Appendix 5B5 Water Supply

1 Results

The following results of the CalSim II model are included for water supply reporting for the following alternatives:

- No Action Alternative 011221
- Alternative 1A 011221
- Alternative 1B 011221
- Alternative 2 011221
- Alternative 3 020121

Table 5B4-1. River Operations Locations and Parameters

Tile	Table Numbers	Figure Numbers
CALSIM Water Supply Summary Report	5B5-1 to 5B5-8	5B5-1 to 5B5-14

2 Report Formats

Reports include tables comparing water supply of two alternatives (water supply by region and type, and water supply by type). Annual exceedance charts including all alternatives.

Table 5B5-1. CALSIM II Water Summary Report, by Region and Type, Long-Term Average and Dry and Critical Year Averag

				Alternative 1A 011221	No Action Alternative 011221	No Action Alternative 011221
Supply Reliability						
Sacramento River Hydrologic	Region		Long Torm	1.600	1.600	2
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	1,608 1,584	1,609 1,585	-2 -2
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	166	165	1
CVF Reluge Level 2	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	146	145	2
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	205 175	205 174	0
CVP Ag	Contract Delivery (annual average -	(TAF/year)	Long Term	265	264	1
-	does not include Settlement	(1711/7/641)	Dry and Critical Long Term	146 951	143 951	0
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	908	909	0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	26	26	0
		(TAF()	Dry and Critical Long Term	18 5	18 0	5
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	6	0	6
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	31 64	0 0	31 64
San Joaquin River Hydrologic	c Region (not including Friant-Kern	and Madera (0	04
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
	Contract Delivery (allitual average)	(TAL/year)	Dry and Critical	814	814	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	258 246	258 246	0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	18	18	0
	, , , , , , , , , , , , , , , , , , , ,	(TAL/year)	Dry and Critical	15	15	0
CVP Ag	Contract Delivery (annual average; does not include Exchange	(TAF/year)	Long Term Dry and Critical	392 206	391 203	1 3
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	3	3	0
	21) (annual average)	(TAI/year)	Dry and Critical Long Term	2	2	0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	12 22	0 0	12 22
San Francisco Bay Hydrologic	c Region		•			
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	259	259	0
			Dry and Critical Long Term	270 48	270 48	0
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	25	25	0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	194 131	194 130	0 1
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	10	0	10
entral Coast Hydrologic Reg	ion		Dry and Critical	24	0	24
		(TAE(::a=:s)	Long Term	39	39	0
SWP M&I	Contract Delivery (annual average)		Dry and Critical	24	24	0
<u>ulare Lake Hydrologic Regic</u>	on (not including Friant-Kern Canal v	<u>water users)</u>	Long Torm	12	12	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	12 11	12 11	0
CVP Ag	Contract Delivery (annual average -	(TAF/year)	Long Term	789	787	2
	includes Cross Valley Canal)	(TAI/year)	Dry and Critical	434	429	5
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	79 43	79 43	0
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	626	626	1
	21) (annual average)		Dry and Critical Long Term	336 4	336 0	0 4
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	6	0	6
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	3	0	3
South Lahontan Hydrologic R			Dry and Critical	7	0	7
SWP M&I	Contract Delivery (including Article	(TAE/year)	Long Term	251	251	0
	21) (annual average)	(TAF/year)	Dry and Critical	166	167	-1
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	13 33	0 0	13 33
South Coast Hydrologic Region			·	55	Ü	
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	1,085 719	1,085 721	-1 -1
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	8 4	8 4	0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	71 179	0	71 179
otal For All Regions			,		<u>_</u>	
otal I of All Regions	Contract Delivery (CVP, SWP and		Long Term	8,283	8,130	153

Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
 Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003.

Table 5B5-2. CALSIM II Water Supply Summary Report, by Type, Long-Term Average and Dry and Critical Year Averages

				Alternative 1A 011221	No Action Alternative 011221	Alternative 1A 011221 minus No Action Alternative 011221
r Supply Reliability						
North of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange	(TAF/year)	Long Term Dry and Critical	265 146	264 143	1 4
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	353 352	352 351	0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	0 0	0 0	0
	Contract Delivery (including Article		Long Term	88	88	0
SWP M&I	21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Dry and Critical	69	69	0
CVP Ag - Sites		(TAE/\(\abla \abla \r)	Long Term	31	0	31
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	64	0	64
Total CVP North of Delta						
Total CVP Ag and M&I NOD	Contract Delivery (CVP) (annual	(TAF/year)	Long Term Dry and Critical	618	617 494	1
Total SWP North of Delta	average)		Dry and Critical	498	494	4
Total SWP North of Delta	Contract Delivery (SWP) (annual		Long Term	88	88	0
Total SWP Ag and M&I NOD	average)	(TAF/year)	Dry and Critical	69	69	0
Total Sites North of Delta						
Total Sites Ag and M&I NOD	Contract Delivery (annual average)	(TAF/year)	Long Term	31	0	31
<u> </u>	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	64	0	64
Total North of Delta	Control to Delivery (CVD, CVD, and		1 T	706	704	24
Total North of Delta Ag and	Contract Delivery (CVP, SWP and	(TAF/year)	Long Term	736	704	31
M&I Deliveries South of Delta	other) (annual average)		Dry and Critical	631	563	69
Bouth of Delta	Contract Delivery (annual average;		Long Term	1,229	1,226	3
CVP Ag	does not include Exchange	(TAF/year)	Dry and Critical	665	657	8
			Long Term	129	129	0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	108	108	0
CMD A	Contract Delivery (including Article	(TAE(::==:=)	Long Term	637	636	1
SWP Ag	21) (annual average)	(TAF/year)	Dry and Critical	342	342	0
	Contract Delivery (including Article		Long Term	1,586	1,586	-1
SWP M&I	21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Dry and Critical	1,032	1,034	-2
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	3 7	0 0	3 7
01415 140 5 011		(===/)	Long Term	95	0	95
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	236	0	236
Total CVP South of Delta						
Total CVP Ag and M&I SOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	1,358 773	1,355 765	3 8
Total SWP South of Delta			,		, 55	Ĭ
Total SWP Ag and M&I SOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	2,223 1,374	2,223 1,376	0 -2
Total Sites South of Delta	average,		2., 2 0	1,3/4	1,370	-2
Total Sites Ag and M&I SOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	97 243	0	97 243
Total South of Delta			Di y ana circical	243	U	243
Total South of Delta Ag and	Contract Delivery (CVP, SWP and		Long Term	3,679	3,578	101
M&I Deliveries	other) (annual average)	(TAF/year)	Dry and Critical	2,390	2,141	249

Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
 Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003.

Table 5B5-3. CALSIM II Water Summary Report, by Region and Type, Long-Term Average and Dry and Critical Year Average

				Alternative 1B 011221	No Action Alternative 011221	Alternative 1 011221 minu No Action Alternative 011221
r Supply Reliability						
<u>Sacramento River Hydrologi</u>	c Region		Long Term	1 600	1 600	2
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	1,608 1,584	1,609 1,585	-2 -2
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	166	165	1
CVI Reluge Level 2	Contract Delivery (annual average)	(TAT/year)	Dry and Critical	146	145	2
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	205 175	205 174	0
CVP Ag	Contract Delivery (annual average -	(TAF/year)	Long Term	266	264	2
	does not include Settlement	(17117) Cary	Dry and Critical Long Term	149 950	143 951	7
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	908	909	0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	26	26	0
			Dry and Critical Long Term	18 5	18 0	5
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	6	0	6
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	29	0	29
	c Region (not including Friant-Kern		Dry and Critical	60	0	60
			Long Term	852	852	0
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	814	814	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	258	258	0
0.15.440.7		(TAF())	Dry and Critical Long Term	246 18	246 18	0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	15	15	0
CVP Ag	Contract Delivery (annual average;	(TAF/year)	Long Term	394	391	3
	does not include Exchange Contract Delivery (including Article		Dry and Critical Long Term	210 3	203 3	7
SWP Ag	21) (annual average)	(TAF/year)	Dry and Critical	2	2	0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	12	0	12
San Francisco Bay Hydrologi	c Region		Dry and Critical	21	0	21
CVP M&I		(TAF(),(25%)	Long Term	259	259	0
CVP MAI	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	270	270	0
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	48 26	48 25	0
	Contract Delivery (including Article		Long Term	194	194	0
SWP M&I	21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Dry and Critical	130	130	0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	10 23	0 0	10 23
Central Coast Hydrologic Reg	aion		Dry and Critical	23	0	23
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	39	39	0
	· · · · · · · · · · · · · · · · · · ·		Dry and Critical	25	24	0
	on (not including Friant-Kern Canal		Long Term	12	12	0
CVP Refuge Level 2	Contract Delivery (annual average)		Dry and Critical	11	11	0
CVP Ag	Contract Delivery (annual average -	(TAF/year)	Long Term	794	787	7
	includes Cross Valley Canal)		Dry and Critical Long Term	445 79	429 79	16 0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	42	43	0
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	625	626	0
-	21) (annual average)		Dry and Critical Long Term	336 3	336 0	3
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	6	0	6
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	3	0	3
South Lahontan Hydrologic I	Region		Dry and Critical	6	0	6
SWP M&I	Contract Delivery (including Article	(TAF/year)	Long Term	251	251	0
SWF MAI	21) (annual average)	(TAF/year)	Dry and Critical	168	167	1
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	12 31	0 0	12 31
South Coast Hydrologic Regi			Diy and entreal	31	<u> </u>	31
	Contract Delivery (including Article	(T)	Long Term	1,083	1,085	-2
SWP M&I	21, includes transfers to SWP	(TAF/year)	Dry and Critical	721	721	0
CIAID A	contractors) (annual average) Contract Delivery (including Article	/TAE/ `	Long Term	8	8	0
SWP Ag	21) (annual average)	(TAF/year)	Dry and Critical	4	4	0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	66 166	0	66
Total For All Regions		. ,	Dry and Cittical	166	0	166
Total Supplies	Contract Delivery (CVP, SWP and	(TAE///22*)	Long Term	8,279	8,130	149
rotal Supplies	other) (annual average)	(TAF/year)	Dry and Critical	6,766	6,414	352

- Long Term is the average quantity for the period of Oct 1921 Sep 2003.
 Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003.
- 3. All scenarios are simulated at historical climate.

Table 5B5-4. CALSIM II Water Supply Summary Report, by Type, Long-Term Average and Dry and Critical Year Averages
Alternative 1B

				Alternative 1B 011221	No Action Alternative 011221	Alternative 1B 011221 minus No Action Alternative 011221
er Supply Reliability						
North of Delta						_
CVP Ag	Contract Delivery (annual average;	(TAF/year)	Long Term	266	264	2
	does not include Exchange	(17.11 / 7 Gall)	Dry and Critical	149	143	7
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	353	352	0
	, , , , , , , , , , , , , , , , , , , ,	(1711/ / Call)	Dry and Critical	352	351	1
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	0	0	0
	21) (annual average)	(1711776417	Dry and Critical	0	0	0
	Contract Delivery (including Article		Long Term	88	88	0
SWP M&I	21, includes transfers to SWP	(TAF/year)	Dry and Critical	69	69	0
	contractors) (annual average)					
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	29	0	29
	contract belivery (aimaal average)	(TAI/year)	Dry and Critical	60	0	60
Total CVP North of Delta						
Total CVD As and MSI NOD	Contract Delivery (CVP) (annual	(TAE/\(\car\)	Long Term	619	617	2
Total CVP Ag and M&I NOD	average)	(TAF/year)	Dry and Critical	501	494	7
Total SWP North of Delta						
	Contract Delivery (SWP) (annual	(=1=1)	Long Term	88	88	0
Total SWP Ag and M&I NOD	average)	(TAF/year)	Dry and Critical	69	69	0
Total Sites North of Delta	avelage		,	Ü		
			Long Term	29	0	29
Total Sites Ag and M&I NOD	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	60	0	60
Total North of Delta			Diy and circical	00	0	1 00
Total North of Delta Ag and	Contract Delivery (CVP, SWP and		Long Term	725	704	31
		(TAF/year)		735		
M&I Deliveries	other) (annual average)		Dry and Critical	630	563	67
South of Delta	Contract Dolivory (annual average)		Long Term	1 225	1 226	10
CVP Ag	Contract Delivery (annual average;	(TAF/year)		1,235	1,226	10
	does not include Exchange		Dry and Critical	681	657	24
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	130	129	1
	, , , , , , , , , , , , , , , , , , ,		Dry and Critical	108	108	0
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	636	636	0
	21) (annual average)	(Dry and Critical	342	342	0
	Contract Delivery (including Article	<i></i>	Long Term	1,585	1,586	-2
SWP M&I	21, includes transfers to SWP	(TAF/year)	Dry and Critical	1,035	1,034	1
	contractors) (annual average)			_		
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	3	0	3
		(1711776417	Dry and Critical	6	0	6
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	88	0	88
	contract benvery (united average)	(17ti / year)	Dry and Critical	220	0	220
Total CVP South of Delta						
Total CVP Ag and M&I SOD	Contract Delivery (CVP) (annual	(TAF/year)	Long Term	1,365	1,355	10
Total CVF Ay allu Mai 300	average)	(IAI/yeaI)	Dry and Critical	789	765	24
Total SWP South of Delta						
	Contract Delivery (SWP) (annual	/ΤΛΓ/	Long Term	2,221	2,223	-2
Total SWP Ag and M&I SOD	average)	(TAF/year)	Dry and Critical	1,377	1,376	1
Total Sites South of Delta	 				• - -	1
		<i>(</i> = <i>x</i> = <i>i</i>	Long Term	91	0	91
Total Sites Ag and M&I SOD	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	226	0	226
Total South of Delta			, and official	220	U	
Total South of Delta Ag and	Contract Delivery (CVP, SWP and		Long Term	2 676	2 570	0.0
		(TAF/year)		3,676	3,578	98
M&I Deliveries	other) (annual average)		Dry and Critical	2,392	2,141	252

Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
 Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003.

^{3.} All scenarios are simulated at historical climate.

Table 5B5-5. CALSIM II Water Summary Report, by Region and Type, Long-Term Average and Dry and Critical Year Averag

				Alternative 2 011221	No Action Alternative 011221	Alternative 2 011221 minus No Action Alternative 011221
er Supply Reliability	a Demien					
Sacramento River Hydrologi CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,607	1,609	-2
- CVF Settlement	Contract Delivery (allitual average)	(TAL/year)	Dry and Critical Long Term	1,583 166	1,585 165	-2 1
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	146	145	1
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	205 175	205 174	0
CVP Ag	Contract Delivery (annual average -	(TAF/year)	Long Term	265	264	1
	does not include Settlement		Dry and Critical Long Term	146 951	143 951	0
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	909	909	0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	26 18	26 18	0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	5	0	5
			Dry and Critical Long Term	7 29	0	7 29
CVP Ag - Sites	Contract Delivery (annual average)		Dry and Critical	62	0	62
	c Region (not including Friant-Kern		Canal water users Long Term) 852	852	0
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	814	814	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	258 246	258 246	0 0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	18	18	0
CVF PIOL	Contract Delivery (annual average;		Dry and Critical Long Term	15 392	15 391	0
CVP Ag	does not include Exchange	(TAF/year)	Dry and Critical	206	203	3
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	3	3	0
Refuge Level 4 - Sites	21) (annual average)		Dry and Critical Long Term	2 14	0	0 14
	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	24	0	24
San Francisco Bay Hydrologi		(TAE()	Long Term	259	259	0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	270	270	0
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	48 25	48 25	0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	194 130	194 130	0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	9	0	9
Central Coast Hydrologic Re	gion		Dry and Critical	22	0	22
SWP M&I	Contract Delivery (annual average)	(TAF/vear)	Long Term	39	39	0
	on (not including Friant-Kern Canal v		Dry and Critical	25	24	0
CVP Refuge Level 2	Contract Delivery (annual average)		Long Term	12	12	0
<u> </u>	Contract Delivery (annual average -		Dry and Critical Long Term	11 789	11 787	2
CVP Ag	includes Cross Valley Canal)	(TAF/year)	Dry and Critical	434	429	5
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	79 42	79 43	0 -1
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	627	626	1
-	21) (annual average)		Dry and Critical Long Term	336 4	336 0	0 4
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	7	0	7
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	2 6	0 0	2 6
South Lahontan Hydrologic			·			
SWP M&I	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	250 166	251 167	-1 -1
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	12	0	12
South Coast Hydrologic Regi		(,, ()	Dry and Critical	29	0	29
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	1,085 722	1,085 721	0
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	8	8	0
	21) (annual average)		Dry and Critical Long Term	4 64	<u>4</u> 0	0 64
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	158	0	158
Total For All Regions	Contract Delivery (CVP, SWP and	/TAE/	Long Term	8,273	8,130	143
Total Supplies	other) (annual average)	(TAF/year)	Dry and Critical	6,740	6,414	326

Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
 Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003.

^{3.} All scenarios are simulated at historical climate.

Table 5B5-6. CALSIM II Water Supply Summary Report, by Type, Long-Term Average and Dry and Critical Year Averages
Alternative 2

				Alternative 2 011221	No Action Alternative 011221	Alternative 2 011221 minus No Action Alternative 011221
r Supply Reliability						
North of Delta	Contract Delivery (annual average;		Long Term	265	264	1
CVP Ag	does not include Exchange	(TAF/year)	Dry and Critical	146	264 143	1 4
		<i>(</i> -,-,)	Long Term	353	352	0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	352	351	0
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	0	0	0
	21) (annual average)	(TAIT year)	Dry and Critical	0	0	0
SWP M&I	Contract Delivery (including Article	(TAE/yoar)	Long Term	88	88	0
SWP MAI	21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Dry and Critical	69	69	0
			Long Term	29	0	29
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	62	0	62
Total CVP North of Delta						
Total CVP Ag and M&I NOD	Contract Delivery (CVP) (annual	(TAF/year)	Long Term	618	617	1
-	average)	(TAIT year)	Dry and Critical	498	494	4
Total SWP North of Delta	C + D II (CUID) (
Total SWP Ag and M&I NOD	Contract Delivery (SWP) (annual	(TAF/year)	Long Term	88	88	0
Total Sites North of Delta	average)	, , ,	Dry and Critical	69	69	0
			Long Term	29	0	29
Total Sites Ag and M&I NOD	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	62	0	62
Total North of Delta			,	Ü2	Ü	- 02
Total North of Delta Ag and	Contract Delivery (CVP, SWP and	(TAE/\(\cor\)	Long Term	735	704	30
M&I Deliveries	other) (annual average)	(TAF/year)	Dry and Critical	629	563	66
South of Delta			<u> </u>			
CVP Ag	Contract Delivery (annual average;	(TAF/year)	Long Term	1,229	1,226	3
	does not include Exchange		Dry and Critical Long Term	665 129	657 129	8
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	108	108	0
CIAID A	Contract Delivery (including Article	(TAF()	Long Term	638	636	1
SWP Ag	21) (annual average)	(TAF/year)	Dry and Critical	342	342	0
	Contract Delivery (including Article		Long Term	1,585	1,586	-1
SWP M&I	21, includes transfers to SWP	(TAF/year)	Dry and Critical	1,033	1,034	-1
	contractors) (annual average)		Long Torm	2	0	
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	2 6	0 0	6
			Long Term	85	0	85
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	209	Ö	209
Total CVP South of Delta			•			
Total CVP Ag and M&I SOD	Contract Delivery (CVP) (annual	(TAF/year)	Long Term	1,358	1,355	3
	average)	(TAL/year)	Dry and Critical	773	765	8
Total SWP South of Delta						_
Total SWP Ag and M&I SOD	Contract Delivery (SWP) (annual	(TAF/year)	Long Term Dry and Critical	2,223	2,223	0
-	average)	, ,	Dry and Chilical	1,376	1,376	-1
Total Sites South of Delta			Long Term	87	0	87
Total Sites Ag and M&I SOD	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	215	0	215
Total South of Delta			, 3	213	J	213
Total South of Delta Ag and	Contract Delivery (CVP, SWP and	(TAF/)(5-11)	Long Term	3,668	3,578	91
M&I Deliveries	other) (annual average)	(TAF/year)	Dry and Critical	2,364	2,141	223

- Long Term is the average quantity for the period of Oct 1921 Sep 2003.
 Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003.
- 3. All scenarios are simulated at historical climate.

Table 5B5-7. CALSIM II Water Summary Report, by Region and Type, Long-Term Average and Dry and Critical Year Average

				Alternative 3 020121	No Action Alternative 011221	Alternative 020121 min No Action Alternative 011221
r Supply Reliability						
<u>Sacramento River Hydrologi</u>	c Region		Long Torm	1 (00	1.600	-1
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	1,608 1,585	1,609 1,585	-1 -1
CVP Refuge Level 2	Contract Delivery (annual average)	(TAE/year)	Long Term	166	165	1
CVP Reluge Level 2	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	146	145	1
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	207 178	205 174	2 4
CL/D. A	Contract Delivery (annual average -	. (745/	Long Term	270	264	5
CVP Ag	does not include Settlement	(TAF/year)	Dry and Critical	157	143	14
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term	951	951	0
			Dry and Critical Long Term	909 26	909 26	0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	18	18	Ő
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/vear)	Long Term	5	0	5
		(.,.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Dry and Critical Long Term	6 25	0	6 25
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	25 52	0 0	52 52
San Joaquin River Hydrologi	c Region (not including Friant-Kern	and Madera	Canal water users			<u> </u>
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry and Critical Long Term	814 259	814 258	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	246	246	
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	18	18	0
CVF MAI	, , , , , , , , , , , , , , , , , , , ,	(TAT/year)	Dry and Critical	15	15	0
CVP Ag	Contract Delivery (annual average; does not include Exchange	(TAF/year)	Long Term Dry and Critical	396 215	391 203	5 12
CIMP A -	Contract Delivery (including Article	/TAF/:::	Long Term	3	3	0
SWP Ag	21) (annual average)	(TAF/year)	Dry and Critical	2	2	0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	11	0	11
San Francisco Bay Hydrologi			Dry and Critical	19	0	19
		(TAE(),(2.5.12)	Long Term	259	259	1
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	271	270	0
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	48	48	1
	Contract Delivery (including Article		Long Term	<u>26</u> 195	25 194	1
SWP M&I	21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Dry and Critical	131	130	1
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	8	0	8
Central Coast Hydrologic Re	gion		Dry and Chilican	19	0	19
SWP M&I	Contract Delivery (annual average)	(TAE/yoar)	Long Term	39	39	0
			Dry and Critical	25	24	0
Tulare Lake Hydrologic Regi	on (not including Friant-Kern Canal	<u>water users)</u>	Long Term	12	12	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	11	11	0
CVP Ag	Contract Delivery (annual average -	(TAF/year)	Long Term	801	787	14
CVI Ay	includes Cross Valley Canal)	(IAI/yeai)	Dry and Critical	454	429	25
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	79 42	79 43	0 -1
SWD Aa	Contract Delivery (including Article	(TAE/2005)	Long Term	632	626	7
SWP Ag	21) (annual average)	(TAF/year)	Dry and Critical	342	336	6
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	3 5	0 0	3 5
CMD 4 - C''	Combinate Delliner (/TAE/ >	Long Term	2	0	2
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	5	0	5
South Lahontan Hydrologic I			Long Towns	350	254	
SWP M&I	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	250 167	251 167	-1 0
CMD MOT C:+	• • • • • • • • • • • • • • • • • • • •	(TAF/::==:)	Long Term	107	0	10
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	24	0	24
South Coast Hydrologic Regi	Contract Delivery (including Article		Long Term	1 005	1 005	1
SWP M&I	21, includes transfers to SWP	(TAF/year)	Dry and Critical	1,085 722	1,085 721	-1 2
	contractors) (annual average)			,		
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	8	8	0
-	21) (annual average)		Dry and Critical Long Term	<u>4</u> 52	4	0 52
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	52 130	0 0	130
Total For All Regions			,			
Total Supplies	Contract Delivery (CVP, SWP and	(TAF/year)	Long Term	8,280	8,130	150
. 2 ta. 2 app. 100	other) (annual average)	(, , , car)	Dry and Critical	6,740	6,414	326

Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
 Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003.

^{3.} All scenarios are simulated at historical climate.

Table 5B5-8. CALSIM II Water Supply Summary Report, by Type, Long-Term Average and Dry and Critical Year Averages
Alternative 3

				Alternative 3 020121	No Action Alternative 011221	Alternative 3 020121 minus No Action Alternative 011221
er Supply Reliability						
North of Delta	Contract Delivery (annual average)		Long Torm	270	264	-
CVP Ag	Contract Delivery (annual average;	(TAF/year)	Long Term Dry and Critical	270		Action ernative 11221 264
	does not include Exchange		Long Term	157 354		
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	355		
	Contract Delivery (including Article		Long Term	0		
SWP Ag	21) (annual average)	(TAF/year)	Dry and Critical	0		_
	Contract Delivery (including Article		Long Term	88	88	
SWP M&I	21, includes transfers to SWP	(TAF/year)	Dry and Critical	69	69	0
	contractors) (annual average)					
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term	25		
-	- Contract Delivery (aimaan average)	(17.11776417	Dry and Critical	52	0	52
Total CVP North of Delta	(0)(0)				2	_
Total CVP Ag and M&I NOD	Contract Delivery (CVP) (annual	(TAF/year)	Long Term	624		- I
-	average)	, , ,	Dry and Critical	512	494	18
Total SWP North of Delta	Contract Delivery (CMD) (annual		Long Term	88	0.0	
Total SWP Ag and M&I NOD	Contract Delivery (SWP) (annual	(TAF/year)	Dry and Critical	69		
Total Sites North of Delta	average)		Dry and Critical	09	09	U
			Long Term	25	Λ	25
Total Sites Ag and M&I NOD	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	52		
Total North of Delta			Dry and Chercar	32	0	32
Total North of Delta Ag and	Contract Delivery (CVP, SWP and	<i>(</i> -,-,)	Long Term	737	704	33
M&I Deliveries	other) (annual average)	(TAF/year)	Dry and Critical	633		
South of Delta			•			
CVP Ag	Contract Delivery (annual average;	(TAE/yoar)	Long Term	1,246	1,226	20
CVP Ag	does not include Exchange	(TAF/year)	Dry and Critical	695	657	38
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	130		1
CVI MAI		(TAIT year)	Dry and Critical	108		1
SWP Ag	Contract Delivery (including Article	(TAF/year)	Long Term	643		7
	21) (annual average)	(, , ,	Dry and Critical	348		
CMD M8.T	Contract Delivery (including Article	(TAE/yoar)	Long Term	1,586	•	
SWP M&I	21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Dry and Critical	1,037	1,034	3
			Long Term	2	Λ	2
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	5		
		<i>(</i> -,-,)	Long Term	69		
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Dry and Critical	173		
Total CVP South of Delta			•			
	Contract Delivery (CVP) (annual	(TAE(), (2.25)	Long Term	1,375	1,355	21
Total CVP Ag and M&I SOD	average)	(TAF/year)	Dry and Critical	804	=	
Total SWP South of Delta						
Total SWP Ag and M&I SOD	Contract Delivery (SWP) (annual	(TAF/year)	Long Term	2,229	2,223	6
-	average)	(TAF/ year)	Dry and Critical	1,385	1,376	9
Total Sites South of Delta						
Total Sites Ag and M&I SOD	Contract Delivery (annual average)	(TAF/year)	Long Term	71	0	71
-	contract belivery (aimaai average)	(17.11 / y Cul)	Dry and Critical	178	0	178
Total South of Delta				_		
Total South of Delta Ag and		(TAF/year)	Long Term	3,676	3,578	98
M&I Deliveries	other) (annual average)	, ,,,	Dry and Critical	2,366	2,141	225

Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
 Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 1921 - Sep 2003.

^{3.} All scenarios are simulated at historical climate.

Figure 5B5-1. CVP North of Delta Agricultural Water Service Contract Deliveries, Annual (Mar-Feb)

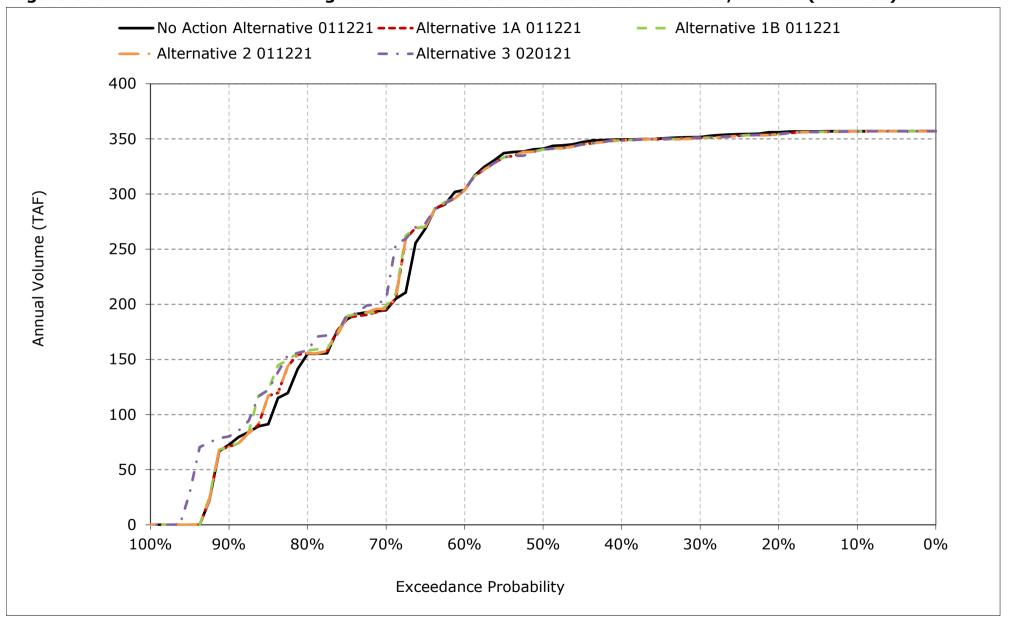


Figure 5B5-2. CVP South of Delta Agricultural Water Service Contract Deliveries, Annual (Mar-Feb)

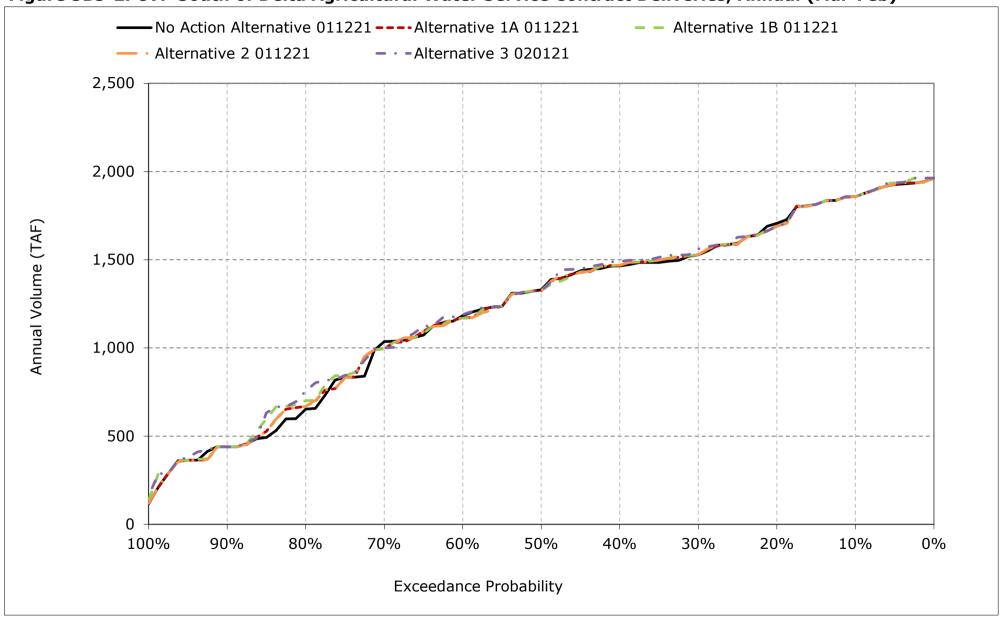


Figure 5B5-3. CVP North of Delta M&I Water Service Contract Deliveries, Annual (Mar-Feb)

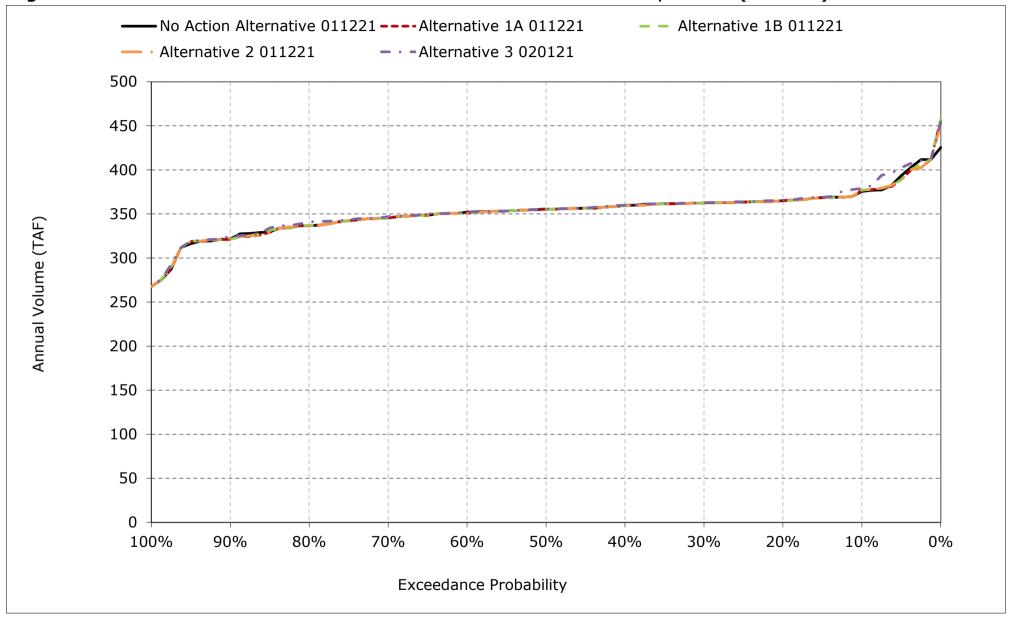


Figure 5B5-4. CVP South of Delta M&I Water Service Contract Deliveries, Annual (Mar-Feb)

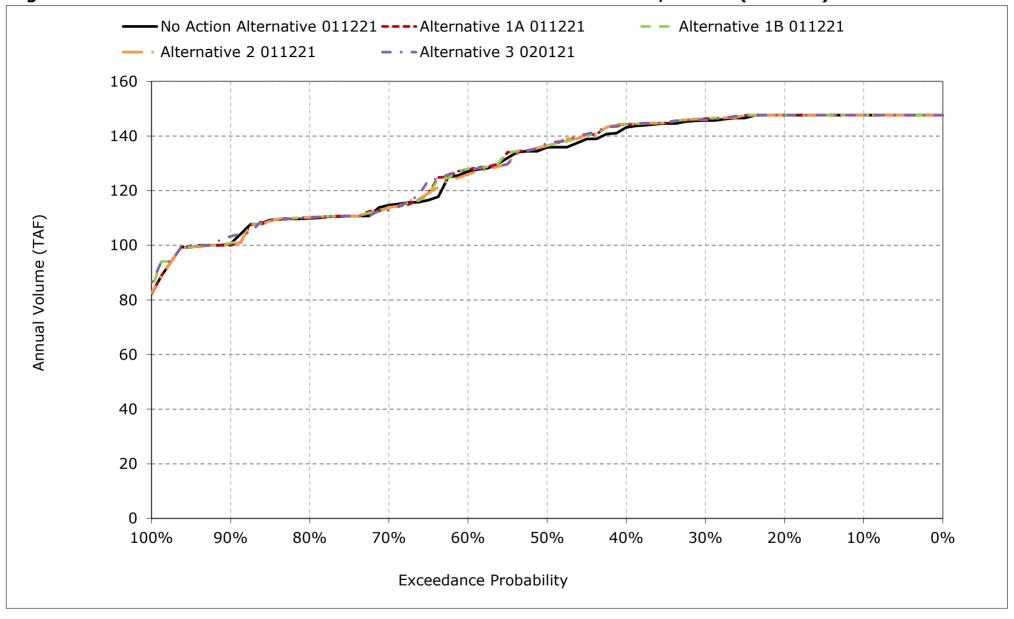


Figure 5B5-5. Total SWP Deliveries, Annual (Jan-Dec)

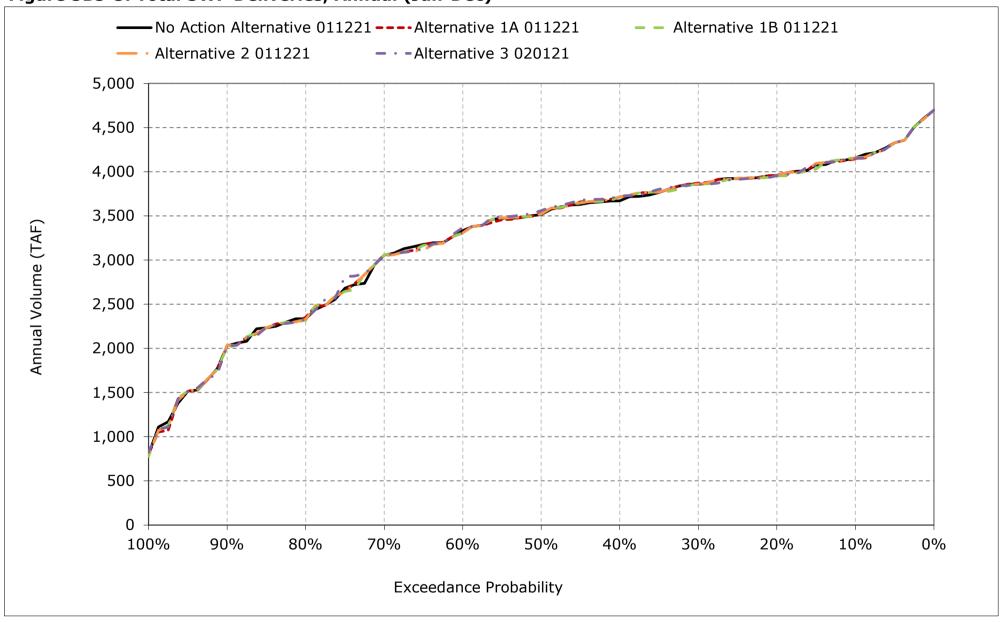


Figure 5B5-6. Total SWP South of Delta Deliveries including Article 21 and 56, Annual (Jan-Dec)

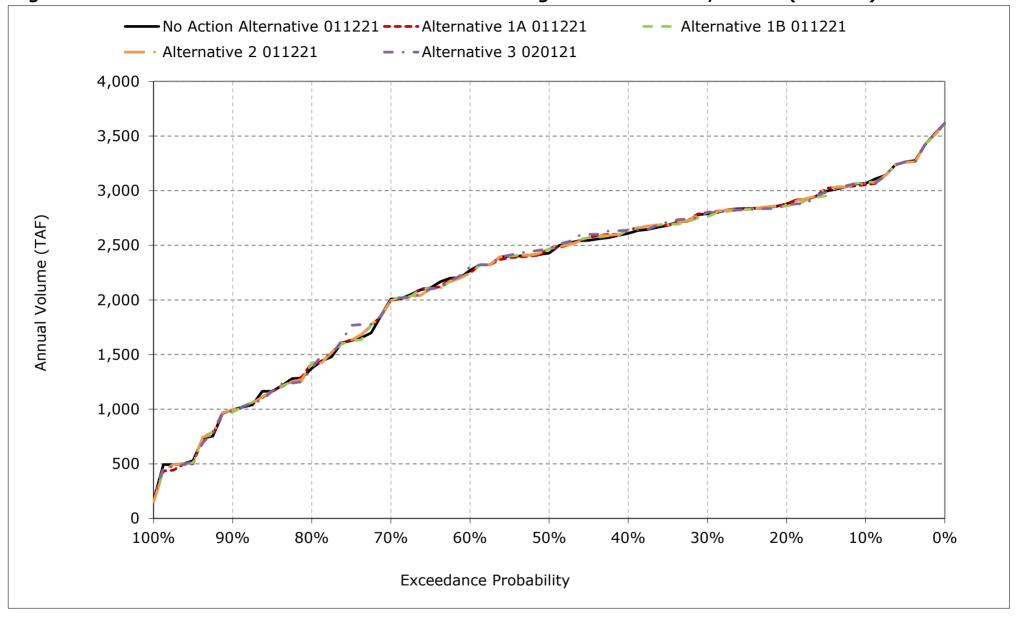


Figure 5B5-7. SWP Table A Deliveries with Article 56, Annual (Jan-Dec)

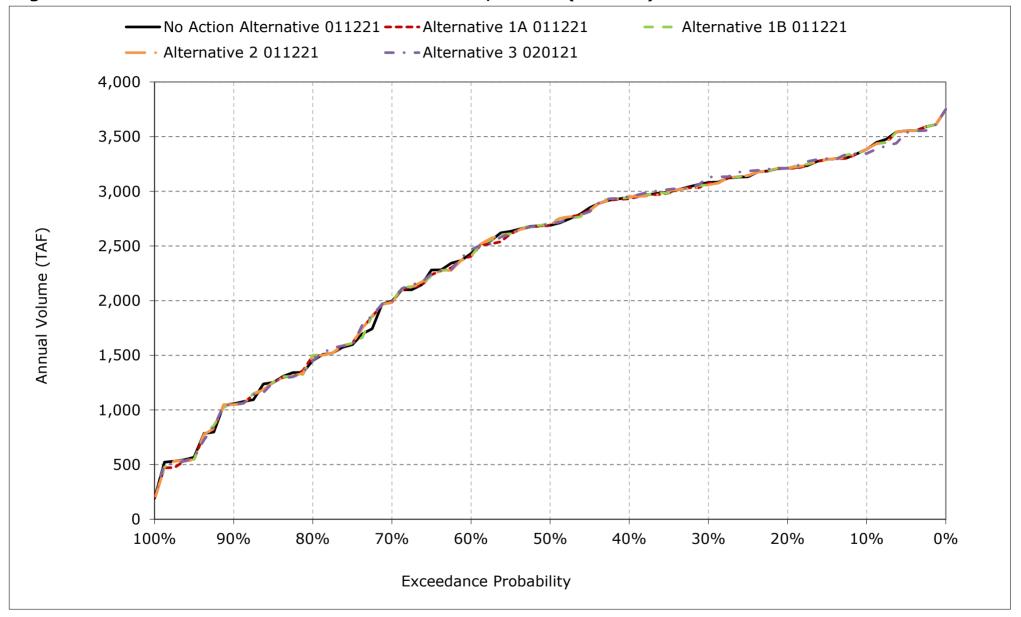


Figure 5B5-8. SWP South of Delta Table A Deliveries with Article 56, Annual (Jan-Dec)

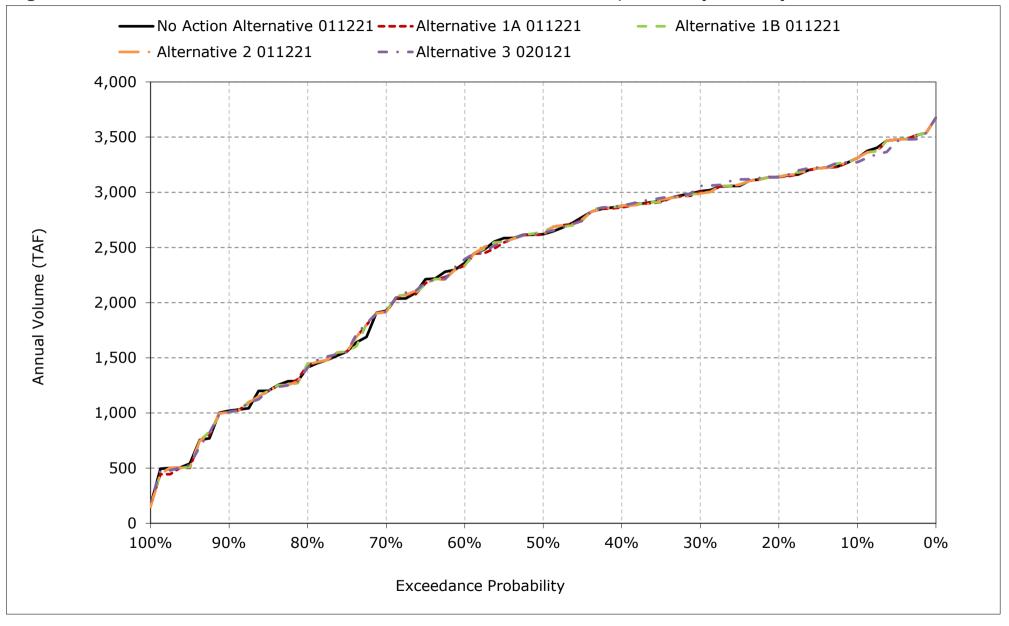


Figure 5B5-9. SWP Article 21 Deliveries, Annual (Jan-Dec)

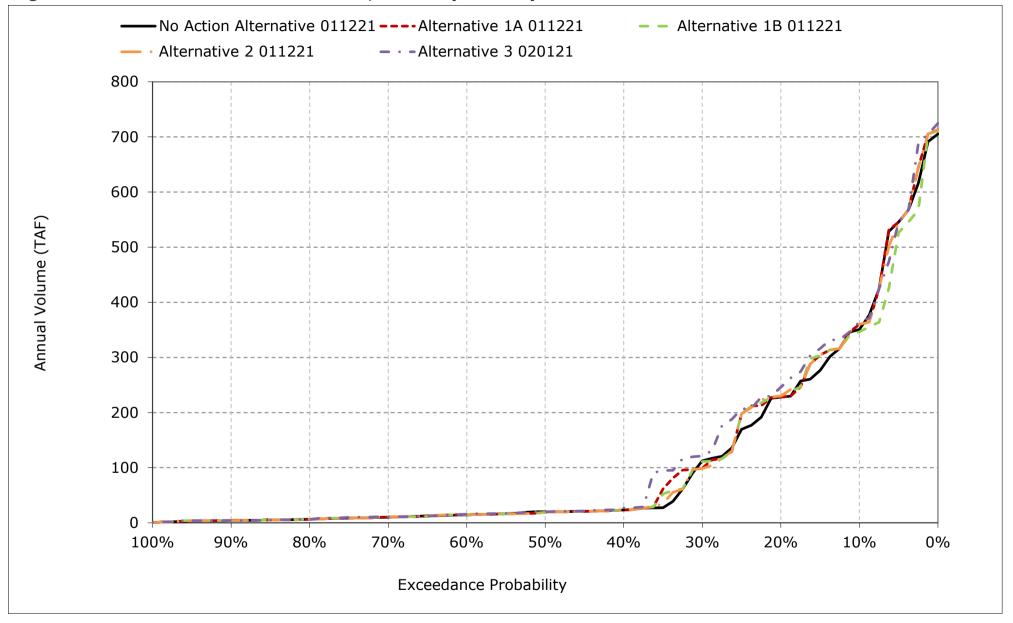


Figure 5B5-10. Total Delta Exports, Annual (Oct-Sep)

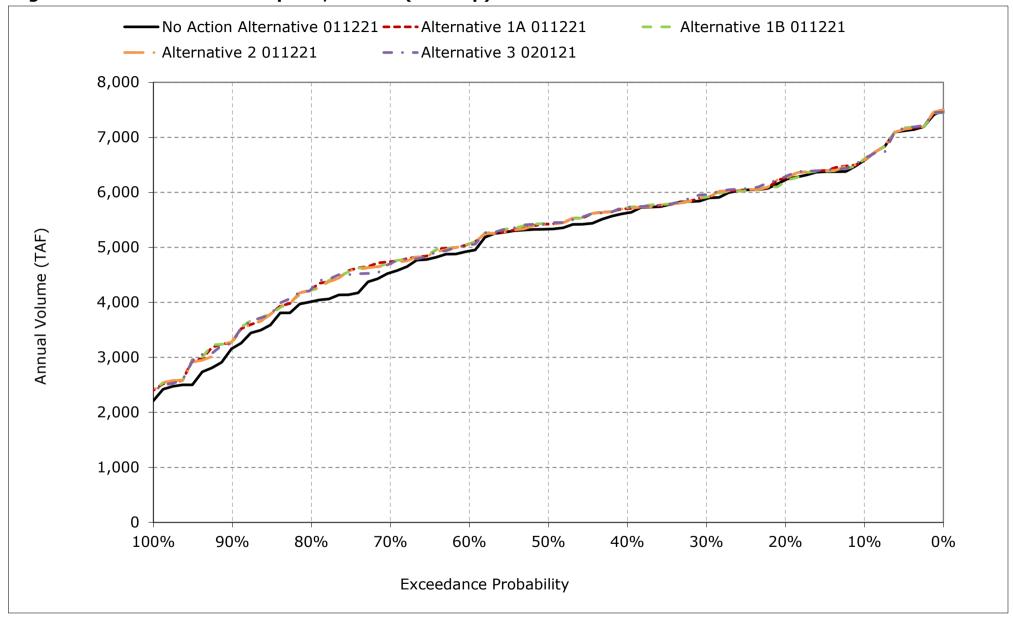


Figure 5B5-11. Sites North of Delta Deliveries, Annual (Mar-Feb)

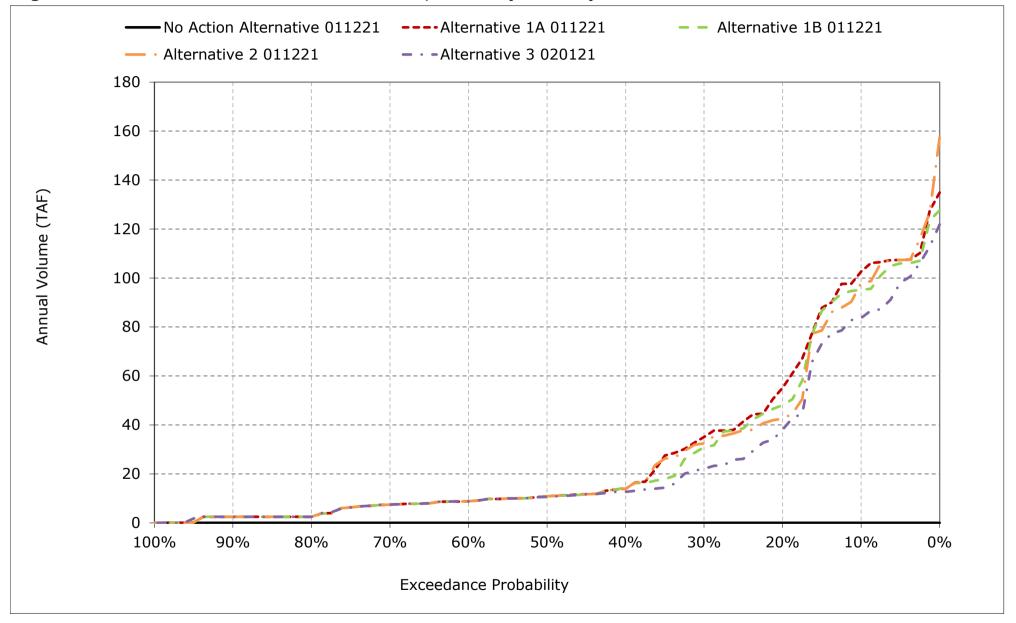


Figure 5B5-12. Sites South of Delta Deliveries, Annual (Jan-Dec)

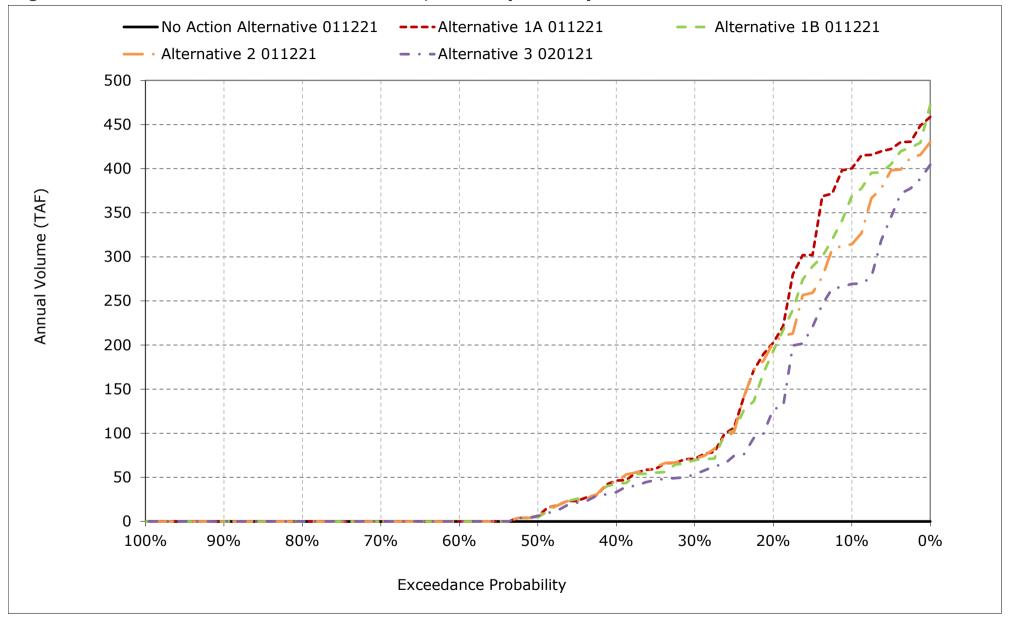


Figure 5B5-13. Sites CVP Refuge Level 4 Deliveries - North of Delta, Annual (Mar-Feb)

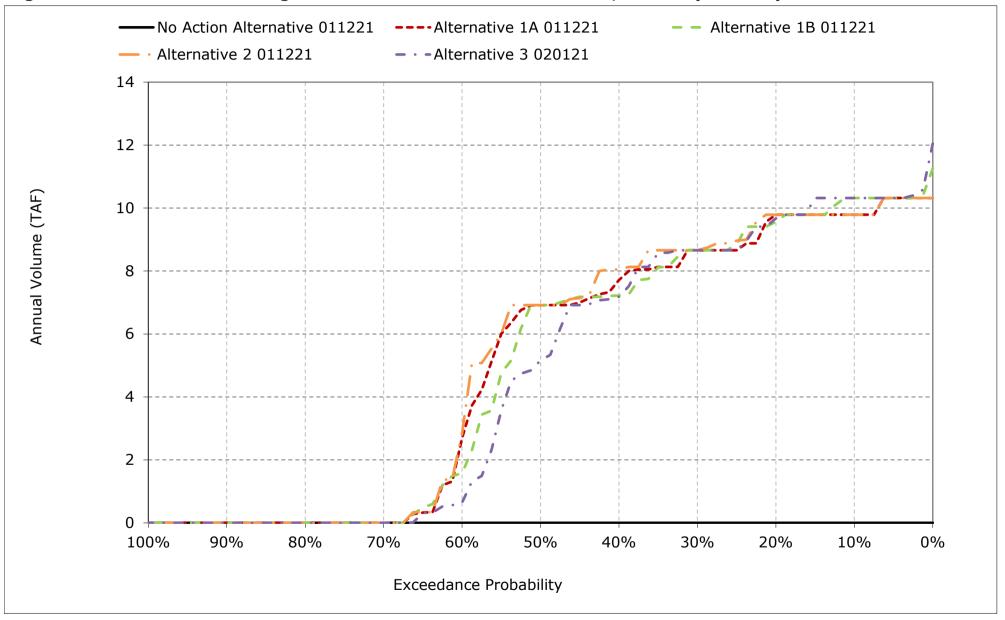


Figure 5B5-14. Sites CVP Refuge Level 4 Deliveries - South of Delta, Annual (Mar-Feb)

