

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 Average

				Alternative 1A 011221	No Action Alternative 011221	Alternative 1A 011221 minus No Action Alternative 011221
Water Supply Reliability						
Sacramento River Hydrologic Region						
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 Dry and Critical	166 146	165 145	1 2
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	205 175	205 174	0 0
CVP Ag	Contract Delivery (annual average - does not include Settlement)	(TAF/year)	Long Term Dry and Critical	265 146	264 143	1 4
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	951 908	951 909	0 0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	26 18	26 18	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	5 6	0 0	5 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 Region (not including Friant-Kern and Madera Canal water users)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	852 814	852 814	0 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 Dry and Critical	18 15	18 15	0 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 21) (annual average)	(TAF/year)	Long Term Dry and Critical	3 2	3 2	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	12 22	0 0	12 22
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	259 270	259 270	0 0
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	48 25	48 25	0 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 Dry and Critical	10 24	0 0	10 24
Central Coast Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	39 24	39 24	0 0
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	12 11	12 11	0 0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term Dry and Critical	789 434	787 429	2 5
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	79 43	79 43	0 0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	626 336	626 336	1 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	4 6	0 0	4 6
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	3 7	0 0	3 7
South Lahontan Hydrologic Region						
SWP M&I	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	251 166	251 167	0 -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						
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 0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	71 179	0 0	71 179
Total For All Regions						
Total Supplies	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	8,283 6,766	8,130 6,414	153 353

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. 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
Water 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 0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	0 0	0 0	0 0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	88 69	88 69	0 0
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	31 64	0 0	31 64
Total CVP North of Delta						
Total CVP Ag and M&I NOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	618 498	617 494	1 4
Total SWP North of Delta						
Total SWP Ag and M&I NOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	88 69	88 69	0 0
Total Sites North of Delta						
Total Sites Ag and M&I NOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	31 64	0 0	31 64
Total North of Delta						
Total North of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	736 631	704 563	31 69
South of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange)	(TAF/year)	Long Term Dry and Critical	1,229 665	1,226 657	3 8
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	129 108	129 108	0 0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	637 342	636 342	1 0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	1,586 1,032	1,586 1,034	-1 -2
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	3 7	0 0	3 7
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	95 236	0 0	95 236
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						
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						
Total Sites Ag and M&I SOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	97 243	0 0	97 243
Total South of Delta						
Total South of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	3,679 2,390	3,578 2,141	101 249

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. 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 1B 011221 minus No Action Alternative 011221
Water Supply Reliability						
Sacramento River Hydrologic Region						
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 Dry and Critical	166 146	165 145	1 2
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	205 175	205 174	0 1
CVP Ag	Contract Delivery (annual average - does not include Settlement)	(TAF/year)	Long Term Dry and Critical	266 149	264 143	2 7
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	950 908	951 909	0 0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	26 18	26 18	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	5 6	0 0	5 6
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	29 60	0 0	29 60
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	852 814	852 814	0 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 Dry and Critical	18 15	18 15	0 0
CVP Ag	Contract Delivery (annual average; does not include Exchange)	(TAF/year)	Long Term Dry and Critical	394 210	391 203	3 7
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	3 2	3 2	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	12 21	0 0	12 21
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	259 270	259 270	0 0
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	48 26	48 25	0 1
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 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 Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	39 25	39 24	0 0
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	12 11	12 11	0 0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term Dry and Critical	794 445	787 429	7 16
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	79 42	79 43	0 0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	625 336	626 336	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	3 6	0 0	3 6
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	3 6	0 0	3 6
South Lahontan Hydrologic Region						
SWP M&I	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	251 168	251 167	0 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 Region						
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	1,083 721	1,085 721	-2 0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	8 4	8 4	0 0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	66 166	0 0	66 166
Total For All Regions						
Total Supplies	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	8,279 6,766	8,130 6,414	149 352

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. 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 011221	No Action Alternative 011221	Alternative 1B 011221 minus No Action Alternative 011221
Water Supply Reliability						
North of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange)	(TAF/year)	Long Term Dry and Critical	266 149	264 143	2 7
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	353 352	352 351	0 1
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	0 0	0 0	0 0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	88 69	88 69	0 0
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	29 60	0 0	29 60
Total CVP North of Delta						
Total CVP Ag and M&I NOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	619 501	617 494	2 7
Total SWP North of Delta						
Total SWP Ag and M&I NOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	88 69	88 69	0 0
Total Sites North of Delta						
Total Sites Ag and M&I NOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	29 60	0 0	29 60
Total North of Delta						
Total North of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	735 630	704 563	31 67
South of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange)	(TAF/year)	Long Term Dry and Critical	1,235 681	1,226 657	10 24
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	130 108	129 108	1 0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	636 342	636 342	0 0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	1,585 1,035	1,586 1,034	-2 1
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	3 6	0 0	3 6
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	88 220	0 0	88 220
Total CVP South of Delta						
Total CVP Ag and M&I SOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	1,365 789	1,355 765	10 24
Total SWP South of Delta						
Total SWP Ag and M&I SOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	2,221 1,377	2,223 1,376	-2 1
Total Sites South of Delta						
Total Sites Ag and M&I SOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	91 226	0 0	91 226
Total South of Delta						
Total South of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	3,676 2,392	3,578 2,141	98 252

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. 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 Average

				Alternative 2 011221	No Action Alternative 011221	Alternative 2 011221 minus No Action Alternative 011221
Water Supply Reliability						
Sacramento River Hydrologic Region						
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	1,607 1,583	1,609 1,585	-2 -2
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	166 146	165 145	1 1
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	205 175	205 174	0 0
CVP Ag	Contract Delivery (annual average - does not include Settlement)	(TAF/year)	Long Term Dry and Critical	265 146	264 143	1 4
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	951 909	951 909	0 0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	26 18	26 18	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	5 7	0 0	5 7
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	29 62	0 0	29 62
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	852 814	852 814	0 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 Dry and Critical	18 15	18 15	0 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 21) (annual average)	(TAF/year)	Long Term Dry and Critical	3 2	3 2	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	14 24	0 0	14 24
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	259 270	259 270	0 0
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	48 25	48 25	0 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 0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	9 22	0 0	9 22
Central Coast Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	39 25	39 24	0 0
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	12 11	12 11	0 0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term Dry and Critical	789 434	787 429	2 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 21) (annual average)	(TAF/year)	Long Term Dry and Critical	627 336	626 336	1 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	4 7	0 0	4 7
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	2 6	0 0	2 6
South Lahontan Hydrologic Region						
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 Dry and Critical	12 29	0 0	12 29
South Coast Hydrologic Region						
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 1
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	8 4	8 4	0 0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	64 158	0 0	64 158
Total For All Regions						
Total Supplies	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	8,273 6,740	8,130 6,414	143 326

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. 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 011221	No Action Alternative 011221	Alternative 2 011221 minus No Action Alternative 011221
Water 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 0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	0 0	0 0	0 0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	88 69	88 69	0 0
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	29 62	0 0	29 62
Total CVP North of Delta						
Total CVP Ag and M&I NOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	618 498	617 494	1 4
Total SWP North of Delta						
Total SWP Ag and M&I NOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	88 69	88 69	0 0
Total Sites North of Delta						
Total Sites Ag and M&I NOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	29 62	0 0	29 62
Total North of Delta						
Total North of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	735 629	704 563	30 66
South of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange)	(TAF/year)	Long Term Dry and Critical	1,229 665	1,226 657	3 8
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	129 108	129 108	0 0
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	638 342	636 342	1 0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	1,585 1,033	1,586 1,034	-1 -1
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	2 6	0 0	2 6
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	85 209	0 0	85 209
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						
Total SWP Ag and M&I SOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	2,223 1,376	2,223 1,376	0 -1
Total Sites South of Delta						
Total Sites Ag and M&I SOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	87 215	0 0	87 215
Total South of Delta						
Total South of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	3,668 2,364	3,578 2,141	91 223

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. 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 3 020121 minus No Action Alternative 011221
Water Supply Reliability						
Sacramento River Hydrologic Region						
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)	(TAF/year)	Long Term Dry and Critical	166 146	165 145	1 1
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	207 178	205 174	2 4
CVP Ag	Contract Delivery (annual average - does not include Settlement)	(TAF/year)	Long Term Dry and Critical	270 157	264 143	5 14
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	951 909	951 909	0 0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	26 18	26 18	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	5 6	0 0	5 6
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	25 52	0 0	25 52
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	852 814	852 814	0 0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	259 246	258 246	0 0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	18 15	18 15	0 0
CVP Ag	Contract Delivery (annual average; does not include Exchange)	(TAF/year)	Long Term Dry and Critical	396 215	391 203	5 12
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	3 2	3 2	0 0
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	11 19	0 0	11 19
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	259 271	259 270	1 0
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	48 26	48 25	1 1
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	195 131	194 130	1 1
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	8 19	0 0	8 19
Central Coast Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	39 25	39 24	0 0
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	12 11	12 11	0 0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term Dry and Critical	801 454	787 429	14 25
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 21) (annual average)	(TAF/year)	Long Term Dry and Critical	632 342	626 336	7 6
Refuge Level 4 - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	3 5	0 0	3 5
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	2 5	0 0	2 5
South Lahontan Hydrologic Region						
SWP M&I	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	250 167	251 167	-1 0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	10 24	0 0	10 24
South Coast Hydrologic Region						
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	-1 2
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	8 4	8 4	0 0
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	52 130	0 0	52 130
Total For All Regions						
Total Supplies	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	8,280 6,740	8,130 6,414	150 326

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. 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 020121	No Action Alternative 011221	Alternative 3 020121 minus No Action Alternative 011221
Water Supply Reliability						
North of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange)	(TAF/year)	Long Term Dry and Critical	270 157	264 143	5 14
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	354 355	352 351	2 4
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	0 0	0 0	0 0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	88 69	88 69	0 0
CVP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	25 52	0 0	25 52
Total CVP North of Delta						
Total CVP Ag and M&I NOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	624 512	617 494	7 18
Total SWP North of Delta						
Total SWP Ag and M&I NOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	88 69	88 69	0 0
Total Sites North of Delta						
Total Sites Ag and M&I NOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	25 52	0 0	25 52
Total North of Delta						
Total North of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	737 633	704 563	33 71
South of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange)	(TAF/year)	Long Term Dry and Critical	1,246 695	1,226 657	20 38
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	130 108	129 108	1 1
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	643 348	636 342	7 6
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	1,586 1,037	1,586 1,034	0 3
SWP Ag - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	2 5	0 0	2 5
SWP M&I - Sites	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	69 173	0 0	69 173
Total CVP South of Delta						
Total CVP Ag and M&I SOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	1,375 804	1,355 765	21 39
Total SWP South of Delta						
Total SWP Ag and M&I SOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	2,229 1,385	2,223 1,376	6 9
Total Sites South of Delta						
Total Sites Ag and M&I SOD	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	71 178	0 0	71 178
Total South of Delta						
Total South of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	3,676 2,366	3,578 2,141	98 225

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. 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)

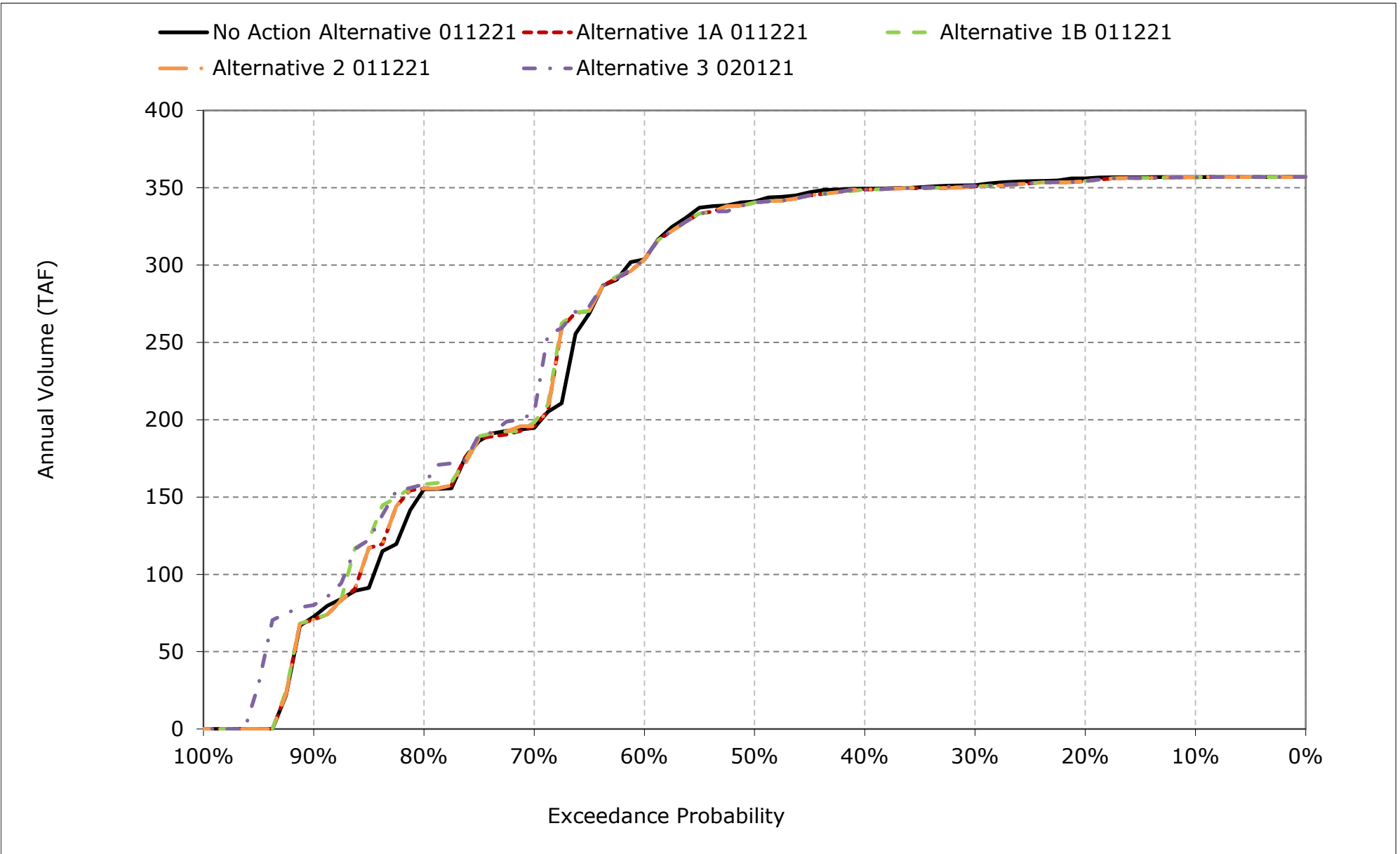


Figure 5B5-2. CVP South of Delta Agricultural Water Service Contract Deliveries, Annual (Mar-Feb)

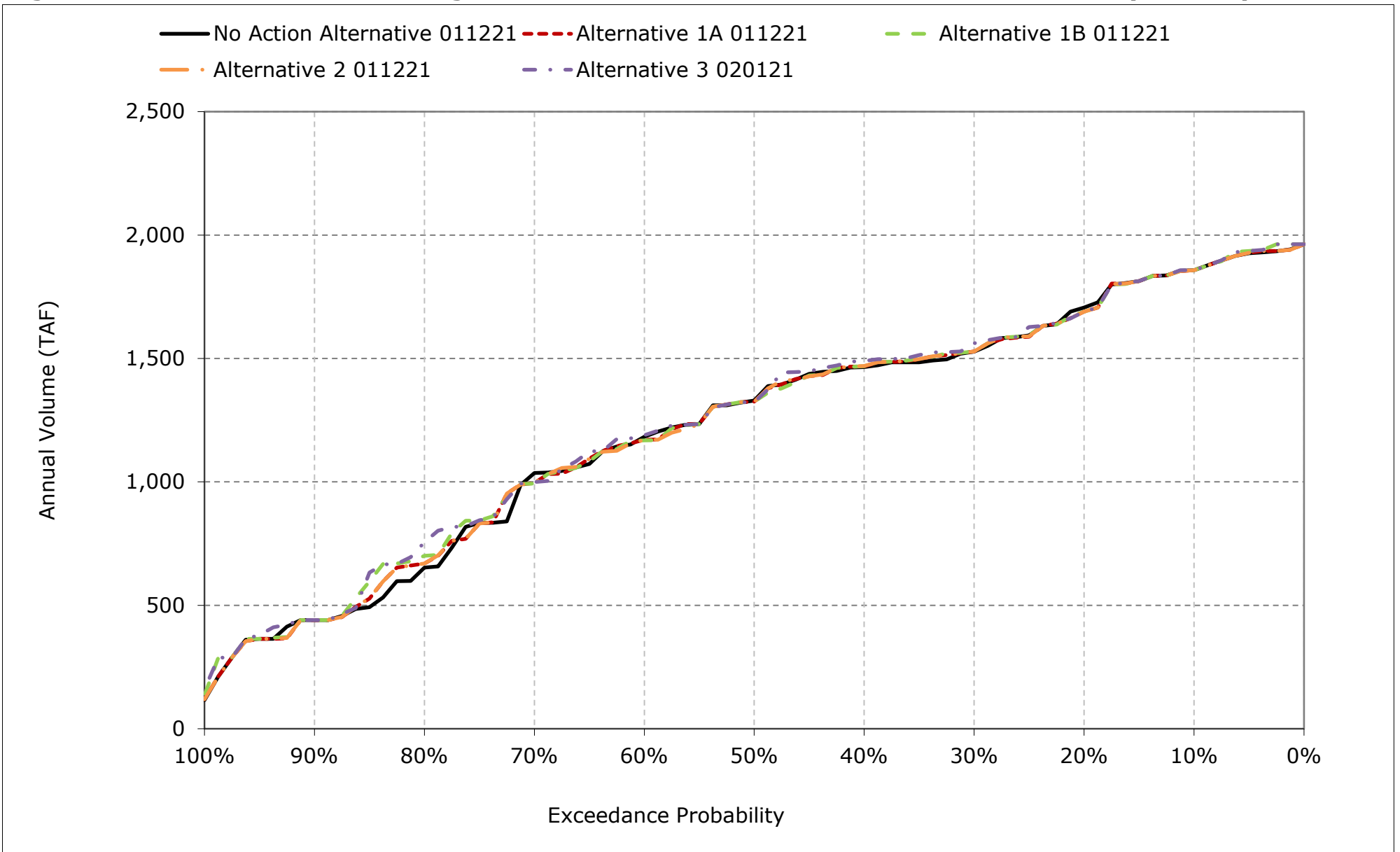


Figure 5B5-3. CVP North of Delta M&I Water Service Contract Deliveries, Annual (Mar-Feb)

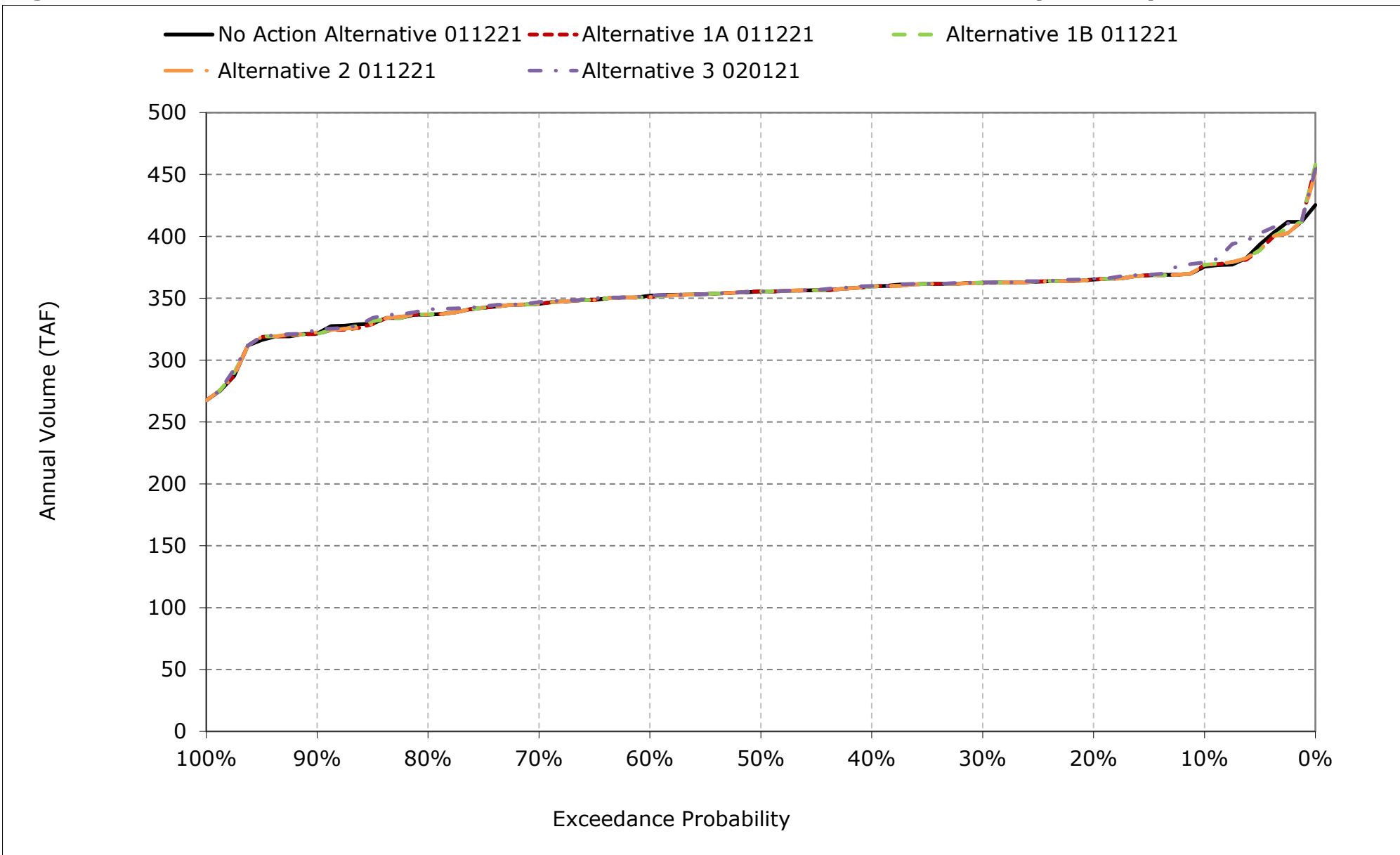


Figure 5B5-4. CVP South of Delta M&I Water Service Contract Deliveries, Annual (Mar-Feb)

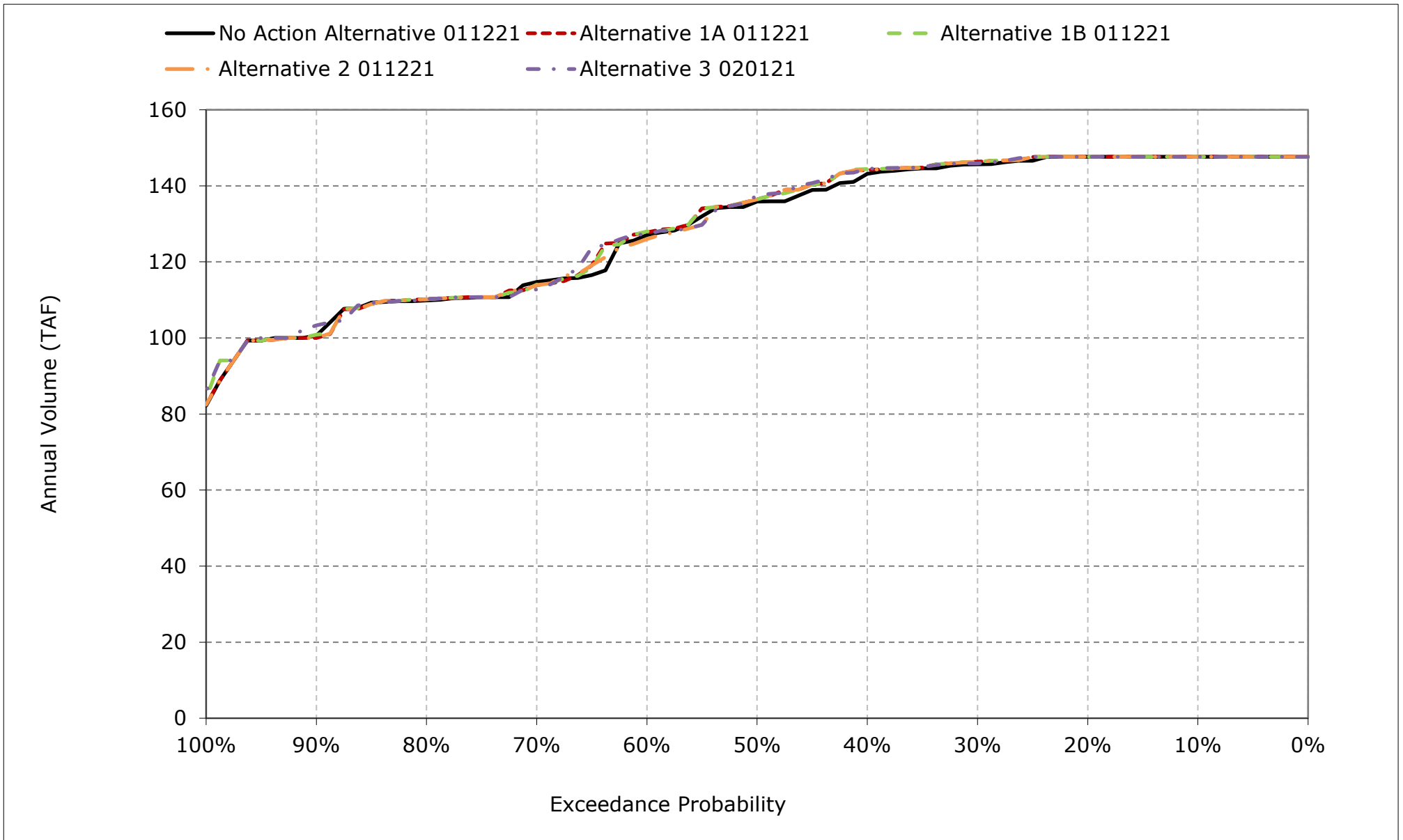


Figure 5B5-5. Total SWP Deliveries, Annual (Jan-Dec)

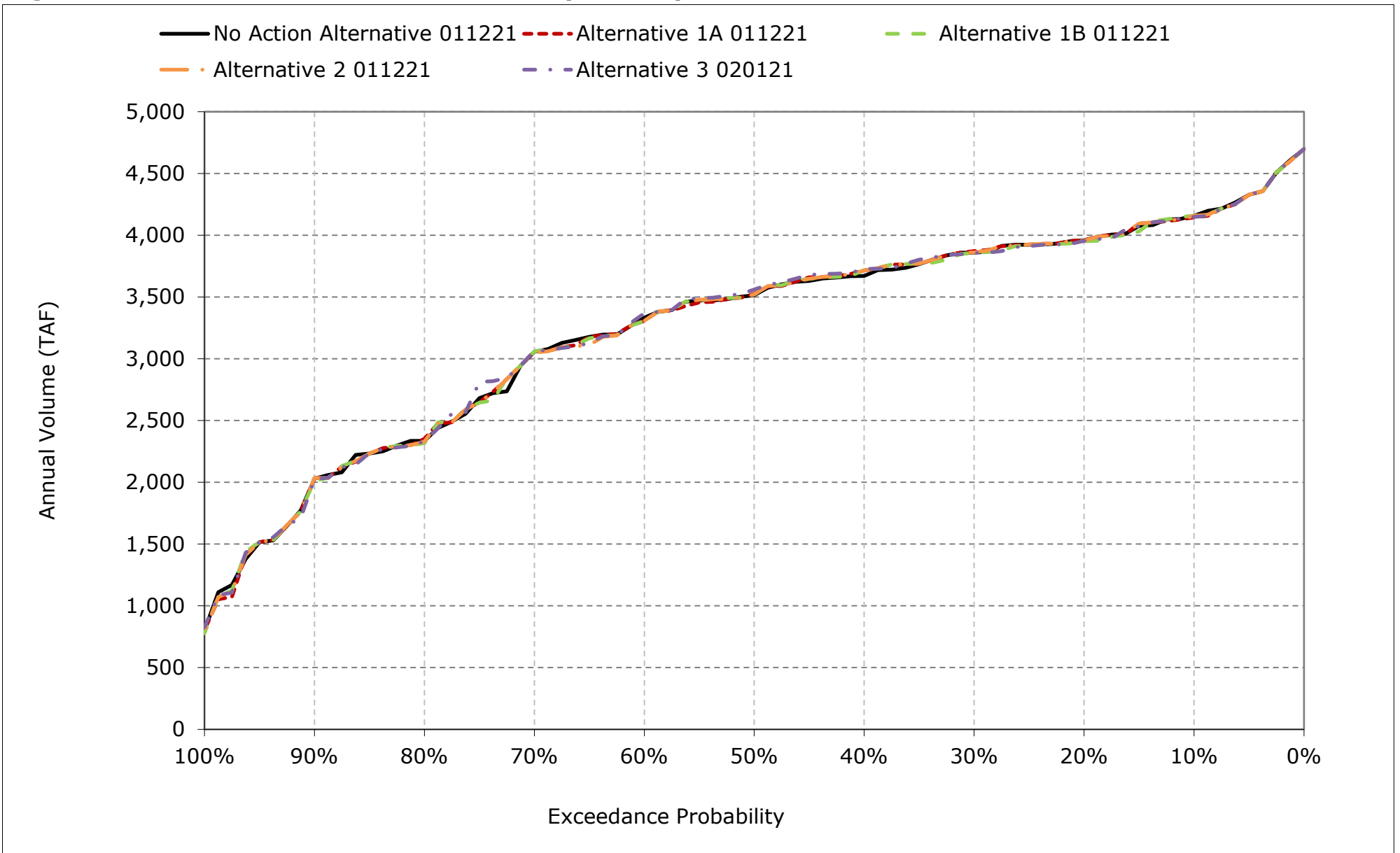


Figure 5B5-6. Total SWP South of Delta Deliveries including Article 21 and 56, Annual (Jan-Dec)

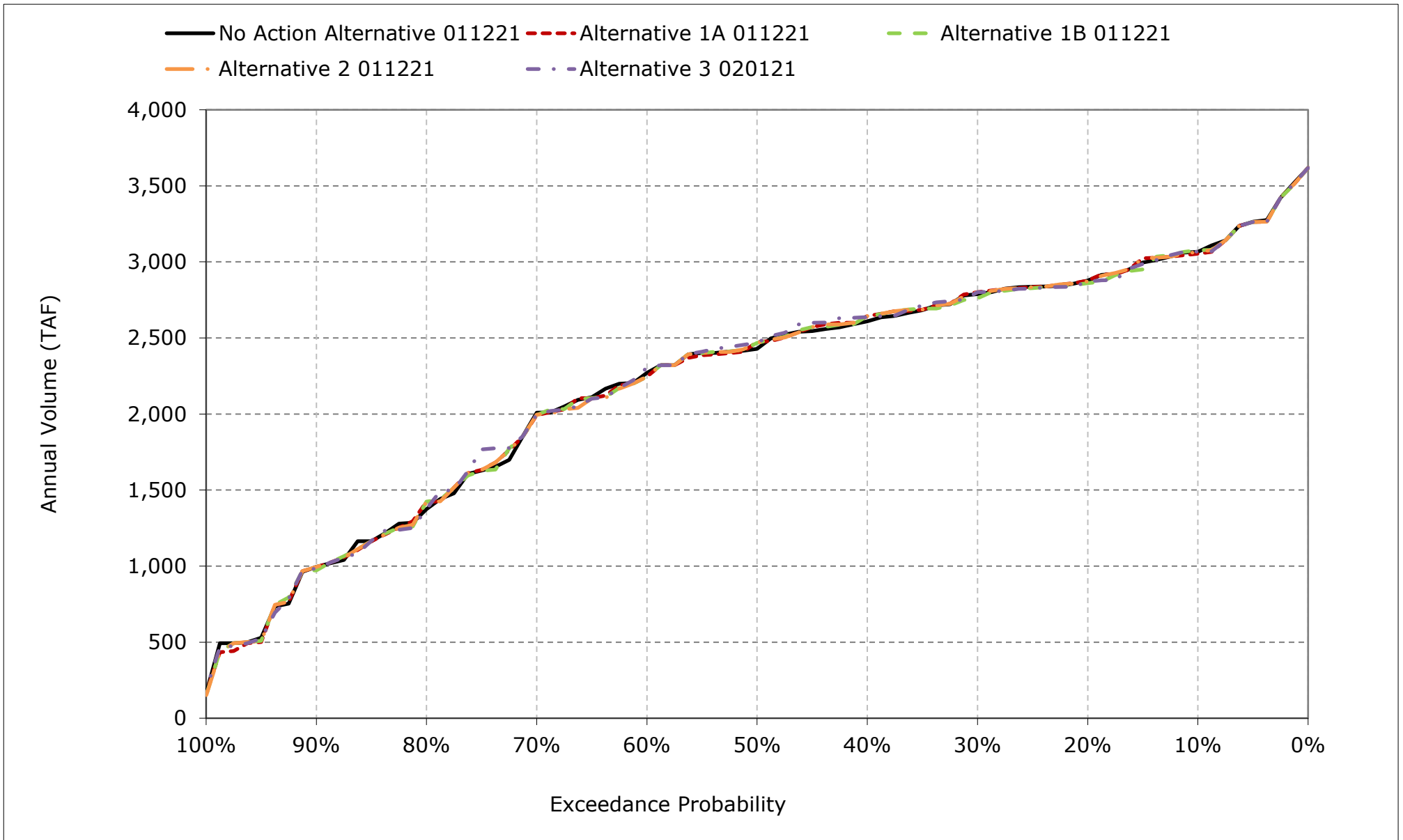


Figure 5B5-7. SWP Table A Deliveries with Article 56, Annual (Jan-Dec)

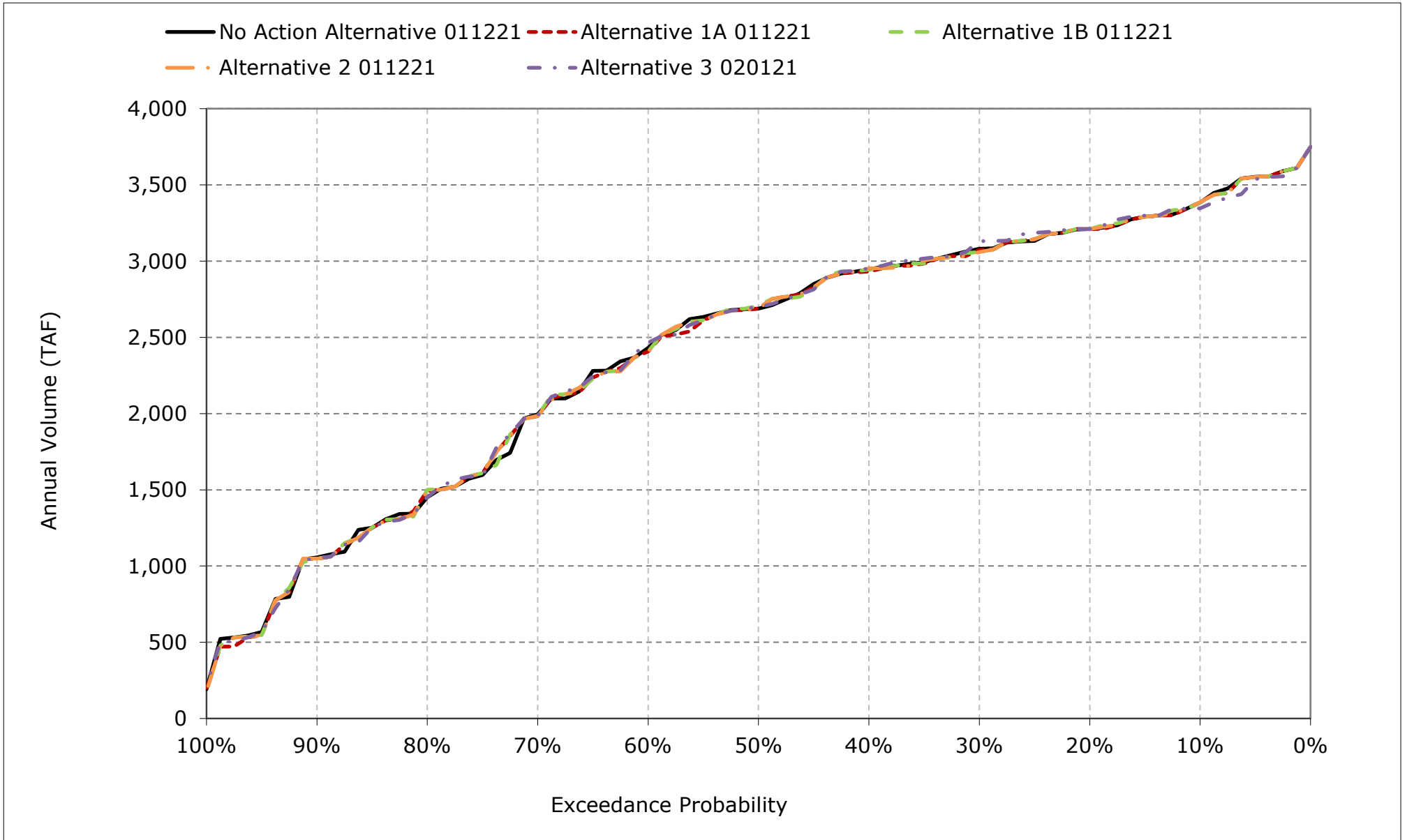


Figure 5B5-8. SWP South of Delta Table A Deliveries with Article 56, Annual (Jan-Dec)

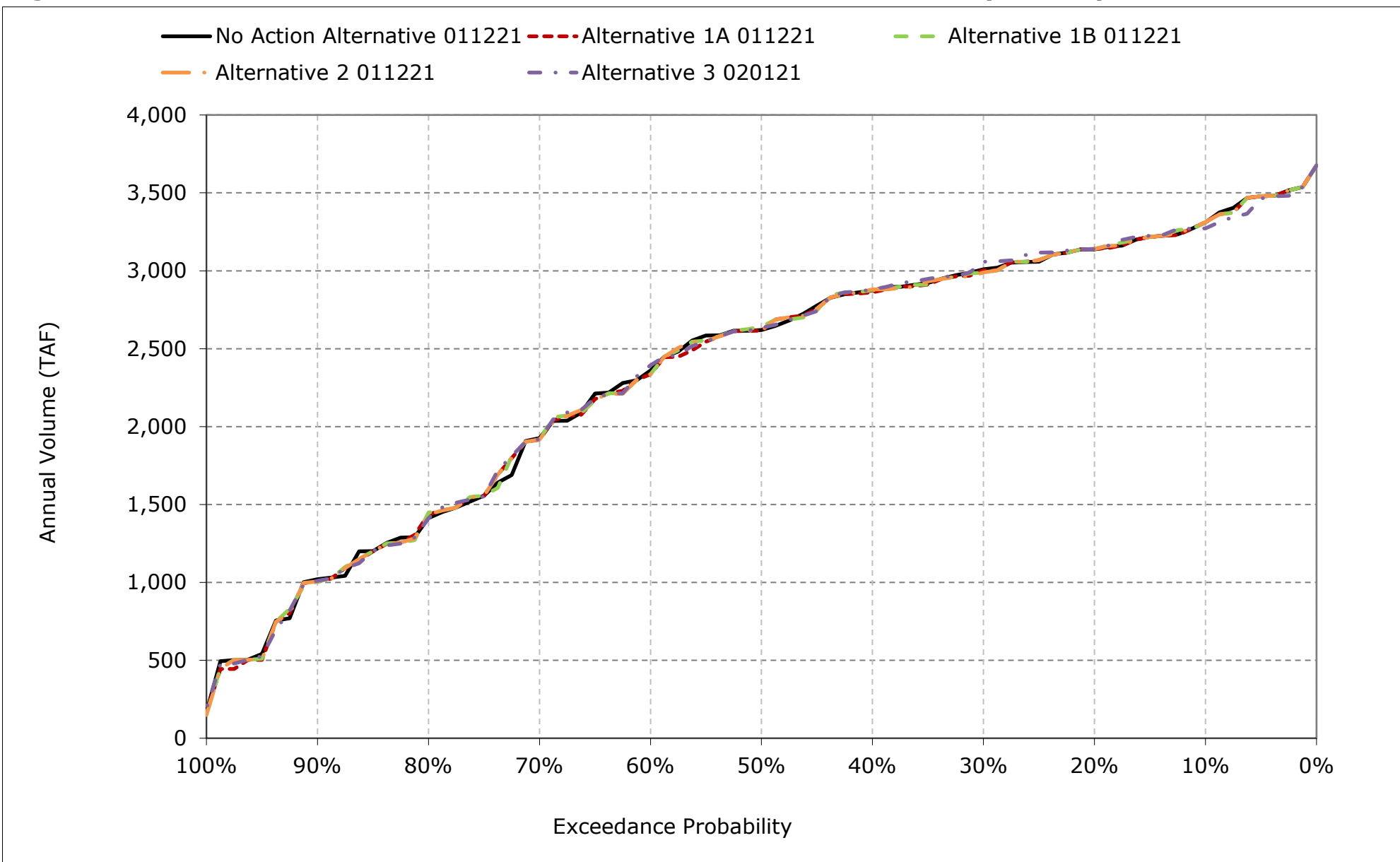


Figure 5B5-9. SWP Article 21 Deliveries, Annual (Jan-Dec)

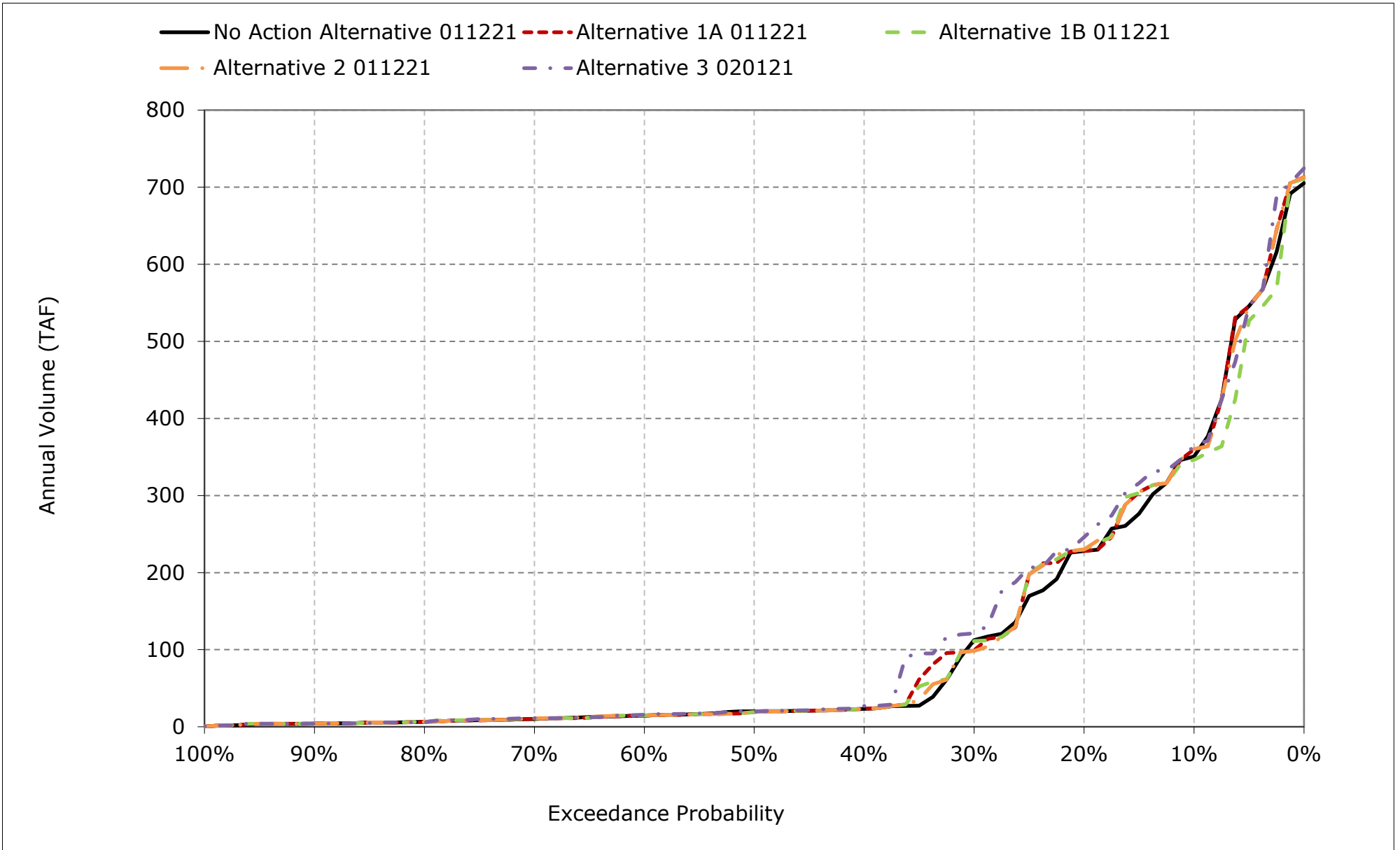


Figure 5B5-10. Total Delta Exports, Annual (Oct-Sep)

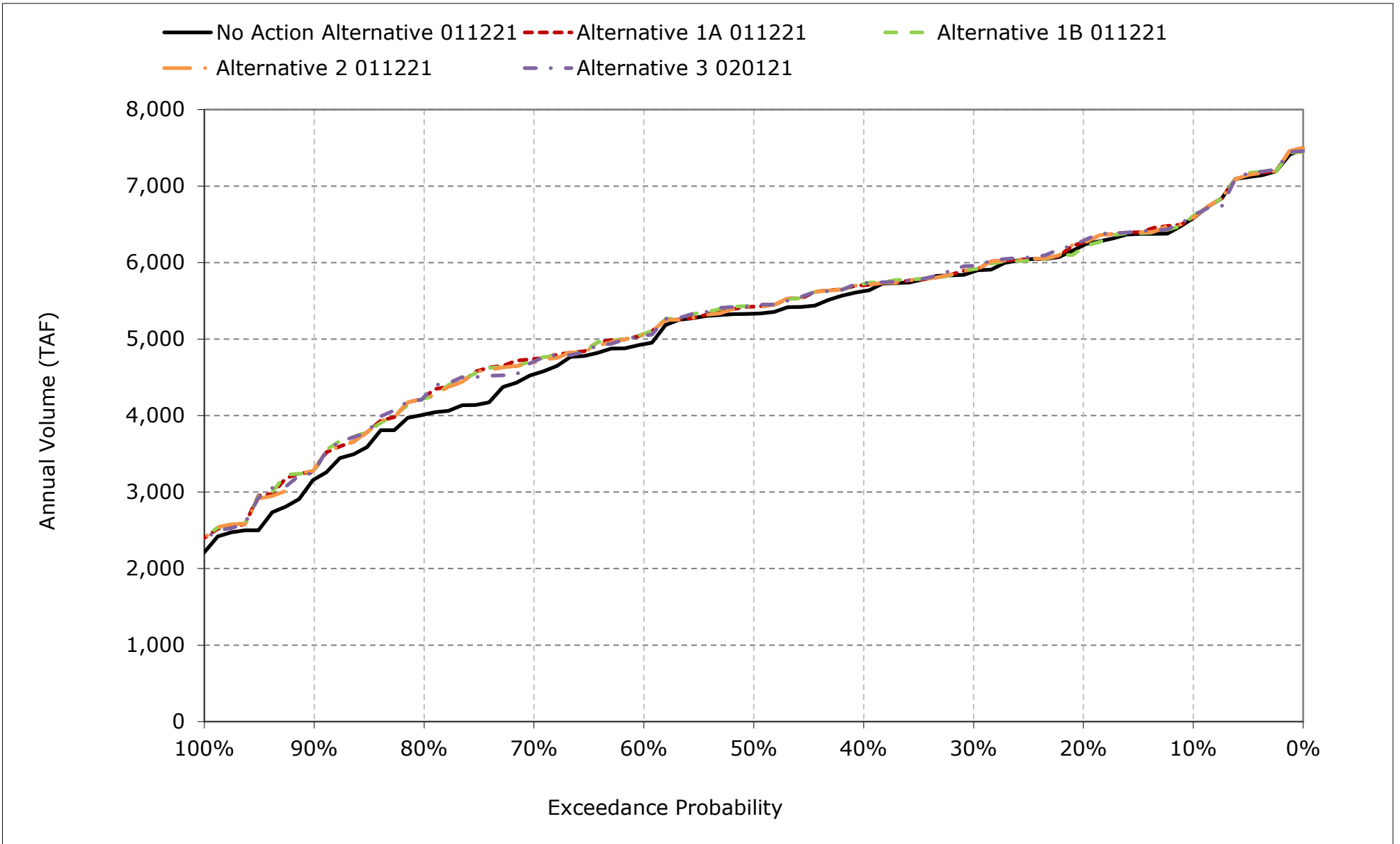


Figure 5B5-11. Sites North of Delta Deliveries, Annual (Mar-Feb)

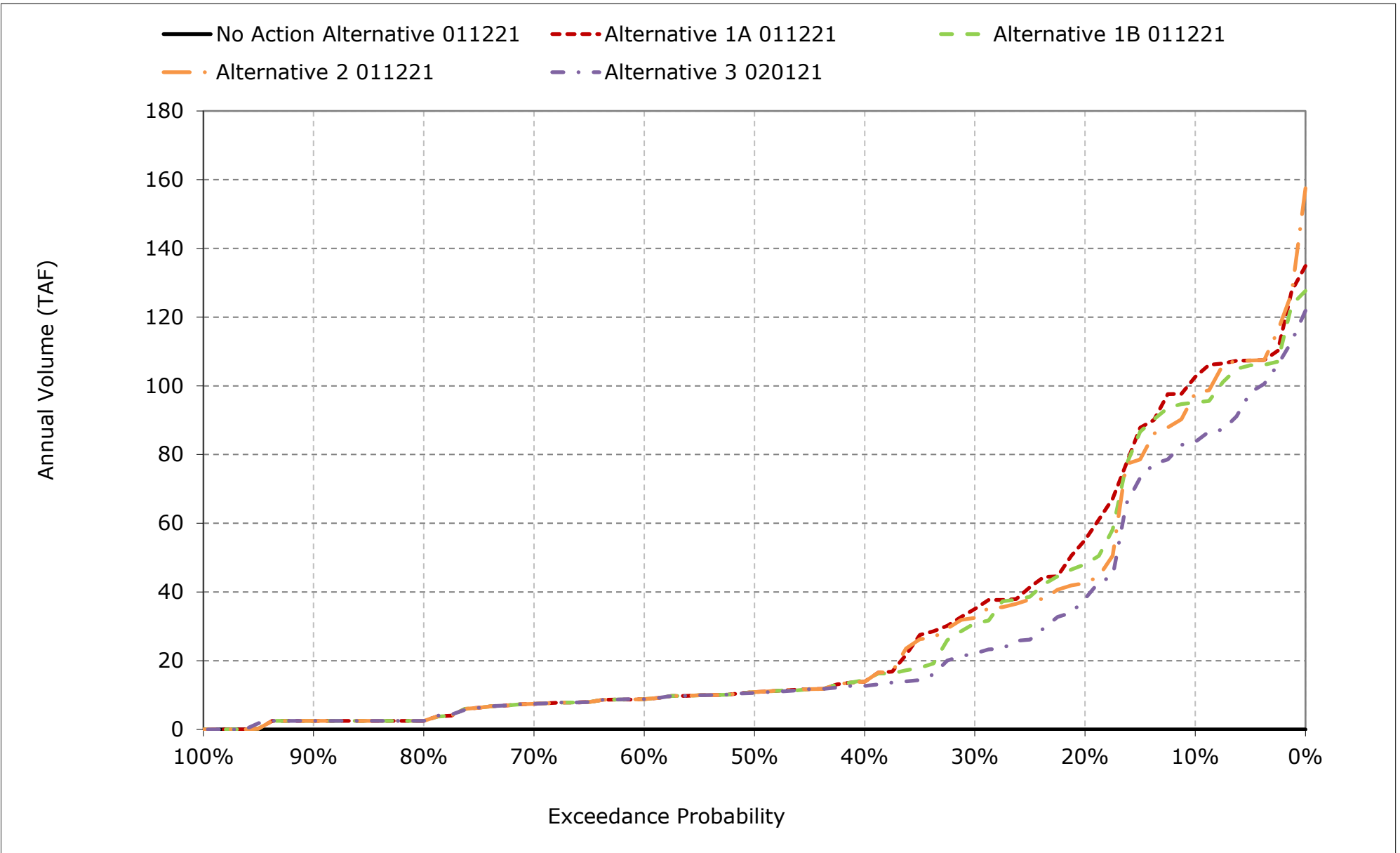


Figure 5B5-12. Sites South of Delta Deliveries, Annual (Jan-Dec)

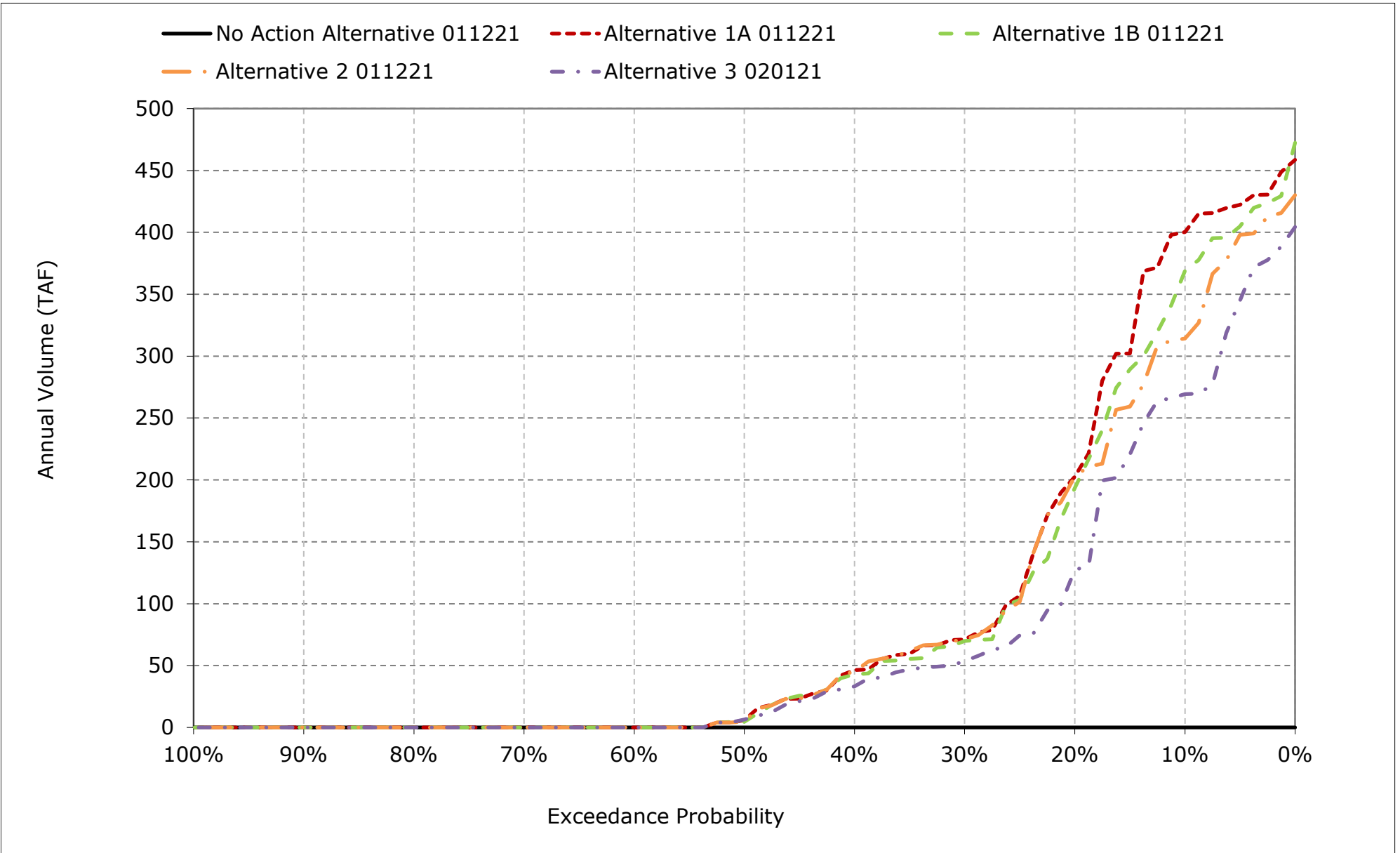


Figure 5B5-13. Sites CVP Refuge Level 4 Deliveries - North of Delta, Annual (Mar-Feb)

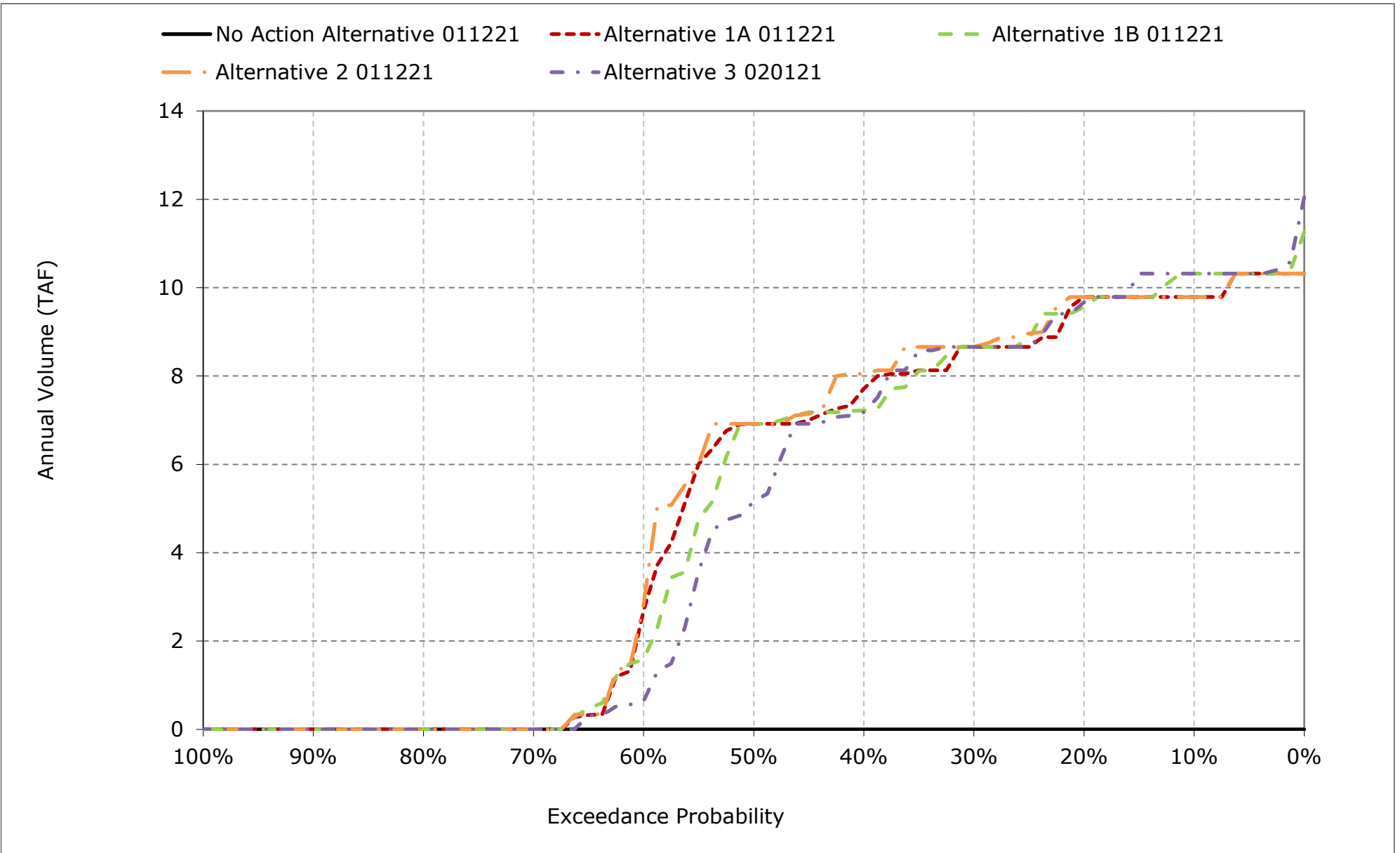


Figure 5B5-14. Sites CVP Refuge Level 4 Deliveries - South of Delta, Annual (Mar-Feb)

