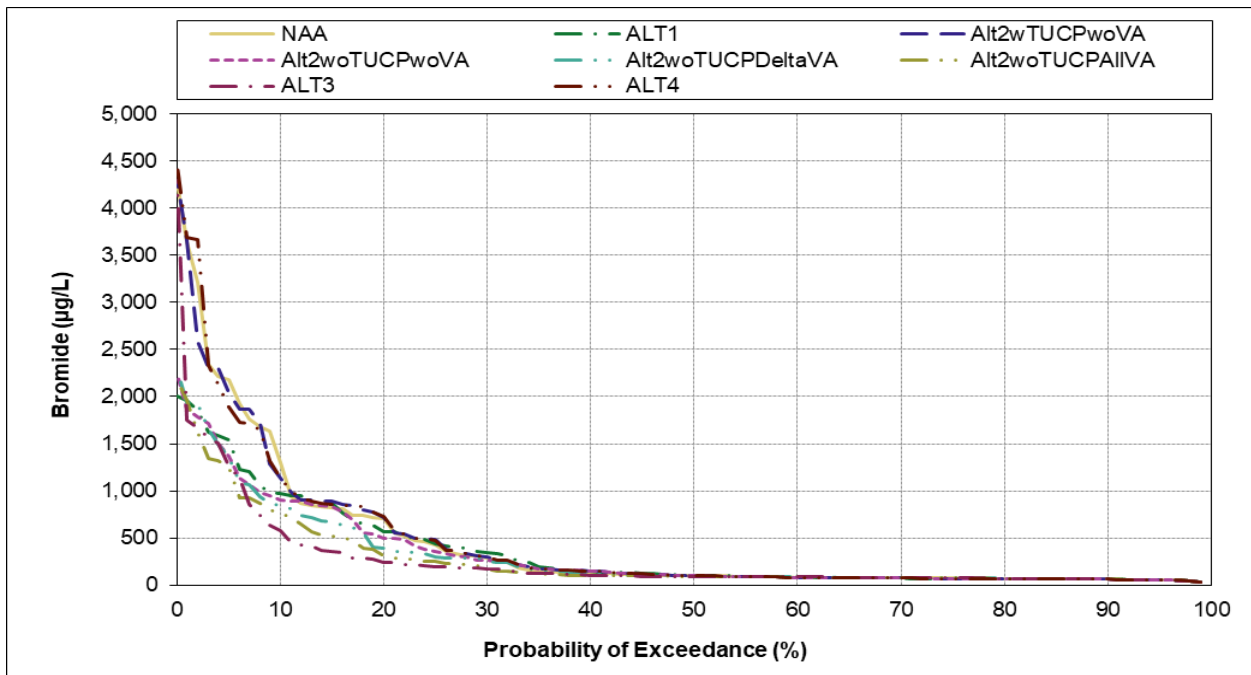


Figure G.3-4-10. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), April

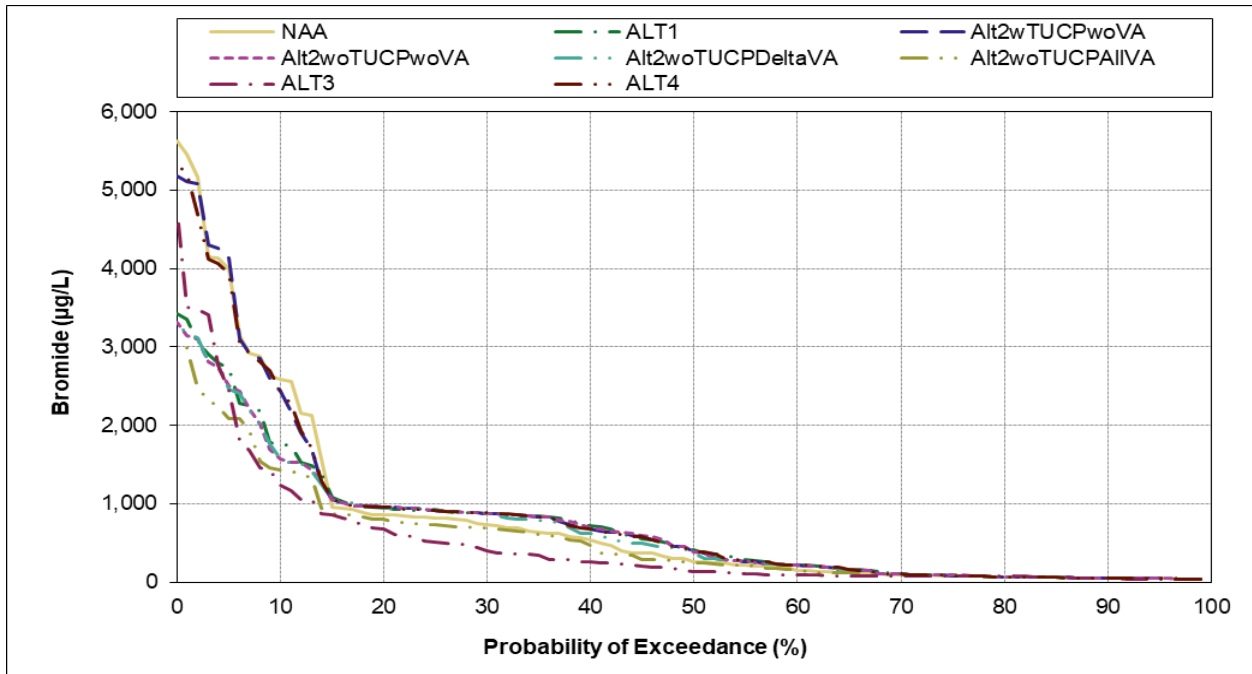


Figure G.3-4-11. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), May

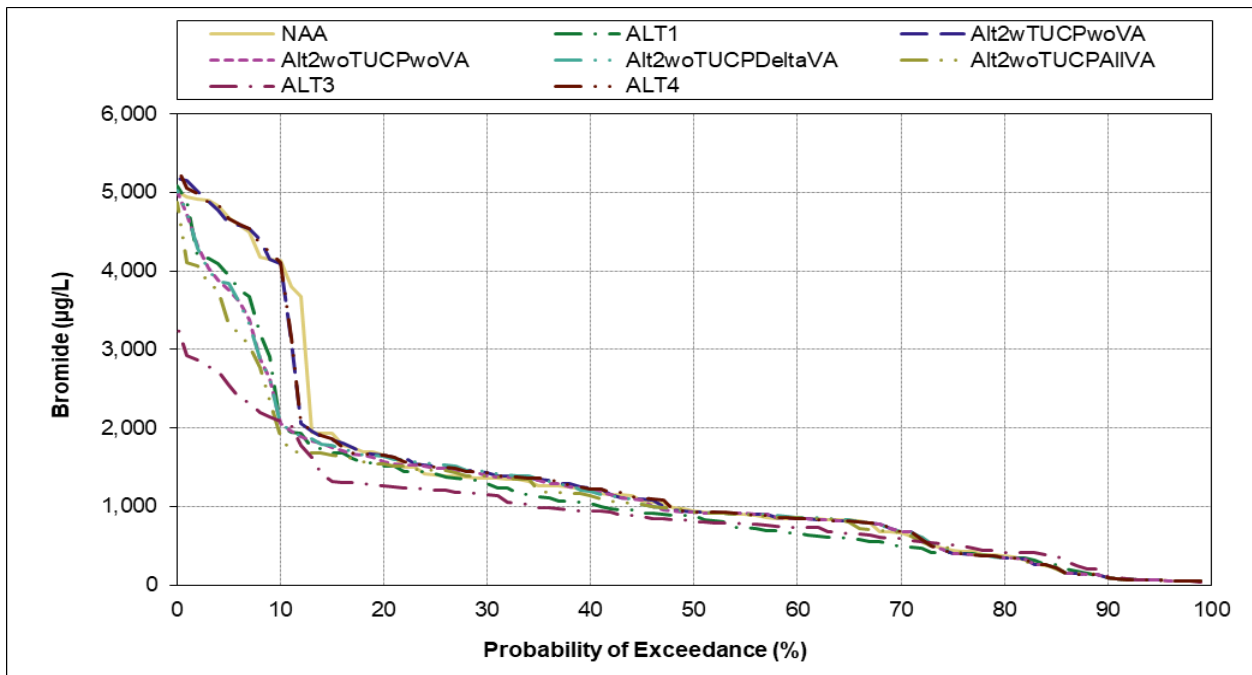


Figure G.3-4-12. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), June

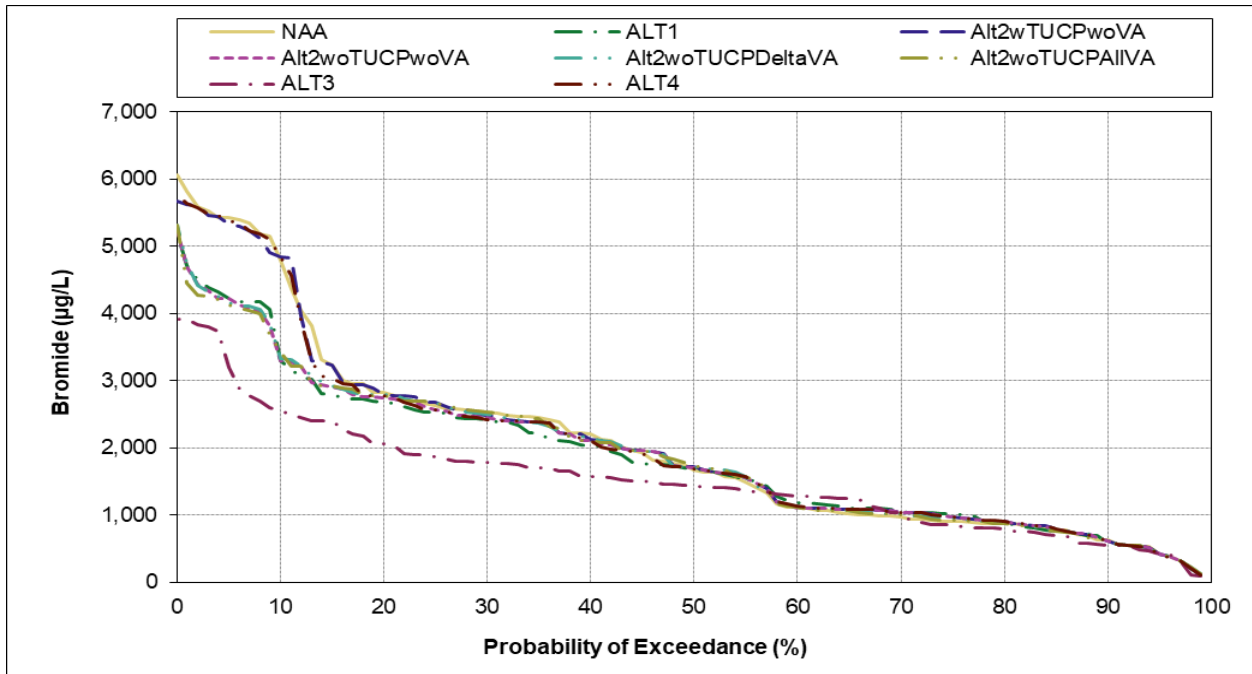


Figure G.3-4-13. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), July

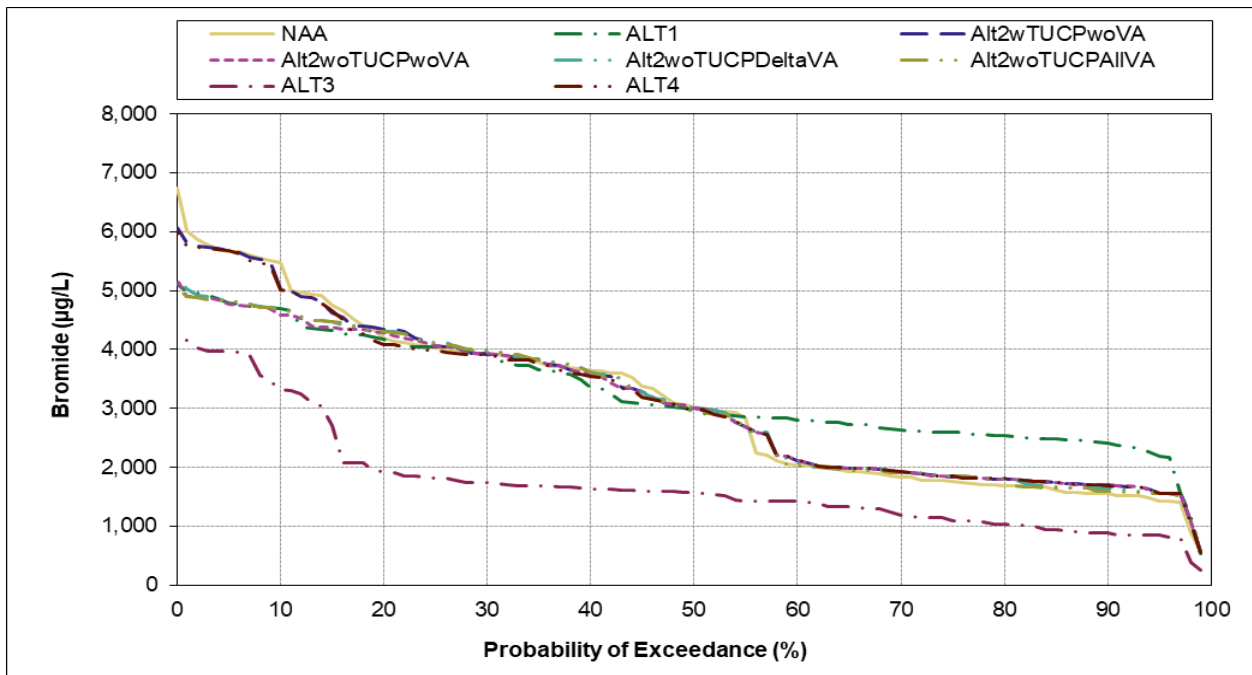


Figure G.3-4-14. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), August

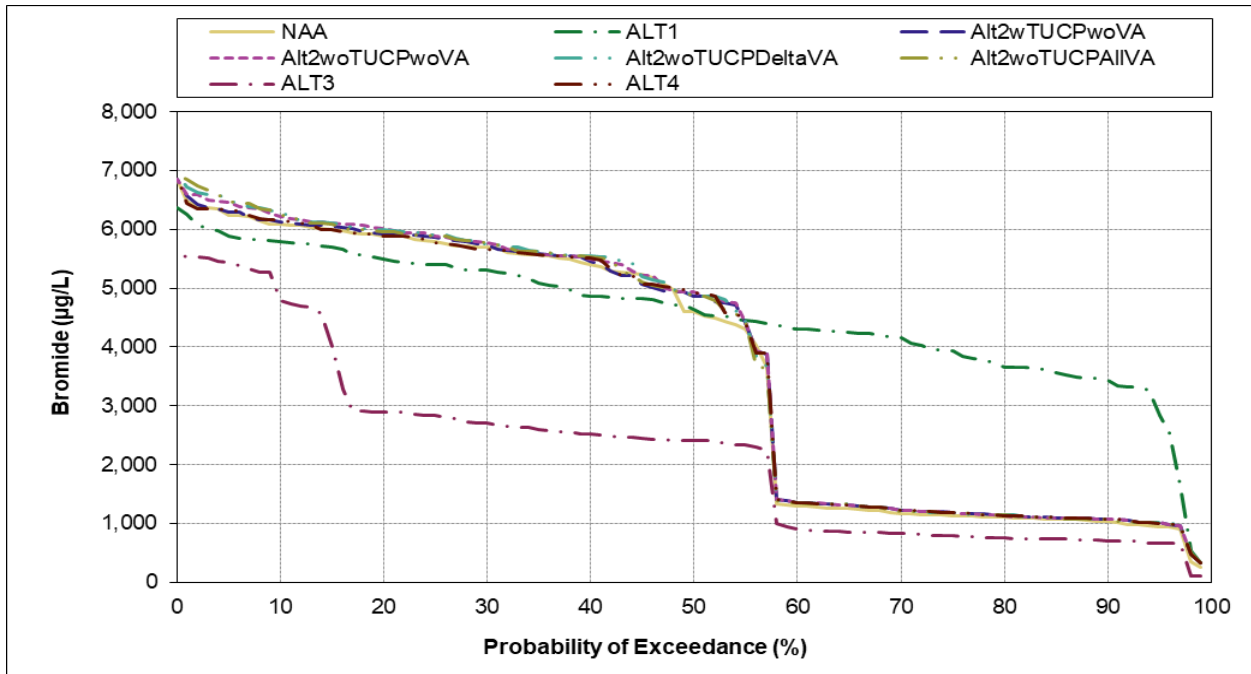


Figure G.3-4-15. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), September

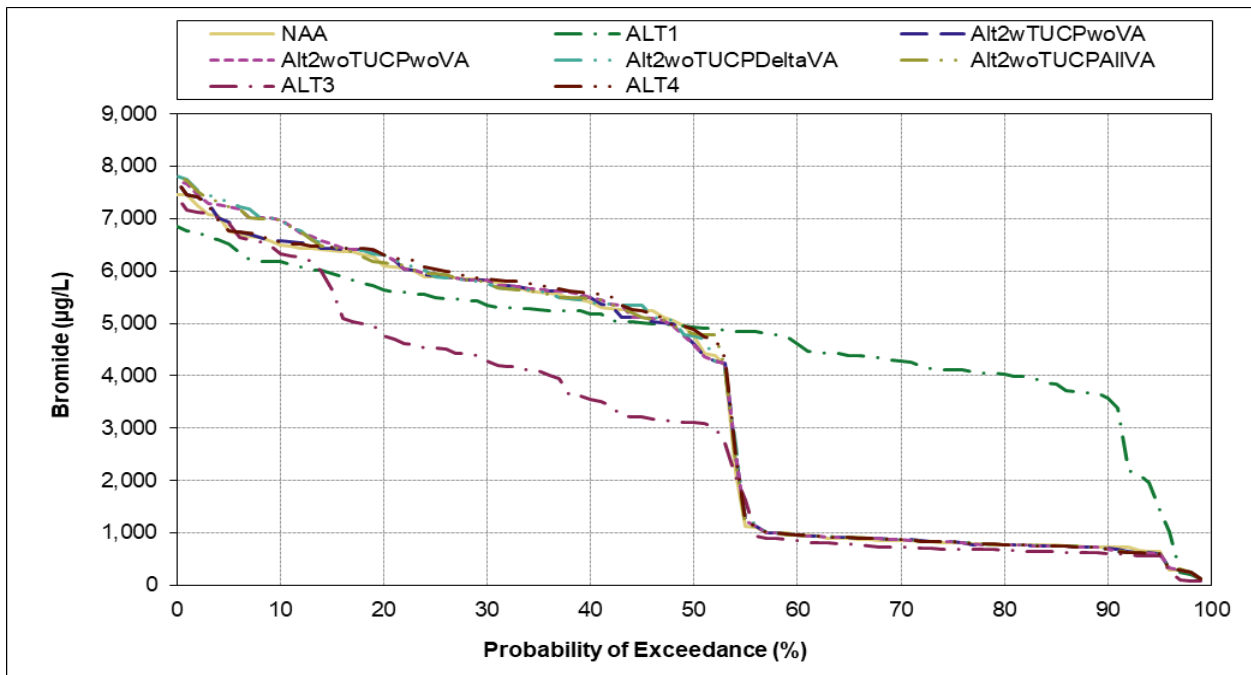


Figure G.3-4-16. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), October

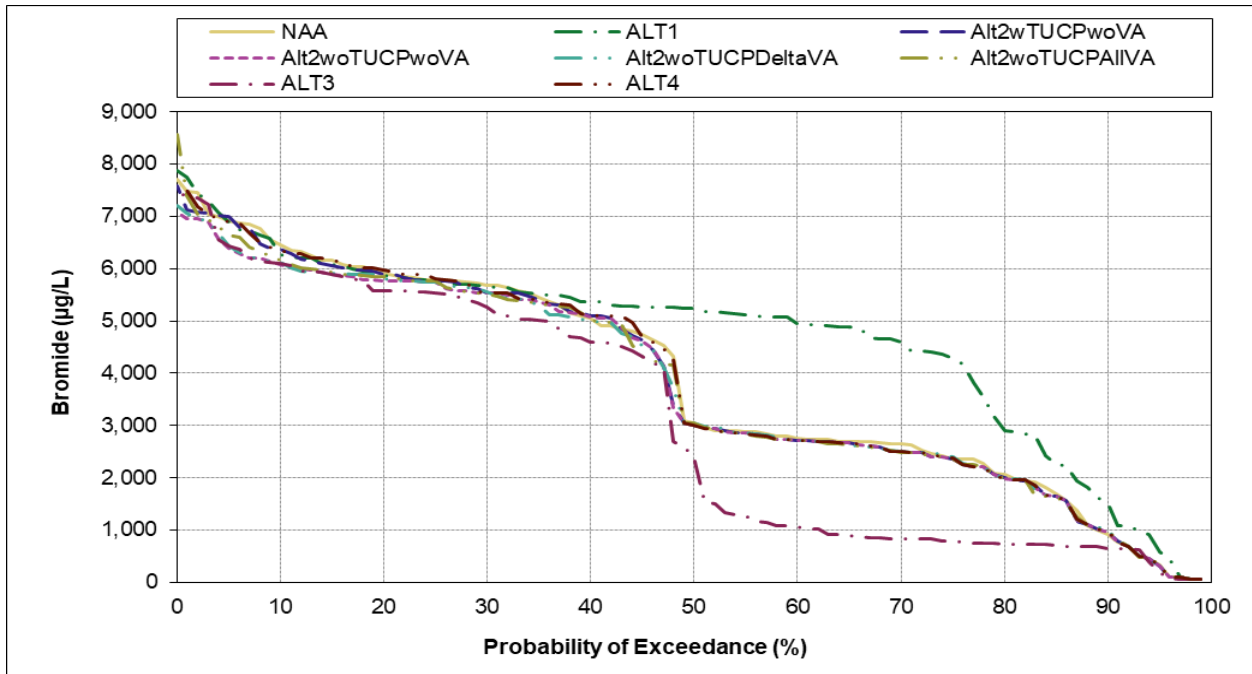


Figure G.3-4-17. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), November

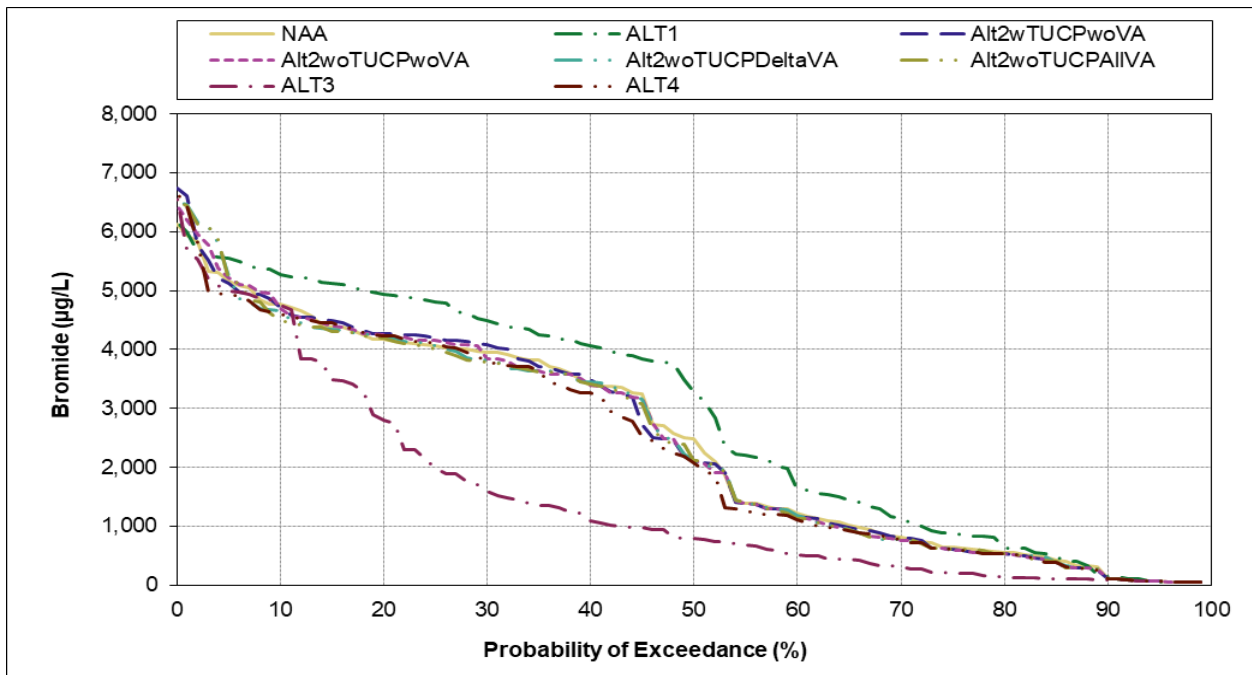


Figure G.3-4-18. San Joaquin River at Antioch, Monthly Average Bromide (in micrograms per liter), December

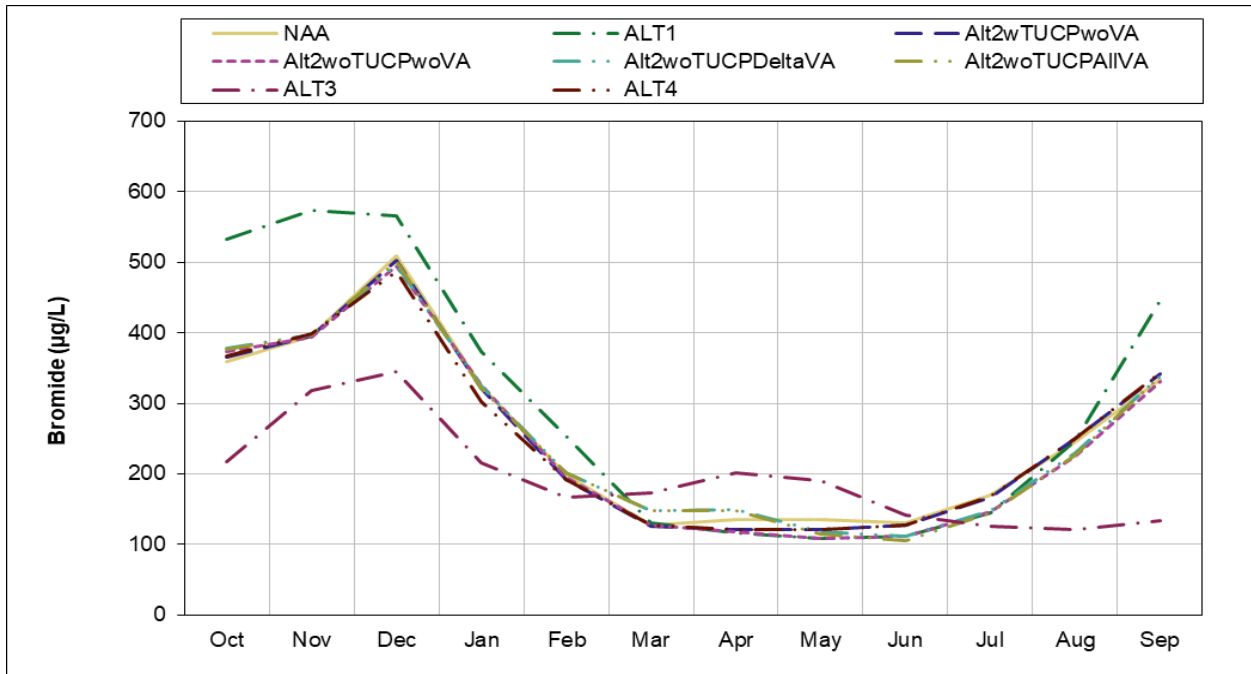


Figure G.3-5-1. Contra Costa Water District Pumping Plant #1, Long term Monthly Average Bromide (in micrograms per liter)

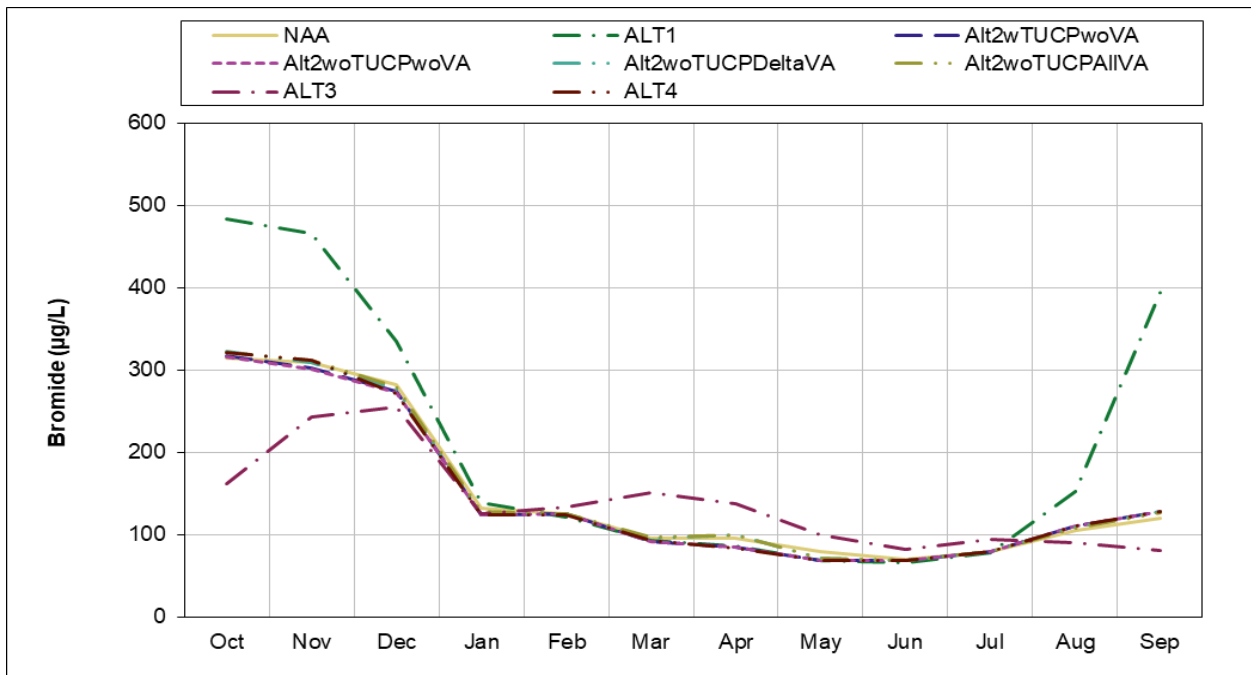


Figure G.3-5-2. Contra Costa Water District Pumping Plant #1, Wet Year Monthly Average Bromide (in micrograms per liter)

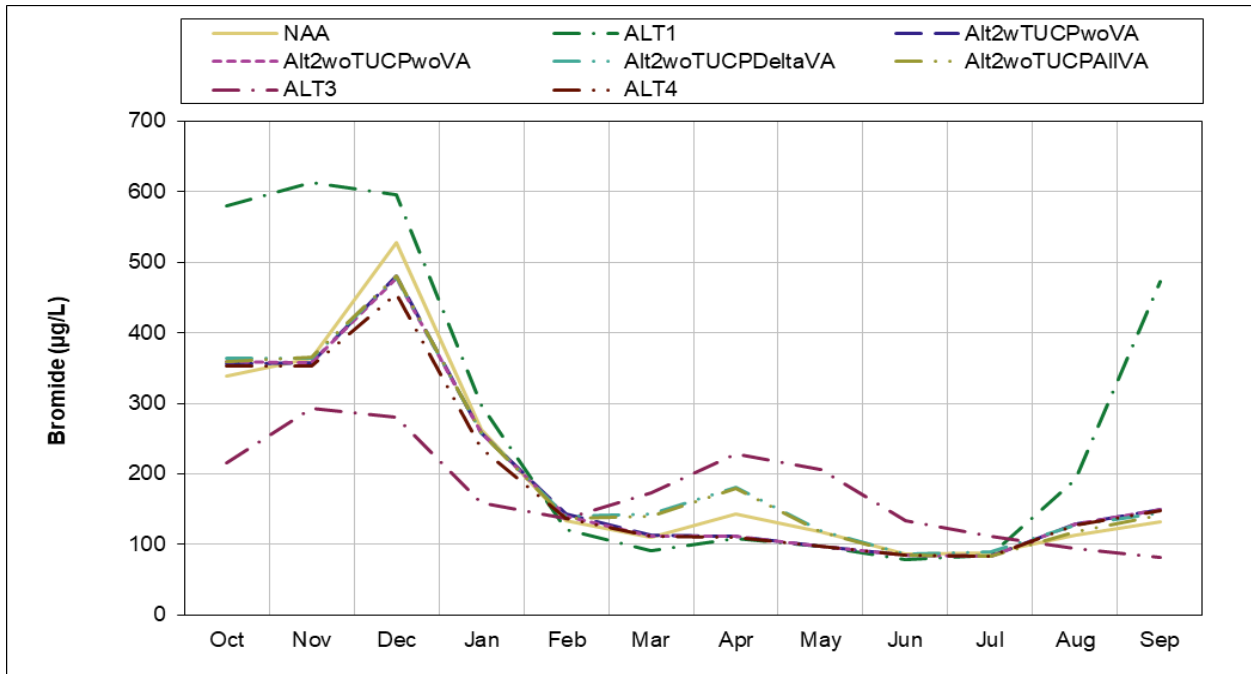


Figure G.3-5-3. Contra Costa Water District Pumping Plant #1, Above Normal Year Monthly Average Bromide (in micrograms per liter)

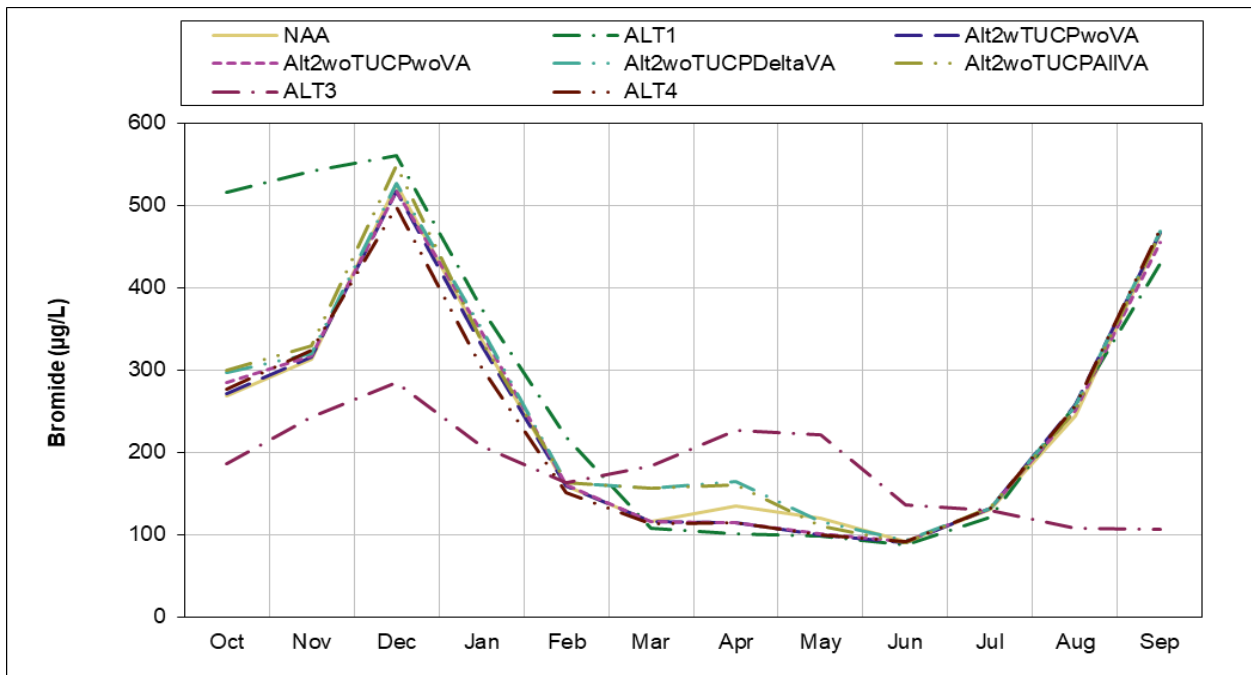


Figure G.3-5-4. Contra Costa Water District Pumping Plant #1, Below Normal Year Monthly Average Bromide (in micrograms per liter)

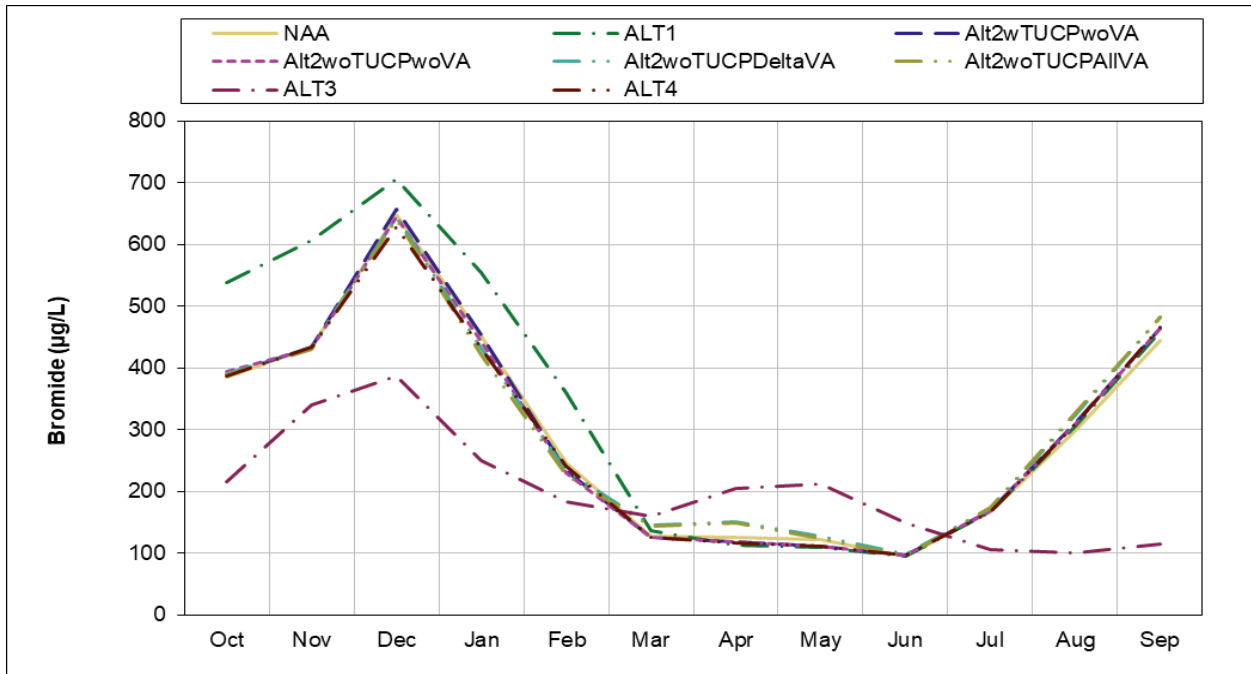


Figure G.3-5-5. Contra Costa Water District Pumping Plant #1, Dry Year Monthly Average Bromide (in micrograms per liter)

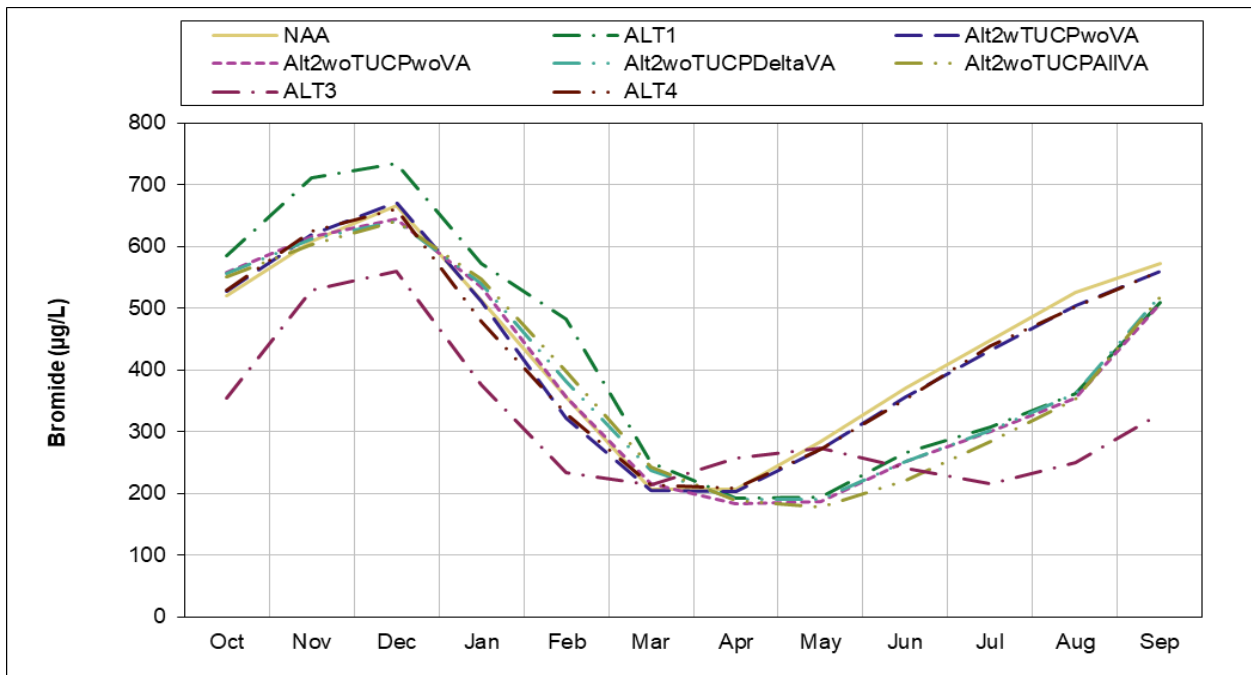


Figure G.3-5-6. Contra Costa Water District Pumping Plant #1, Critical Year Monthly Average Bromide (in micrograms per liter)

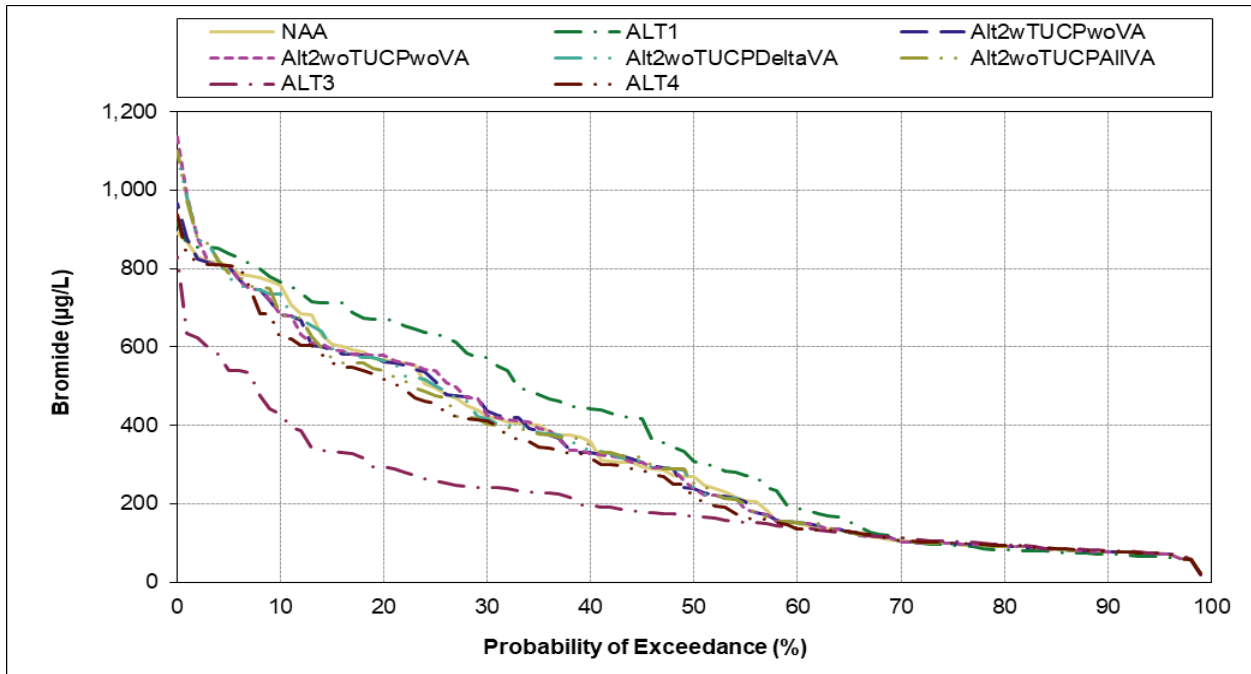


Figure G.3-5-7. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), January

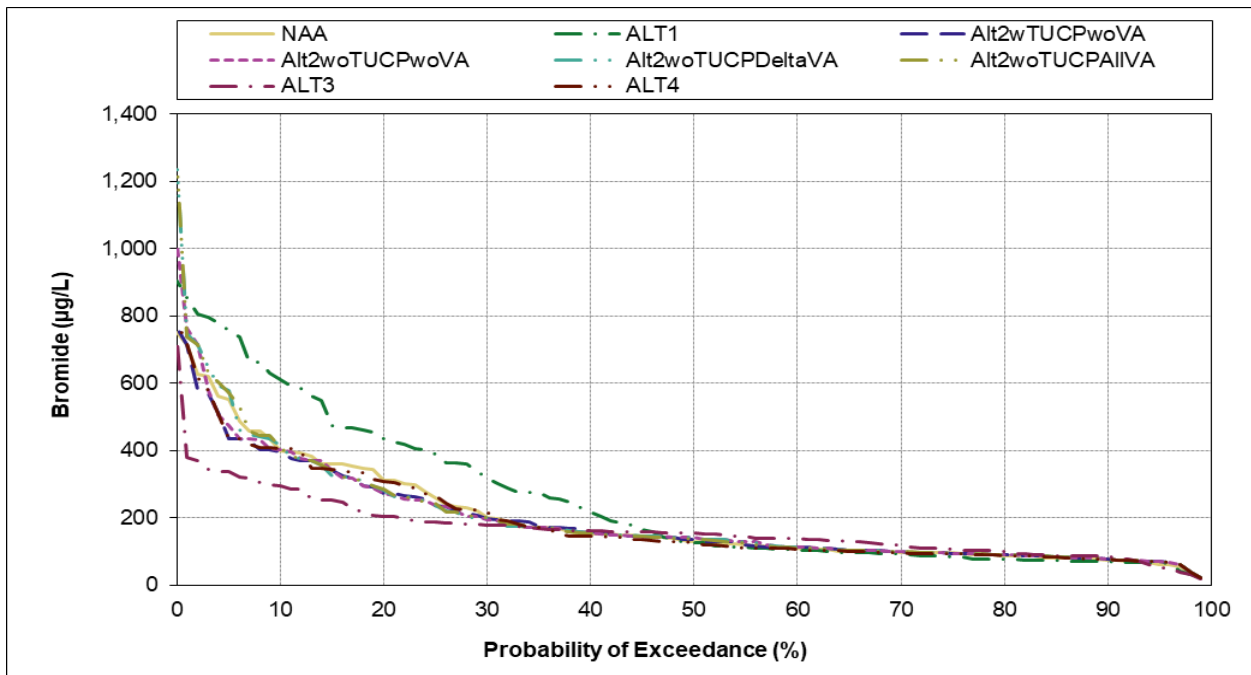


Figure G.3-5-8. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), February

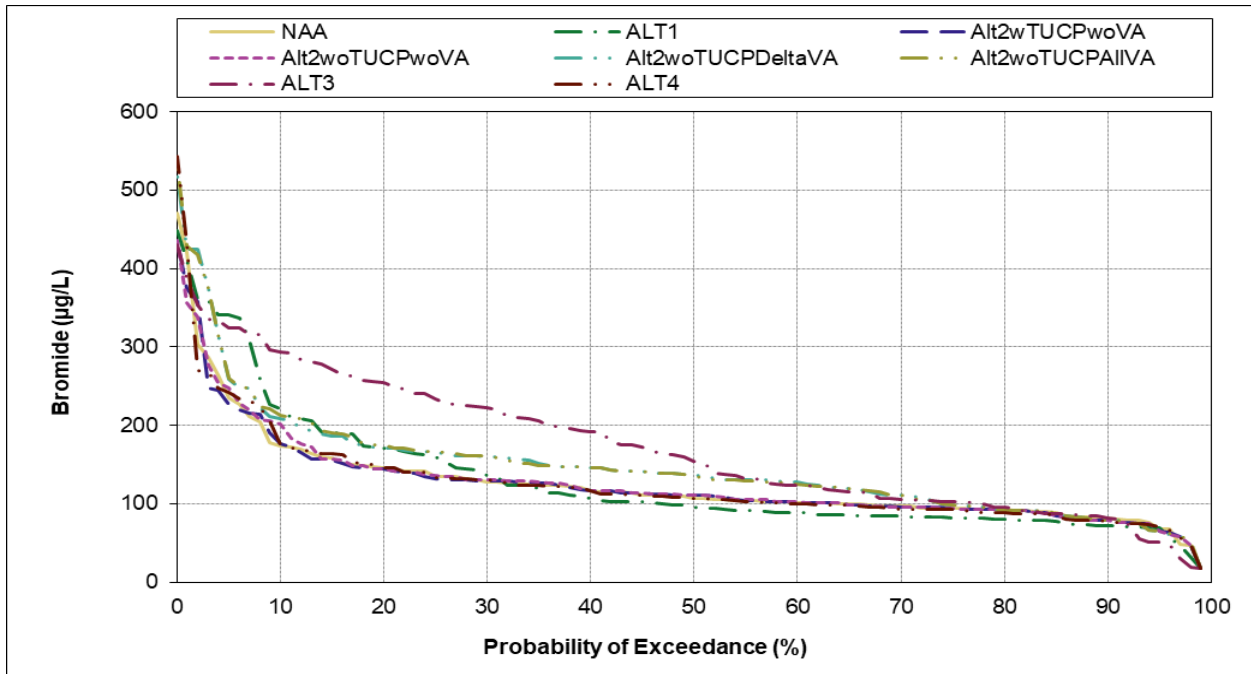


Figure G.3-5-9. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), March

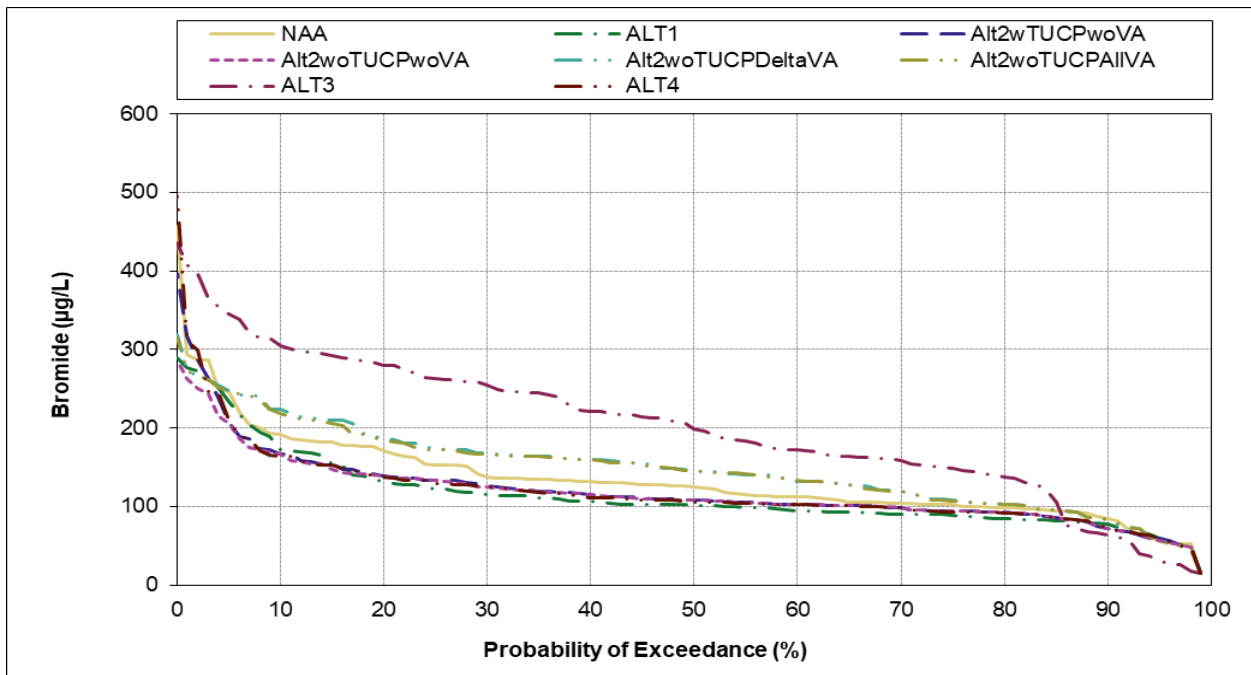


Figure G.3-5-10. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), April

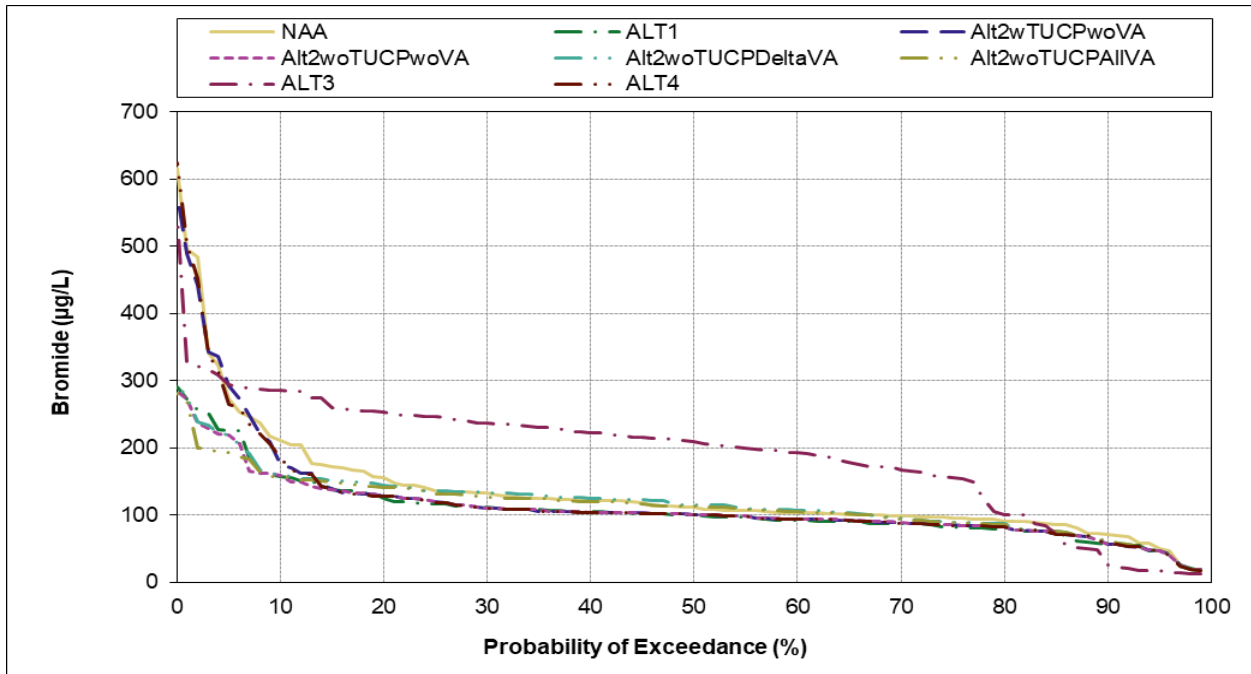


Figure G.3-5-11. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), May

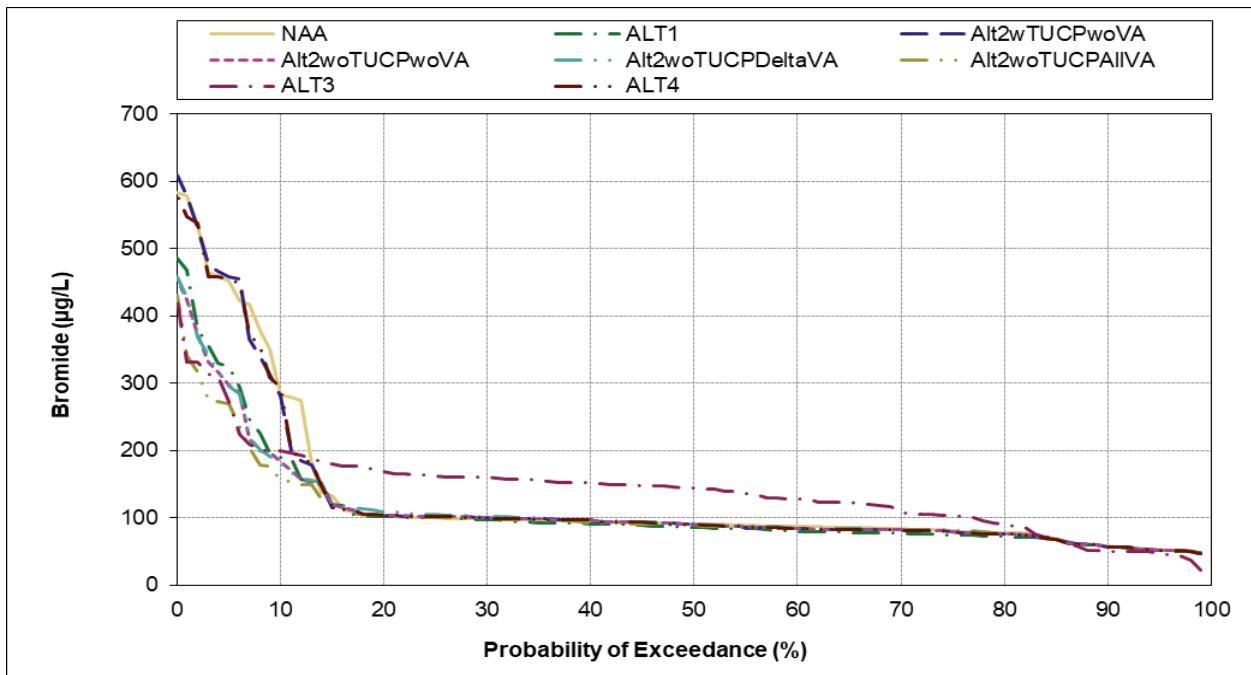


Figure G.3-5-12. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), June

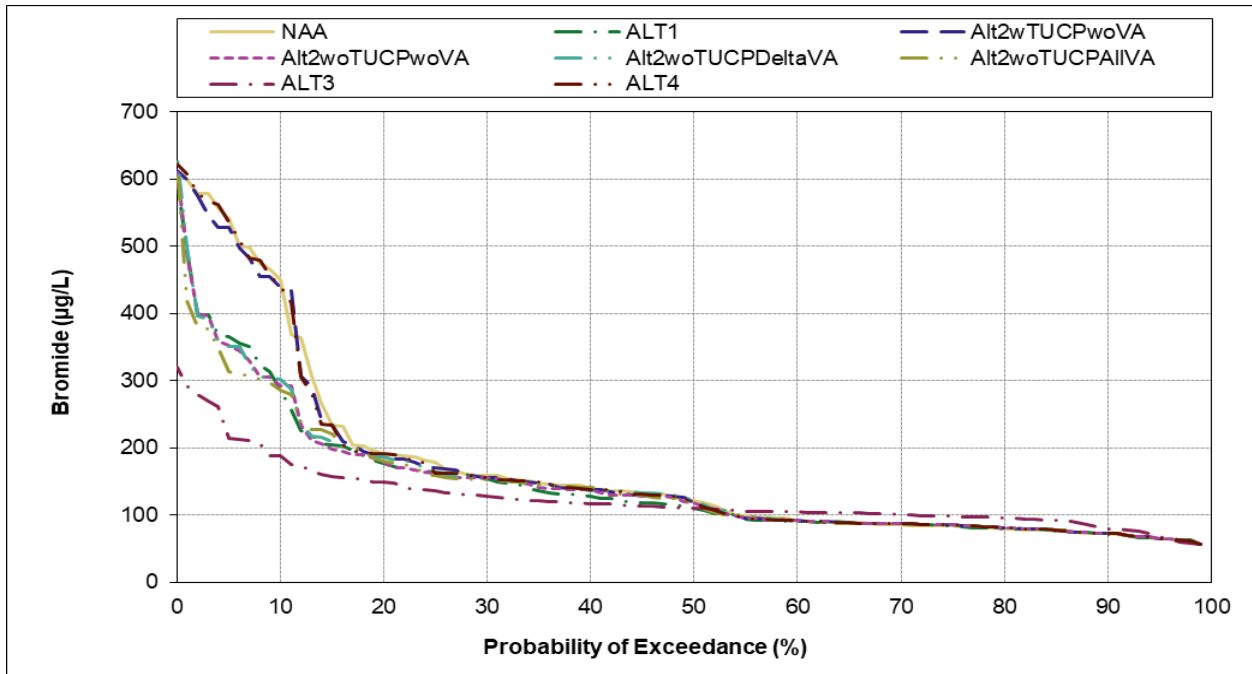


Figure G.3-5-13. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), July

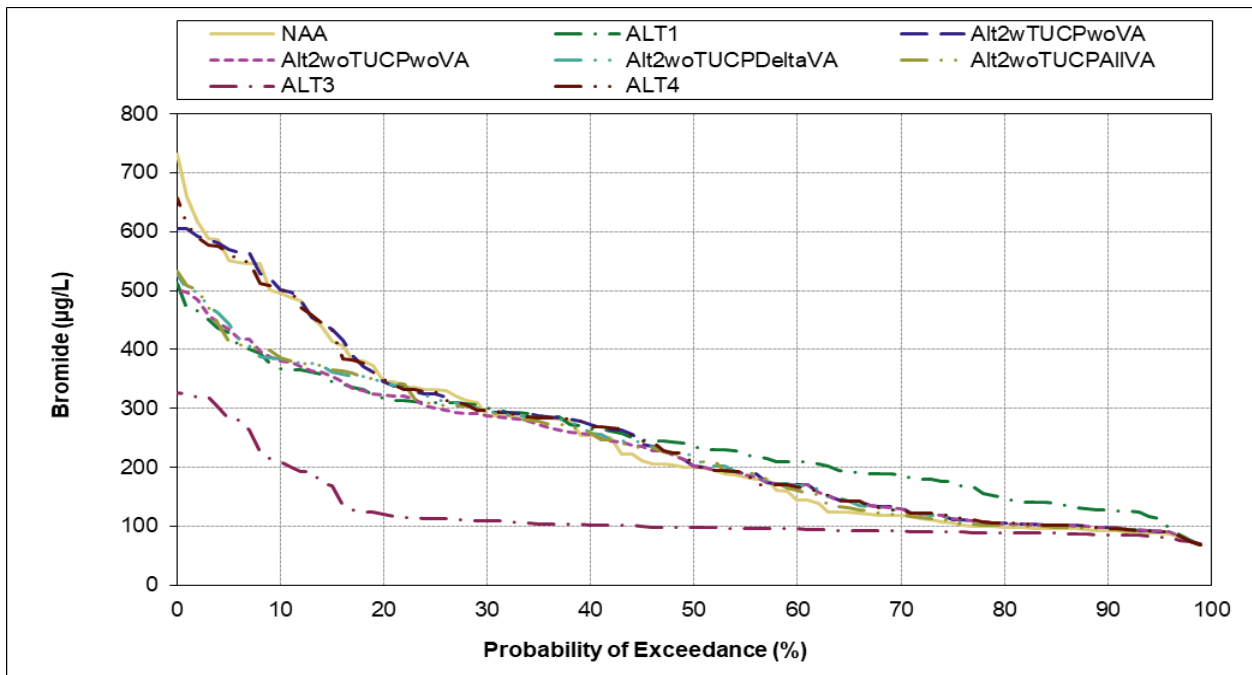


Figure G.3-5-14. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), August

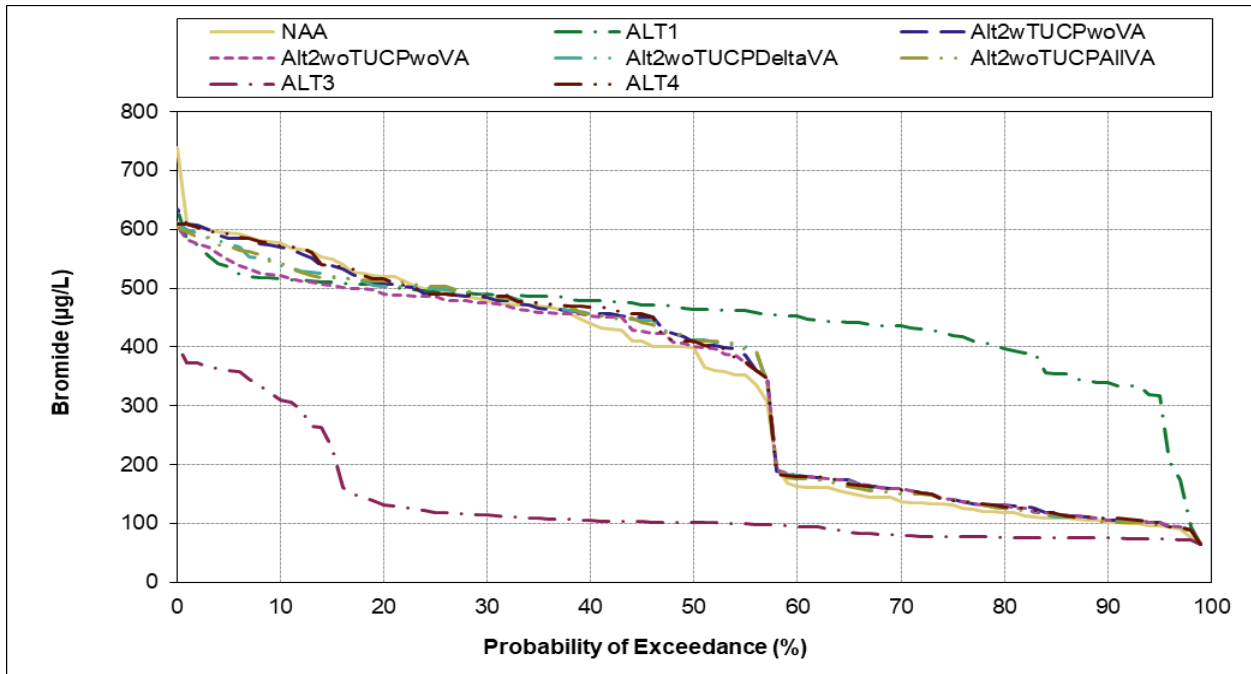


Figure G.3-5-15. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), September

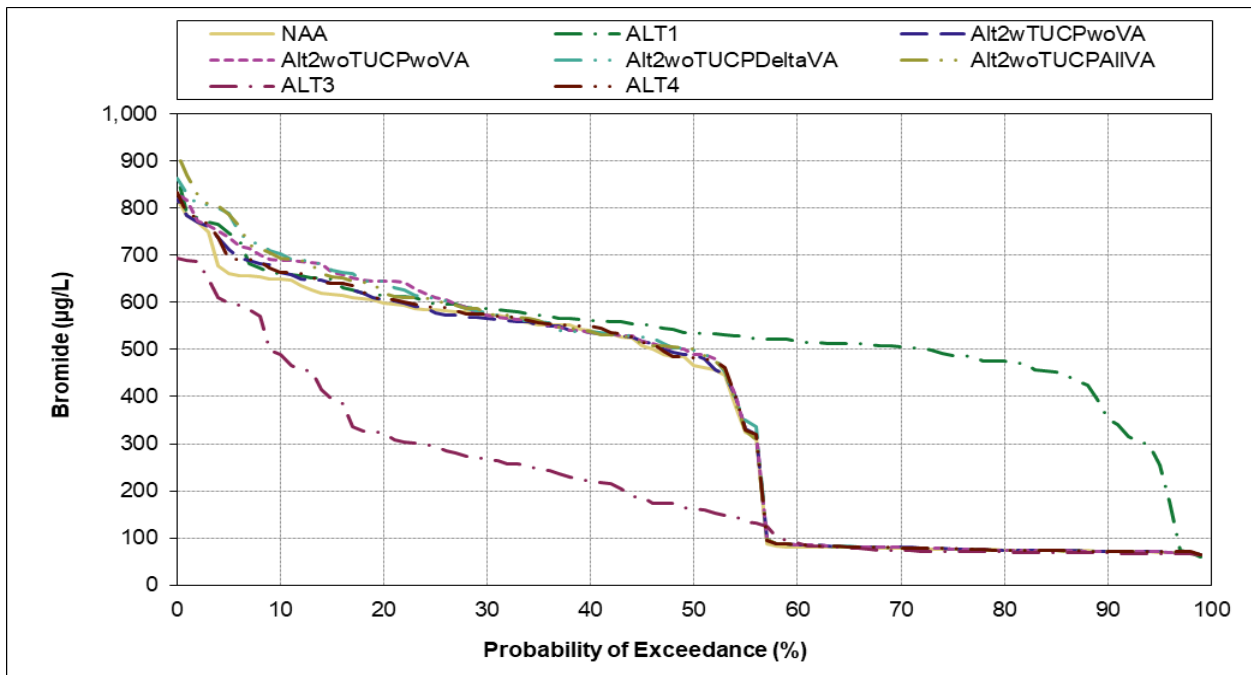


Figure G.3-5-16. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), October

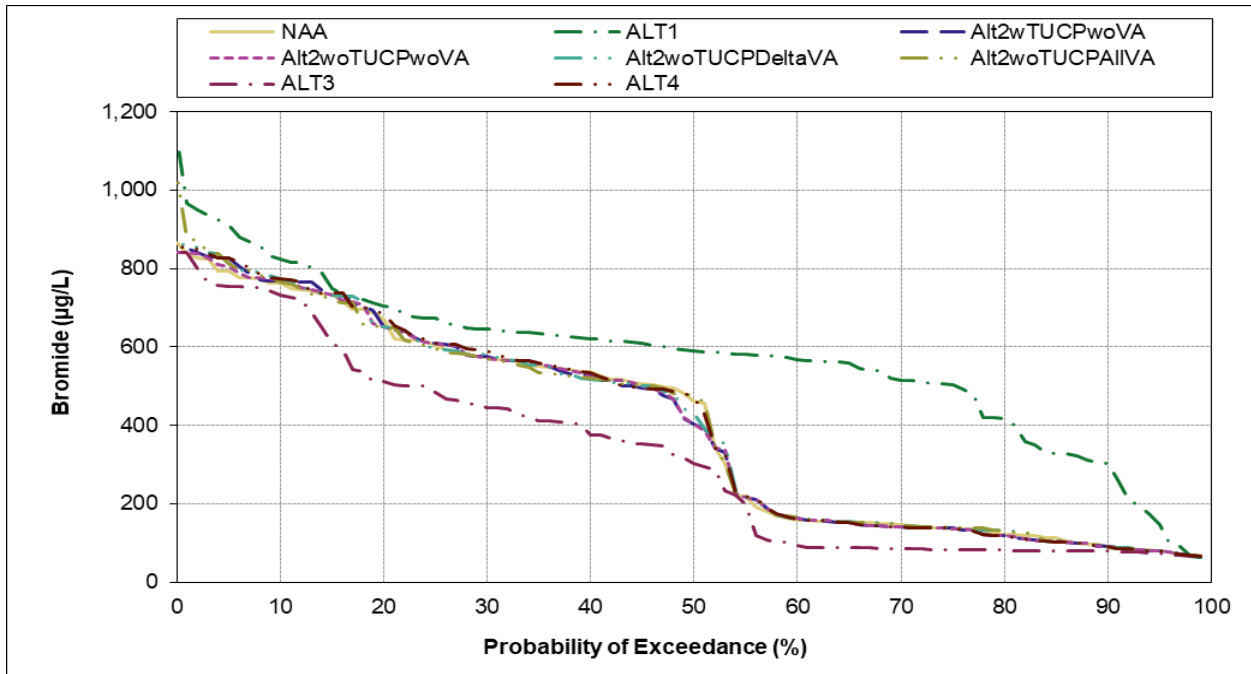


Figure G.3-5-17. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), November

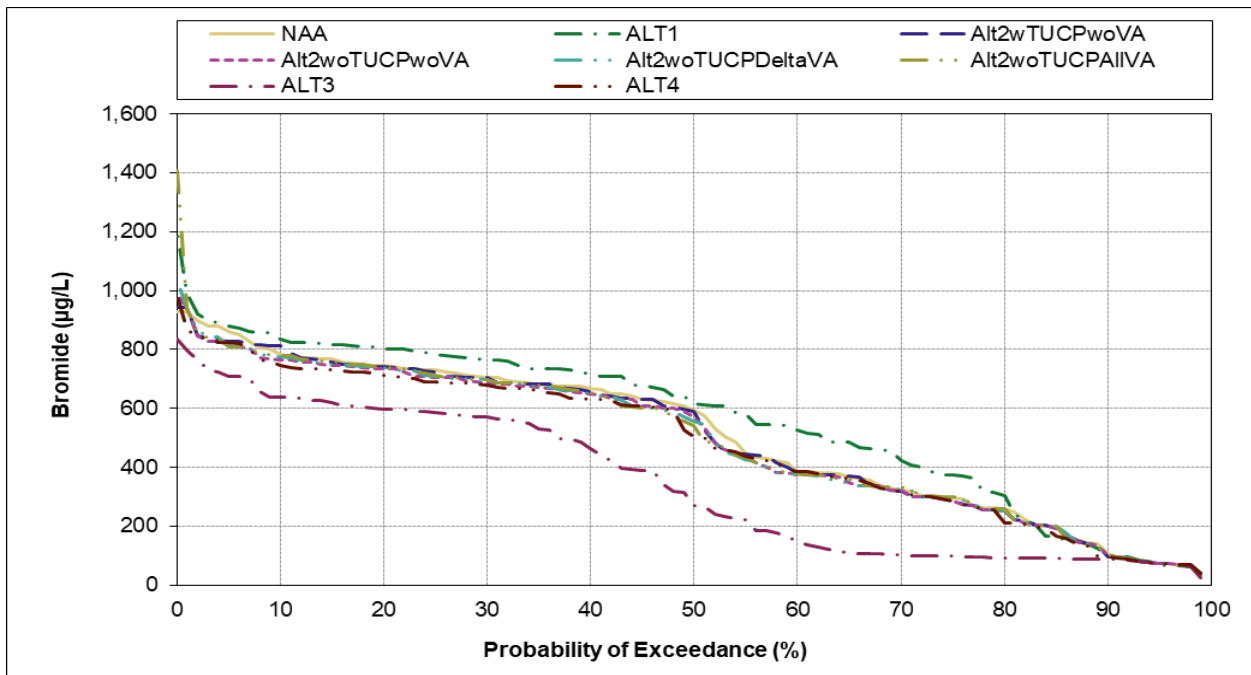


Figure G.3-5-18. Contra Costa Water District Pumping Plant #1, Monthly Average Bromide (in micrograms per liter), December

G.3.5 References

California Department of Water Resources. 2020a. *Water Data Library*. Available: <http://wdl.water.ca.gov/waterdatalibrary/>. Accessed: May 21, 2020.

California Department of Water Resources. 2020b. *Water Data Library*. Available: <https://wdl.water.ca.gov/waterdatalibrary/WaterQualityDataLib.aspx/>. Accessed: December 12, 2020.

California Environmental Data Exchange Network. 2020. Available: <https://ceden.org/index.shtml> - California Environmental Data Exchange Network.

California Urban Water Agencies. 1998. *Bay-Delta Water Quality Evaluation, Draft Final Report*. Prepared by D. M. Owen, Malcolm Pirnie, Inc.; P. A. Daniel, Camp, Dresser, and McKee; R. S. Summers, University of Cincinnati. May.

Contra Costa Water District. 1997. *Conversions between EC, TDS, Chlorides, Bromide and Sodium*. Prepared by Richard A. Denton. January.