Appendix 5B3 – Delta Operations (CalSim II)

The following results of the CalSim II model are included for delta operations at key project locations for the following alternatives:

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

Section	Output Parameters	Table Numbers	Figure Numbers
Delta	Sacramento River Flow at Freeport	5B3-1-1a to 5B3-1-4c	5B3-1-1 to 5B3-1-18
Delta	DCC Flow	5B3-2-1a to 5B3-2-4c	5B3-2-1 to 5B3-2-18
Delta	Yolo Bypass Flow	5B3-3-1a to 5B3-3-4c	5B3-3-1 to 5B3-3-18
Delta	Sacramento River Flow at Rio Vista	5B3-4-1a to 5B3-4-4c	5B3-4-1 to 5B3-4-18
Delta	Delta Outflow	5B3-5-1a to 5B3-5-4c	5B3-5-1 to 5B3-5-18
Delta	Old and Middle River Flow	5B3-6-1a to 5B3-6-4c	5B3-6-1 to 5B3-6-18
Delta	San Joaquin River at Vernalis	5B3-7-1a to 5B3-7-4c	5B3-7-1 to 5B3-7-18
Delta	San Joaquin River at Vernalis (60-20-20)	5B3-8-1a to 5B3-8-4c	5B3-8-1 to 5B3-8-6

Report formats

- Monthly tables comparing an alternative against the No Action alternative (exceedance values, long-term average, and average by water year type)
- Monthly pattern charts (long-term average and average by water year type) including all alternatives
- Monthly exceedance charts (all months) including all alternatives

Table 5B3-1-1a. Sacramento River Flow at Freeport, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,399	24,146	48,741	58,415	65,818	61,761	52,870	43,518	26,635	24,173	17,772	22,063
20%	14,226	15,568	32,821	51,261	57,186	50,168	40,756	31,756	20,094	23,306	17,184	21,446
30%	12,620	14,399	22,929	38,967	49,951	39,506	25,336	20,921	15,578	21,438	16,687	21,146
40%	12,112	13,614	18,360	26,312	43,564	32,875	22,859	17,208	15,153	20,198	16,454	20,135
50%	10,919	13,259	15,637	22,920	32,788	25,343	18,551	15,183	14,631	19,209	15,330	14,285
60%	9,661	11,929	15,245	18,947	25,695	21,710	15,239	13,573	14,126	17,191	13,428	11,275
70%	8,806	9,878	13,960	14,650	21,401	18,301	12,638	11,966	13,279	15,711	11,147	10,114
80%	7,835	9,138	12,159	12,794	17,750	14,906	11,958	10,551	12,233	13,960	9,780	9,218
90%	7,054	7,287	9,801	11,765	14,560	12,042	10,926	9,823	10,851	10,426	8,964	7,604
Long Term												
Full Simulation Period[a]	11,321	14,535	22,458	30,034	37,320	32,057	24,973	20,710	17,158	18,113	13,921	15,135
Water Year Types[b,c]												
Wet (32%)	14,276	18,111	25,645	48,304	56,161	48,925	40,279	33,406	24,000	19,624	16,478	21,465
Above Normal (15%)	12,444	16,320	22,905	36,313	43,185	42,470	27,398	23,370	16,743	21,725	17,016	20,960
Below Normal (17%)	12,311	15,483	25,759	22,142	32,912	22,289	19,420	16,193	14,491	21,189	15,633	12,623
Dry (22%)	8,173	11,869	21,558	16,291	23,237	20,402	14,659	12,093	14,146	16,533	10,090	9,497
Critical (15%)	7,362	7,896	12,607	13,993	16,897	13,976	11,337	8,738	10,378	10,010	9,036	6,986

Table 5B3-1-1b. Sacramento River Flow at Freeport, Alternative 1A 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,404	23,397	48,114	56,120	65,734	61,751	51,592	43,414	24,679	24,293	17,704	22,007
20%	14,293	14,966	32,827	49,629	56,202	48,178	40,754	31,728	19,031	23,329	17,239	21,512
30%	12,885	14,399	22,944	37,903	49,280	37,187	25,392	20,547	15,572	21,448	16,853	21,209
40%	12,201	13,612	18,100	25,886	42,800	31,335	22,903	17,075	15,165	20,380	16,450	20,146
50%	11,396	13,350	15,452	22,574	31,786	23,757	18,589	14,922	14,557	19,413	15,626	14,491
60%	10,515	12,602	14,980	18,467	25,187	20,553	15,523	13,551	14,124	17,571	14,199	11,793
70%	10,213	11,034	13,762	14,532	20,992	17,825	13,065	11,968	13,276	16,506	11,797	10,928
80%	9,353	10,302	11,822	12,740	17,501	14,613	11,982	10,637	12,191	14,385	11,216	10,310
90%	8,026	7,597	9,994	11,961	14,342	12,116	11,090	9,867	10,851	10,872	9,647	8,731
Long Term												
Full Simulation Period[a]	11,843	14,724	22,345	29,569	36,799	31,188	24,738	20,589	16,988	18,551	14,445	15,568
Water Year Types[b,c]												
Wet (32%)	14,198	17,819	25,625	47,812	55,706	48,342	39,627	33,226	23,719	19,556	16,402	21,461
Above Normal (15%)	12,512	16,271	22,725	35,378	42,587	41,065	27,273	23,210	16,419	21,792	16,996	21,031
Below Normal (17%)	12,899	15,960	25,578	21,644	32,104	21,069	19,235	16,039	14,285	21,468	16,242	12,998
Dry (22%)	9,342	12,716	21,595	15,987	22,752	19,299	14,731	12,060	14,121	17,694	11,513	10,503
Critical (15%)	8,592	8,038	12,213	13,855	16,594	13,784	11,373	8,685	10,429	11,016	9,952	7,932

Table 5B3-1-1c. Sacramento River Flow at Freeport, Alternative 1A 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	5	-748	-628	-2,295	-84	-10	-1,278	-103	-1,956	120	-68	-55
20%	67	-602	6	-1,632	-985	-1,990	-2	-28	-1,062	24	54	66
30%	265	0	14	-1,064	-671	-2,319	57	-373	-6	10	166	64
40%	89	-2	-260	-426	-764	-1,540	44	-133	11	182	-4	11
50%	477	90	-185	-346	-1,002	-1,586	38	-261	-74	204	296	206
60%	854	673	-265	-481	-507	-1,157	284	-22	-3	380	771	518
70%	1,407	1,157	-198	-118	-409	-476	427	2	-3	795	650	814
80%	1,518	1,164	-337	-54	-249	-293	24	86	-42	425	1,436	1,092
90%	971	310	193	196	-219	74	164	44	0	446	682	1,128
Long Term												
Full Simulation Period[a]	522	189	-113	-465	-521	-869	-235	-122	-169	438	524	432
Water Year Types[b,c]												
Wet (32%)	-79	-292	-20	-492	-454	-582	-651	-180	-280	-68	-76	-5
Above Normal (15%)	69	-49	-180	-935	-598	-1,405	-124	-160	-324	67	-19	71
Below Normal (17%)	589	477	-181	-498	-808	-1,220	-185	-154	-206	279	610	375
Dry (22%)	1,168	848	37	-305	-485	-1,103	72	-32	-25	1,161	1,424	1,007
Critical (15%)	1,231	142	-394	-138	-304	-192	36	-53	51	1,006	916	946

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-1-2a. Sacramento River Flow at Freeport, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,399	24,146	48,741	58,415	65,818	61,761	52,870	43,518	26,635	24,173	17,772	22,063
20%	14,226	15,568	32,821	51,261	57,186	50,168	40,756	31,756	20,094	23,306	17,184	21,446
30%	12,620	14,399	22,929	38,967	49,951	39,506	25,336	20,921	15,578	21,438	16,687	21,146
40%	12,112	13,614	18,360	26,312	43,564	32,875	22,859	17,208	15,153	20,198	16,454	20,135
50%	10,919	13,259	15,637	22,920	32,788	25,343	18,551	15,183	14,631	19,209	15,330	14,285
60%	9,661	11,929	15,245	18,947	25,695	21,710	15,239	13,573	14,126	17,191	13,428	11,275
70%	8,806	9,878	13,960	14,650	21,401	18,301	12,638	11,966	13,279	15,711	11,147	10,114
80%	7,835	9,138	12,159	12,794	17,750	14,906	11,958	10,551	12,233	13,960	9,780	9,218
90%	7,054	7,287	9,801	11,765	14,560	12,042	10,926	9,823	10,851	10,426	8,964	7,604
Long Term												
Full Simulation Period[a]	11,321	14,535	22,458	30,034	37,320	32,057	24,973	20,710	17,158	18,113	13,921	15,135
Water Year Types[b,c]												
Wet (32%)	14,276	18,111	25,645	48,304	56,161	48,925	40,279	33,406	24,000	19,624	16,478	21,465
Above Normal (15%)	12,444	16,320	22,905	36,313	43,185	42,470	27,398	23,370	16,743	21,725	17,016	20,960
Below Normal (17%)	12,311	15,483	25,759	22,142	32,912	22,289	19,420	16,193	14,491	21,189	15,633	12,623
Dry (22%)	8,173	11,869	21,558	16,291	23,237	20,402	14,659	12,093	14,146	16,533	10,090	9,497
Critical (15%)	7,362	7,896	12,607	13,993	16,897	13,976	11,337	8,738	10,378	10,010	9,036	6,986

Table 5B3-1-2b. Sacramento River Flow at Freeport, Alternative 1B 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,405	23,391	48,084	56,042	65,774	61,489	50,671	41,932	24,684	24,344	17,704	22,063
20%	14,311	14,966	33,003	49,615	55,898	48,167	40,751	31,736	19,032	23,337	17,221	21,511
30%	12,847	14,395	23,026	37,896	49,430	37,273	25,615	20,546	15,515	21,471	16,827	21,275
40%	12,177	13,643	18,209	26,215	42,998	31,324	22,903	17,075	15,159	20,467	16,450	20,130
50%	11,327	13,352	15,453	22,610	32,232	23,758	18,589	14,922	14,572	19,402	15,655	14,514
60%	10,430	12,825	14,970	18,498	25,186	20,510	15,523	13,550	14,067	17,705	14,202	11,804
70%	10,199	10,993	13,752	14,532	20,996	17,662	13,065	11,985	13,277	16,611	11,756	11,033
80%	9,030	10,155	11,923	12,740	17,517	14,613	12,076	10,637	12,191	14,501	11,260	10,203
90%	7,897	7,753	9,984	11,801	14,482	12,119	11,089	9,867	10,851	10,935	9,618	8,498
Long Term												
Full Simulation Period[a]	11,823	14,815	22,407	29,557	36,855	31,177	24,733	20,561	16,986	18,576	14,448	15,580
Water Year Types[b,c]												
Wet (32%)	14,192	17,818	25,689	47,787	55,675	48,325	39,568	33,146	23,690	19,558	16,399	21,489
Above Normal (15%)	12,584	16,346	22,882	35,468	42,649	41,116	27,316	23,210	16,428	21,798	16,995	21,092
Below Normal (17%)	12,852	16,186	25,683	21,665	32,208	21,076	19,257	16,045	14,263	21,471	16,245	13,093
Dry (22%)	9,363	12,864	21,551	15,970	22,843	19,286	14,746	12,056	14,169	17,789	11,530	10,425
Critical (15%)	8,421	8,104	12,287	13,735	16,723	13,707	11,380	8,672	10,424	11,027	9,955	7,903

Table 5B3-1-2c. Sacramento River Flow at Freeport, Alternative 1B 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	6	-755	-657	-2,373	-44	-272	-2,199	-1,585	-1,951	172	-68	0
20%	85	-602	181	-1,646	-1,288	-2,002	-6	-21	-1,061	32	37	65
30%	228	-4	97	-1,072	-521	-2,232	280	-374	-63	33	140	129
40%	65	29	-152	-97	-566	-1,551	44	-134	6	269	-4	-5
50%	408	92	-184	-310	-556	-1,585	38	-261	-59	193	326	229
60%	769	895	-275	-449	-508	-1,200	284	-22	-59	514	774	528
70%	1,393	1,115	-208	-118	-405	-639	428	18	-1	900	609	919
80%	1,194	1,016	-236	-54	-233	-293	118	86	-42	541	1,480	985
90%	843	466	183	36	-79	77	164	44	0	509	653	895
Long Term												
Full Simulation Period[a]	502	280	-51	-477	-465	-880	-240	-149	-171	463	527	445
Water Year Types[b,c]												
Wet (32%)	-84	-293	44	-517	-485	-600	-711	-260	-309	-66	-78	23
Above Normal (15%)	141	26	-24	-845	-537	-1,354	-82	-160	-315	74	-21	132
Below Normal (17%)	541	703	-76	-477	-704	-1,213	-163	-149	-228	281	613	470
Dry (22%)	1,190	995	-7	-321	-394	-1,116	88	-37	23	1,256	1,440	928
Critical (15%)	1,060	209	-320	-258	-174	-269	43	-66	46	1,017	919	917

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-1-3a. Sacramento River Flow at Freeport, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,399	24,146	48,741	58,415	65,818	61,761	52,870	43,518	26,635	24,173	17,772	22,063
20%	14,226	15,568	32,821	51,261	57,186	50,168	40,756	31,756	20,094	23,306	17,184	21,446
30%	12,620	14,399	22,929	38,967	49,951	39,506	25,336	20,921	15,578	21,438	16,687	21,146
40%	12,112	13,614	18,360	26,312	43,564	32,875	22,859	17,208	15,153	20,198	16,454	20,135
50%	10,919	13,259	15,637	22,920	32,788	25,343	18,551	15,183	14,631	19,209	15,330	14,285
60%	9,661	11,929	15,245	18,947	25,695	21,710	15,239	13,573	14,126	17,191	13,428	11,275
70%	8,806	9,878	13,960	14,650	21,401	18,301	12,638	11,966	13,279	15,711	11,147	10,114
80%	7,835	9,138	12,159	12,794	17,750	14,906	11,958	10,551	12,233	13,960	9,780	9,218
90%	7,054	7,287	9,801	11,765	14,560	12,042	10,926	9,823	10,851	10,426	8,964	7,604
Long Term												
Full Simulation Period[a]	11,321	14,535	22,458	30,034	37,320	32,057	24,973	20,710	17,158	18,113	13,921	15,135
Water Year Types[b,c]												
Wet (32%)	14,276	18,111	25,645	48,304	56,161	48,925	40,279	33,406	24,000	19,624	16,478	21,465
Above Normal (15%)	12,444	16,320	22,905	36,313	43,185	42,470	27,398	23,370	16,743	21,725	17,016	20,960
Below Normal (17%)	12,311	15,483	25,759	22,142	32,912	22,289	19,420	16,193	14,491	21,189	15,633	12,623
Dry (22%)	8,173	11,869	21,558	16,291	23,237	20,402	14,659	12,093	14,146	16,533	10,090	9,497
Critical (15%)	7,362	7,896	12,607	13,993	16,897	13,976	11,337	8,738	10,378	10,010	9,036	6,986

Table 5B3-1-3b. Sacramento River Flow at Freeport, Alternative 2 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,404	23,380	48,114	56,152	65,734	61,754	51,571	43,403	24,681	24,295	17,704	22,063
20%	14,344	14,966	32,861	49,627	56,189	49,093	40,754	31,728	19,032	23,338	17,225	21,512
30%	12,871	14,399	22,944	38,700	49,355	37,184	25,392	20,547	15,572	21,500	16,853	21,195
40%	12,203	13,612	18,100	25,889	42,877	31,335	22,896	17,073	15,165	20,380	16,450	20,146
50%	11,133	13,350	15,452	22,578	31,786	23,758	18,586	14,922	14,558	19,415	15,661	14,491
60%	10,504	12,592	14,973	18,471	25,187	20,568	15,523	13,551	14,124	17,487	14,198	11,746
70%	10,214	10,927	13,764	14,532	20,994	17,828	13,065	11,968	13,276	16,569	11,797	10,924
80%	8,598	9,564	11,830	12,741	17,503	14,613	11,982	10,637	12,191	14,386	10,996	10,221
90%	7,958	7,620	10,025	11,801	14,342	12,091	11,090	9,866	10,851	10,870	9,568	8,541
Long Term												
Full Simulation Period[a]	11,791	14,664	22,359	29,574	36,830	31,245	24,767	20,590	16,990	18,541	14,412	15,545
Water Year Types[b,c]												
Wet (32%)	14,201	17,821	25,634	47,863	55,722	48,483	39,715	33,229	23,725	19,559	16,441	21,489
Above Normal (15%)	12,513	16,282	22,724	35,378	42,624	41,083	27,273	23,209	16,419	21,793	16,996	21,033
Below Normal (17%)	12,957	15,954	25,595	21,664	32,068	21,077	19,243	16,044	14,284	21,470	16,197	12,984
Dry (22%)	9,175	12,406	21,609	15,987	22,780	19,364	14,729	12,060	14,119	17,675	11,453	10,449
Critical (15%)	8,414	8,090	12,250	13,756	16,732	13,739	11,373	8,684	10,428	10,963	9,792	7,813

Table 5B3-1-3c. Sacramento River Flow at Freeport, Alternative 2 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	5	-766	-627	-2,263	-84	-7	-1,299	-115	-1,954	122	-69	0
20%	119	-602	39	-1,634	-997	-1,075	-2	-28	-1,062	32	41	66
30%	251	0	15	-267	-596	-2,321	56	-374	-6	63	166	49
40%	91	-2	-260	-424	-687	-1,540	37	-135	11	182	-4	11
50%	215	90	-185	-342	-1,001	-1,585	34	-261	-73	206	332	206
60%	843	663	-272	-476	-508	-1,142	284	-22	-3	296	770	471
70%	1,408	1,050	-196	-117	-407	-473	428	2	-3	858	650	811
80%	763	425	-329	-53	-246	-293	25	86	-42	425	1,216	1,003
90%	903	333	224	36	-219	49	164	43	0	443	604	938
Long Term												
Full Simulation Period[a]	470	129	-99	-460	-490	-812	-206	-120	-168	428	492	410
Water Year Types[b,c]												
Wet (32%)	-76	-290	-10	-441	-438	-441	-564	-178	-275	-65	-37	24
Above Normal (15%)	69	-39	-181	-936	-562	-1,387	-125	-161	-324	68	-19	73
Below Normal (17%)	647	471	-164	-478	-844	-1,212	-176	-149	-206	281	564	362
Dry (22%)	1,002	537	51	-305	-457	-1,038	70	-32	-27	1,143	1,363	952
Critical (15%)	1,053	195	-357	-238	-165	-237	36	-54	51	953	756	827

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-1-4a. Sacramento River Flow at Freeport, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,399	24,146	48,741	58,415	65,818	61,761	52,870	43,518	26,635	24,173	17,772	22,063
20%	14,226	15,568	32,821	51,261	57,186	50,168	40,756	31,756	20,094	23,306	17,184	21,446
30%	12,620	14,399	22,929	38,967	49,951	39,506	25,336	20,921	15,578	21,438	16,687	21,146
40%	12,112	13,614	18,360	26,312	43,564	32,875	22,859	17,208	15,153	20,198	16,454	20,135
50%	10,919	13,259	15,637	22,920	32,788	25,343	18,551	15,183	14,631	19,209	15,330	14,285
60%	9,661	11,929	15,245	18,947	25,695	21,710	15,239	13,573	14,126	17,191	13,428	11,275
70%	8,806	9,878	13,960	14,650	21,401	18,301	12,638	11,966	13,279	15,711	11,147	10,114
80%	7,835	9,138	12,159	12,794	17,750	14,906	11,958	10,551	12,233	13,960	9,780	9,218
90%	7,054	7,287	9,801	11,765	14,560	12,042	10,926	9,823	10,851	10,426	8,964	7,604
Long Term												
Full Simulation Period[a]	11,321	14,535	22,458	30,034	37,320	32,057	24,973	20,710	17,158	18,113	13,921	15,135
Water Year Types[b,c]												
Wet (32%)	14,276	18,111	25,645	48,304	56,161	48,925	40,279	33,406	24,000	19,624	16,478	21,465
Above Normal (15%)	12,444	16,320	22,905	36,313	43,185	42,470	27,398	23,370	16,743	21,725	17,016	20,960
Below Normal (17%)	12,311	15,483	25,759	22,142	32,912	22,289	19,420	16,193	14,491	21,189	15,633	12,623
Dry (22%)	8,173	11,869	21,558	16,291	23,237	20,402	14,659	12,093	14,146	16,533	10,090	9,497
Critical (15%)	7,362	7,896	12,607	13,993	16,897	13,976	11,337	8,738	10,378	10,010	9,036	6,986

Table 5B3-1-4b. Sacramento River Flow at Freeport, Alternative 3 020121, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,460	23,379	48,219	56,055	65,776	59,937	50,099	41,951	24,687	24,444	17,704	22,064
20%	14,645	15,014	33,806	49,597	56,356	48,134	40,752	31,746	19,037	23,352	17,274	21,515
30%	13,096	14,407	23,405	37,896	48,703	37,277	25,616	20,548	15,421	21,611	16,772	21,228
40%	12,198	13,646	19,109	26,280	44,302	31,336	22,908	17,196	15,098	20,514	16,461	20,368
50%	11,217	13,295	15,589	22,588	32,300	23,758	18,591	14,872	14,578	19,425	15,579	14,549
60%	10,551	12,229	15,159	18,563	25,180	20,511	15,436	13,551	14,128	17,626	14,228	12,080
70%	10,212	10,921	13,753	14,590	21,010	17,977	13,066	11,951	13,371	16,744	11,789	10,688
80%	8,509	9,814	11,921	12,759	17,451	14,594	12,099	10,636	12,253	14,181	10,636	10,099
90%	7,754	8,062	9,884	11,802	14,161	12,121	11,187	9,788	10,851	11,002	9,322	8,407
Long Term												
Full Simulation Period[a]	11,848	14,804	22,550	29,609	36,913	31,150	24,715	20,527	16,972	18,584	14,383	15,546
Water Year Types[b,c]												
Wet (32%)	14,216	17,819	25,684	47,860	55,714	48,138	39,483	33,047	23,651	19,564	16,387	21,423
Above Normal (15%)	13,031	16,561	23,072	35,499	43,025	41,017	27,322	23,209	16,433	21,892	16,998	21,393
Below Normal (17%)	13,097	16,254	26,015	21,713	32,265	21,056	19,297	16,108	14,253	21,531	16,212	13,144
Dry (22%)	9,328	12,586	21,873	16,057	22,867	19,447	14,755	12,015	14,191	17,763	11,239	10,296
Critical (15%)	7,861	8,152	12,209	13,713	16,557	13,808	11,374	8,644	10,384	10,947	10,008	7,645

Table 5B3-1-4c. Sacramento River Flow at Freeport, Alternative 3 020121 minus No Action Alternative 011221, Monthly Flow (cfs)

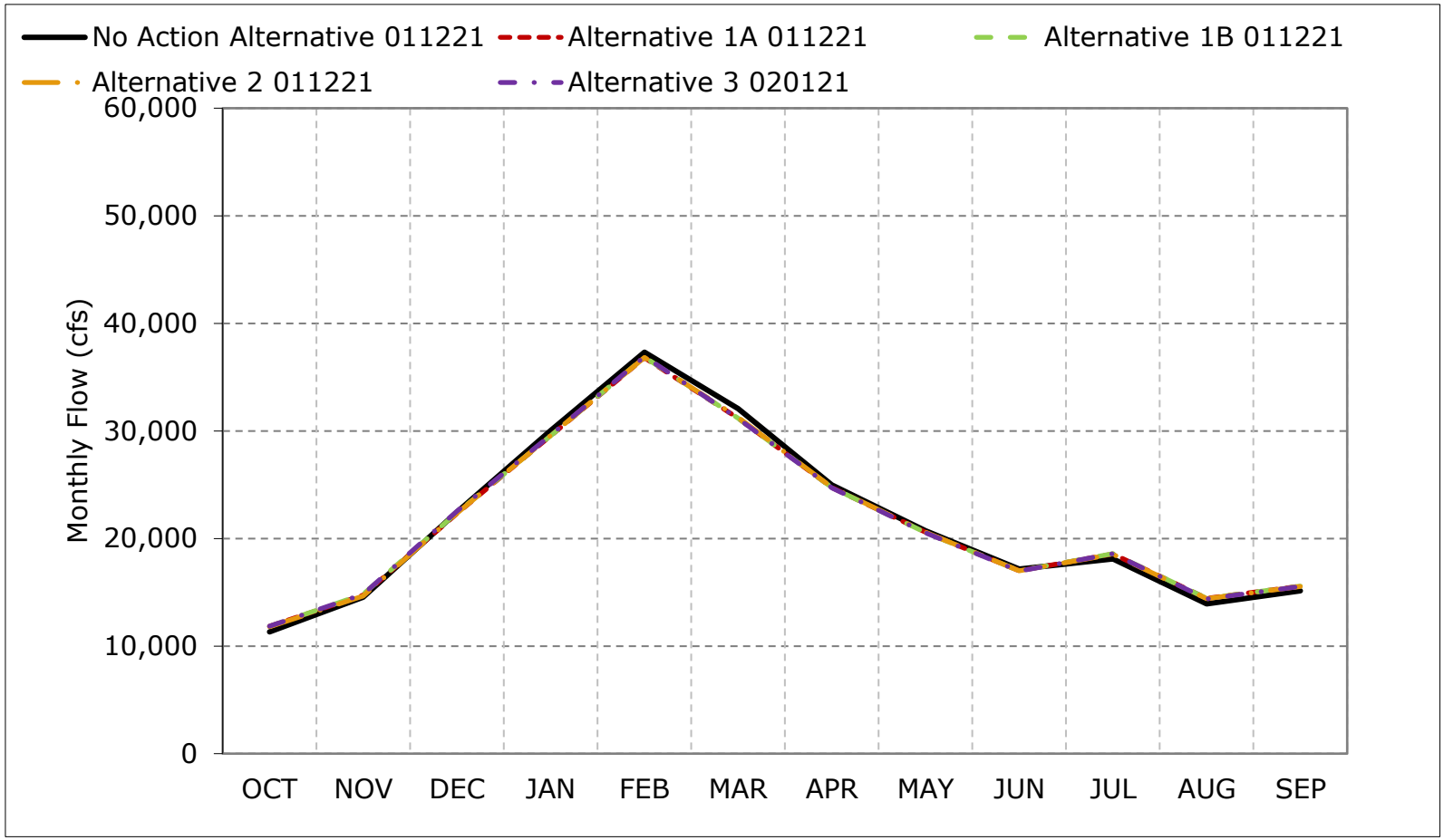
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	61	-766	-523	-2,359	-42	-1,824	-2,771	-1,567	-1,948	272	-68	2
20%	419	-554	985	-1,663	-830	-2,035	-4	-11	-1,057	46	89	69
30%	477	8	475	-1,071	-1,248	-2,229	280	-373	-157	174	85	82
40%	86	32	748	-32	738	-1,539	49	-12	-55	315	6	232
50%	298	36	-47	-332	-487	-1,585	40	-311	-52	216	249	264
60%	889	300	-86	-384	-515	-1,199	197	-22	2	435	799	805
70%	1,405	1,044	-207	-60	-391	-324	428	-15	92	1,033	642	575
80%	673	676	-238	-34	-299	-312	141	85	20	221	856	881
90%	699	775	83	36	-400	79	262	-36	0	575	357	804
Long Term												
Full Simulation Period[a]	527	269	92	-426	-407	-907	-258	-183	-185	471	462	411
Water Year Types[b,c]												
Wet (32%)	-61	-292	40	-444	-447	-786	-796	-360	-349	-60	-90	-42
Above Normal (15%)	587	241	167	-814	-160	-1,452	-76	-162	-310	167	-18	433
Below Normal (17%)	786	772	256	-429	-647	-1,233	-123	-85	-237	342	580	521
Dry (22%)	1,154	717	316	-235	-370	-955	96	-78	46	1,230	1,149	800
Critical (15%)	499	256	-398	-280	-340	-168	37	-94	7	937	972	659

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

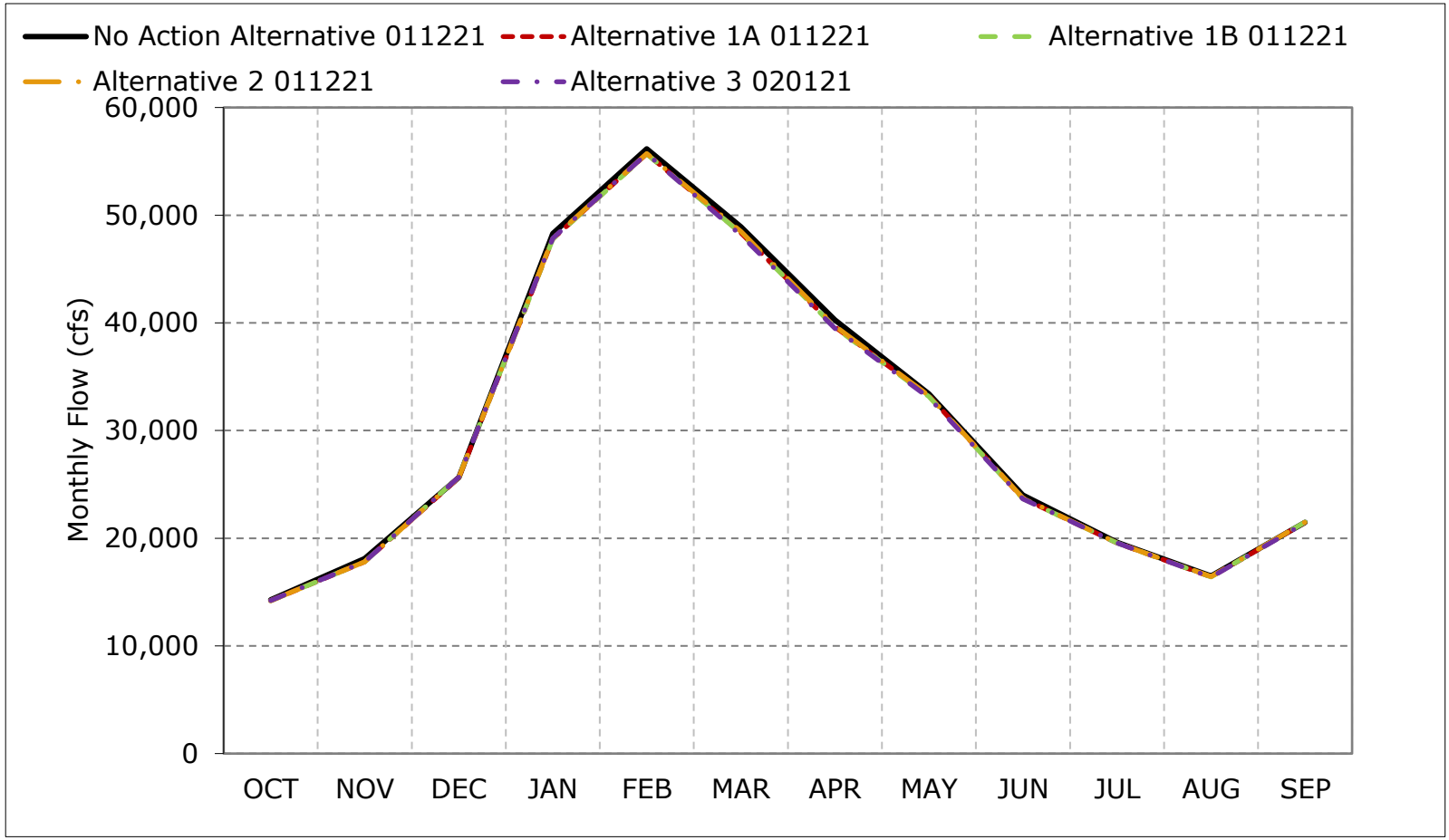
c These results are displayed with calendar year - year type sorting.

Figure 5B3-1-1. Sacramento River Flow at Freeport, Long-Term Average Flow



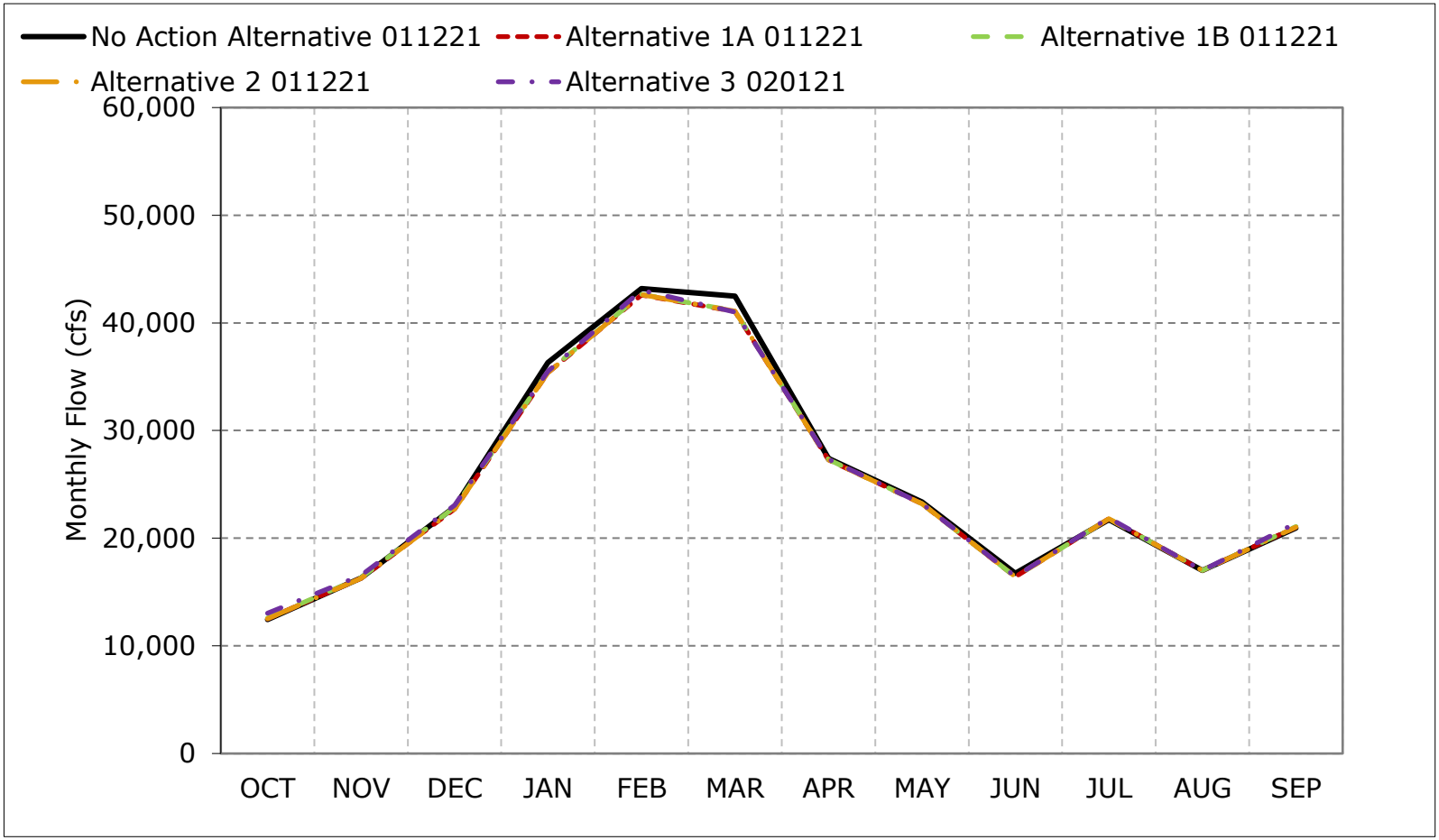
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-1-2. Sacramento River Flow at Freeport, Wet Year Average Flow



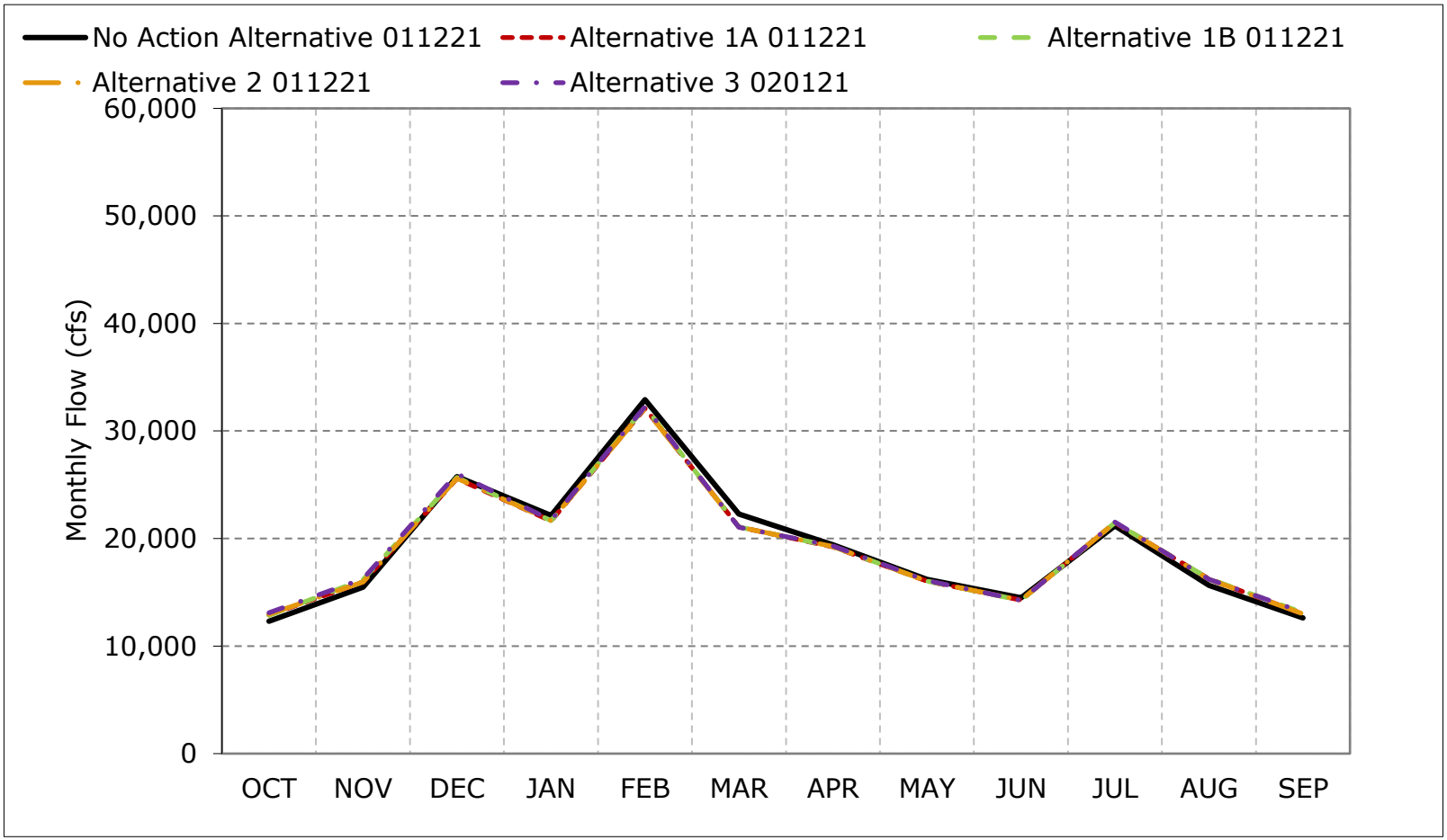
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-1-3. Sacramento River Flow at Freeport, Above Normal Year Average Flow



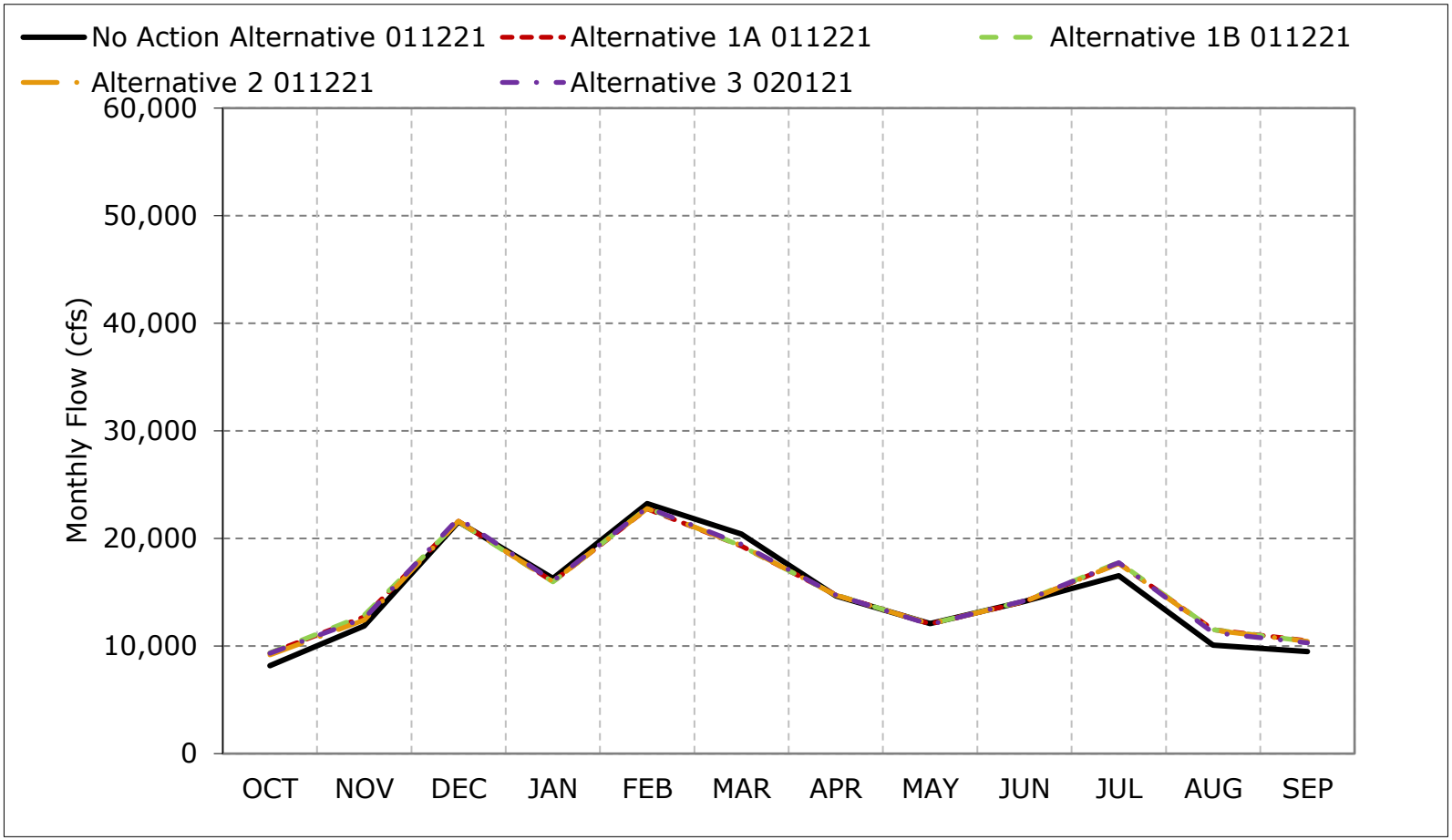
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-1-4. Sacramento River Flow at Freeport, Below Normal Year Average Flow



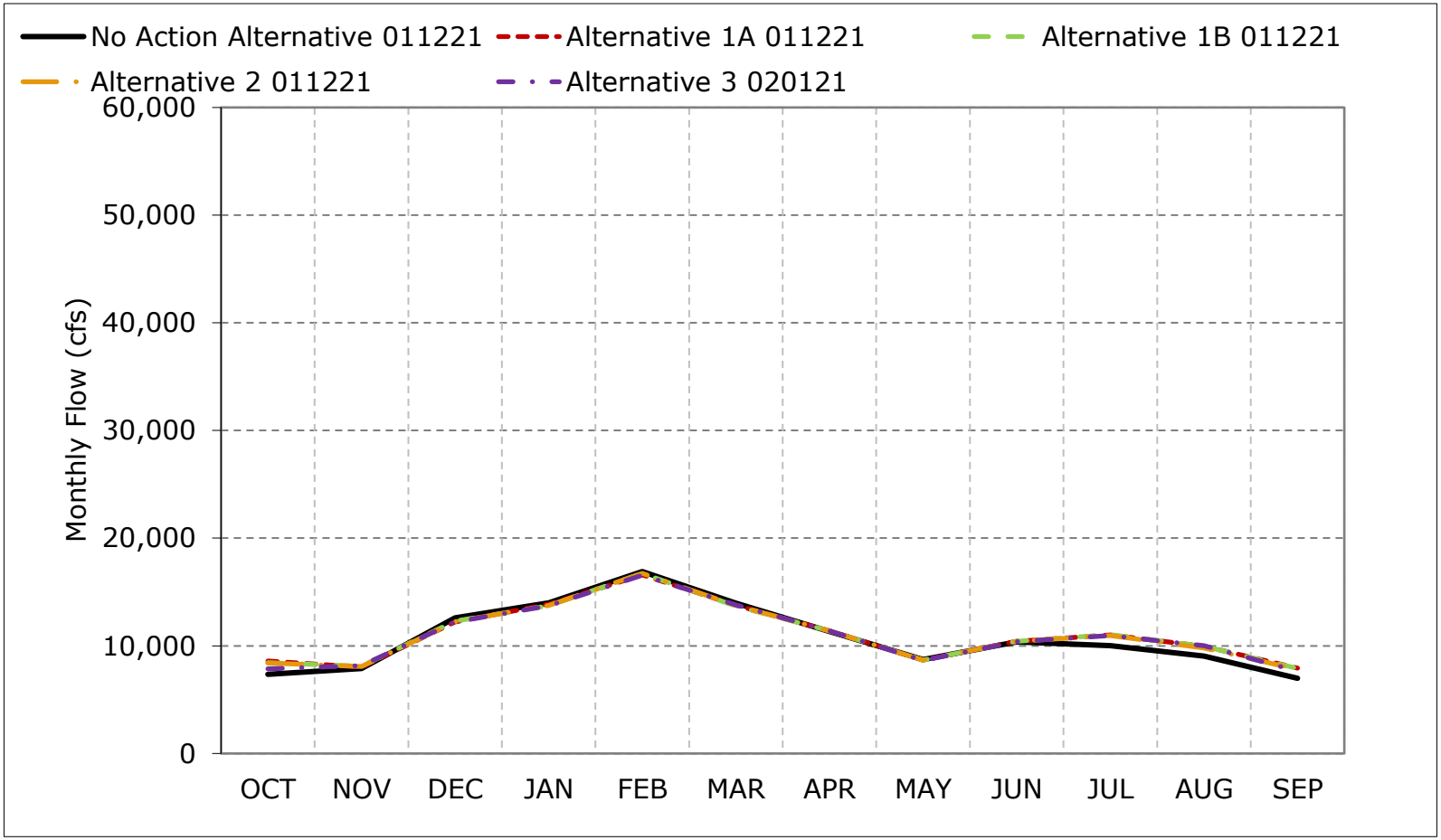
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-1-5. Sacramento River Flow at Freeport, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-1-6. Sacramento River Flow at Freeport, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-1-7. Sacramento River Flow at Freeport, October

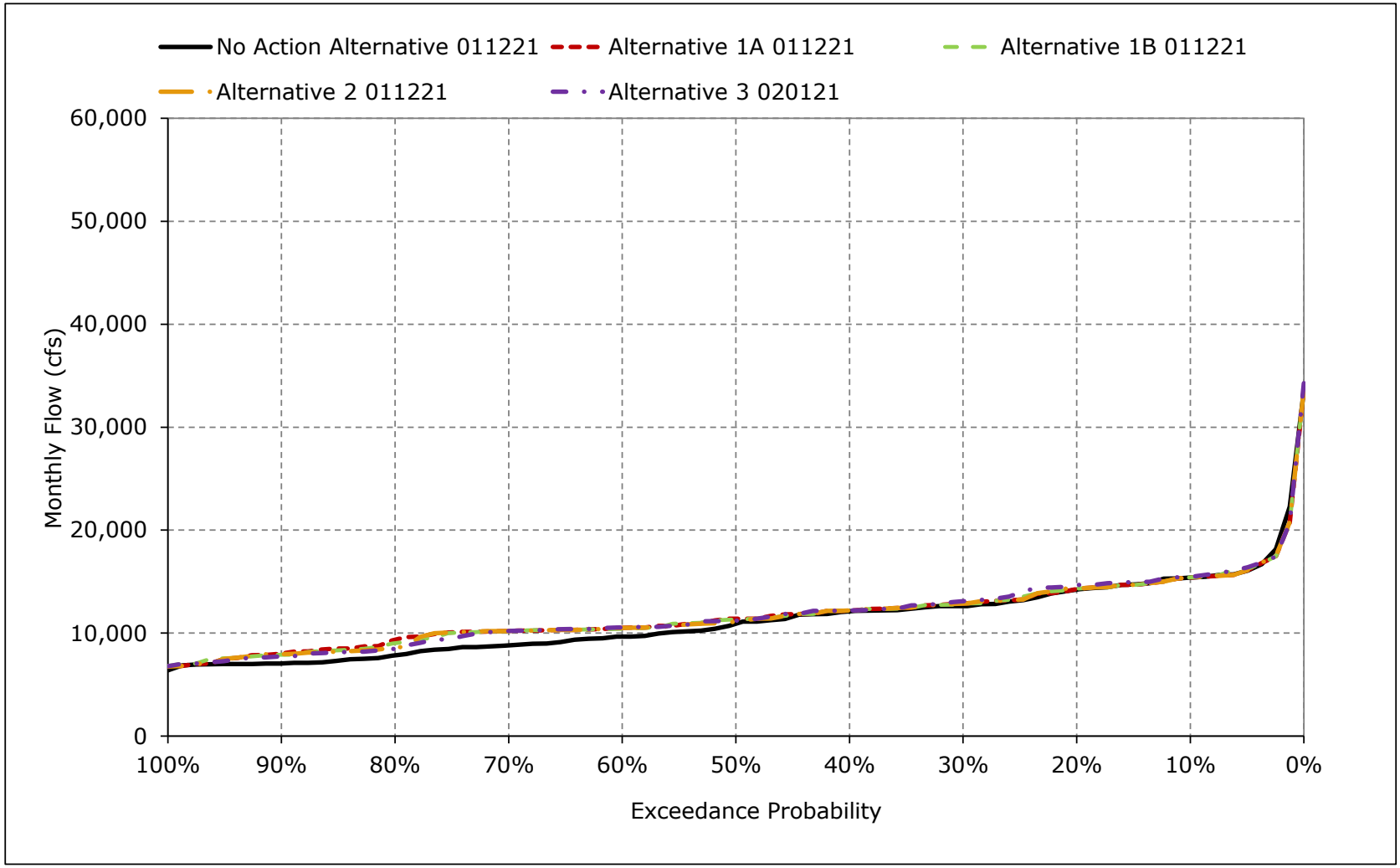


Figure 5B3-1-8. Sacramento River Flow at Freeport, November

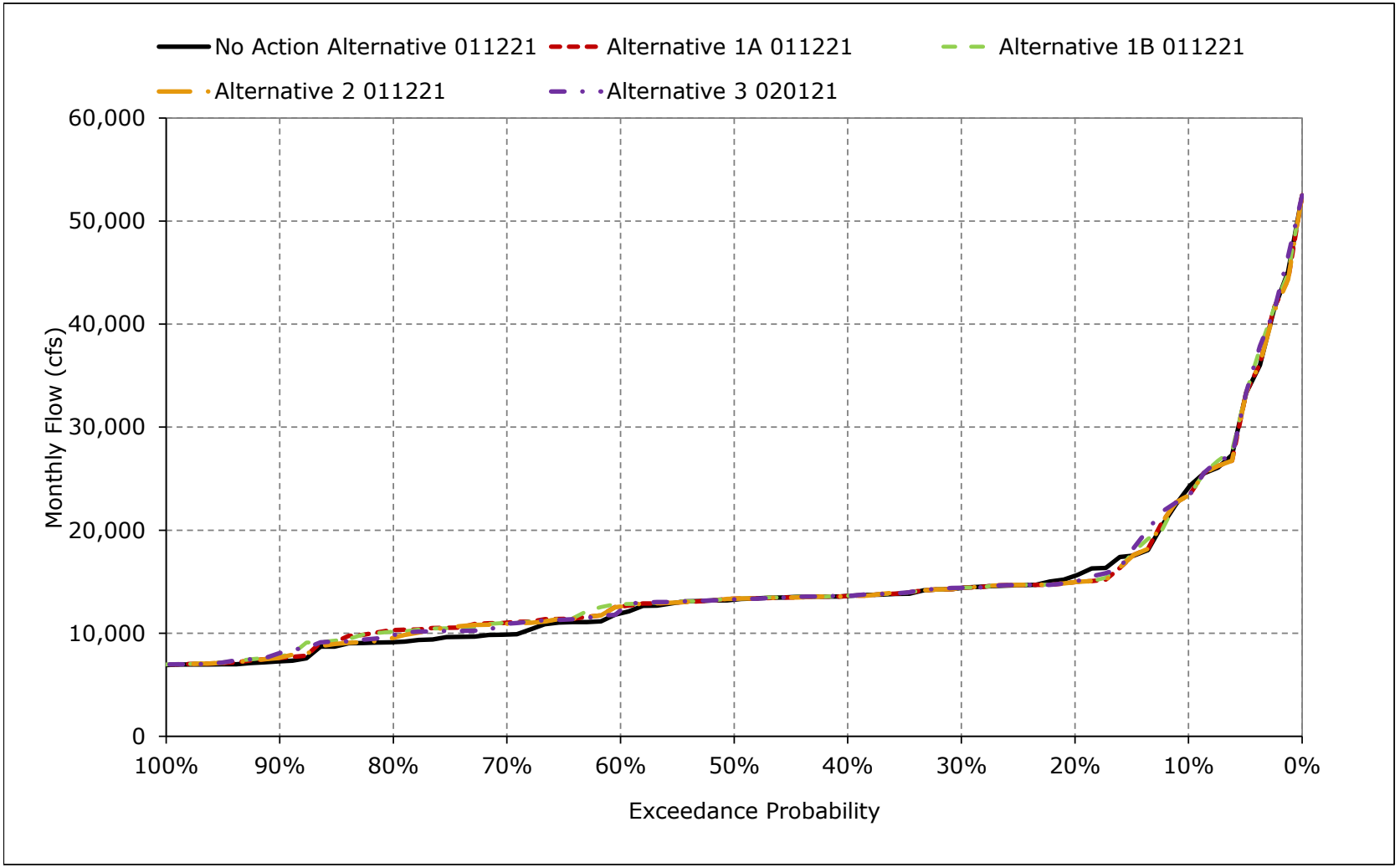


Figure 5B3-1-9. Sacramento River Flow at Freeport, December

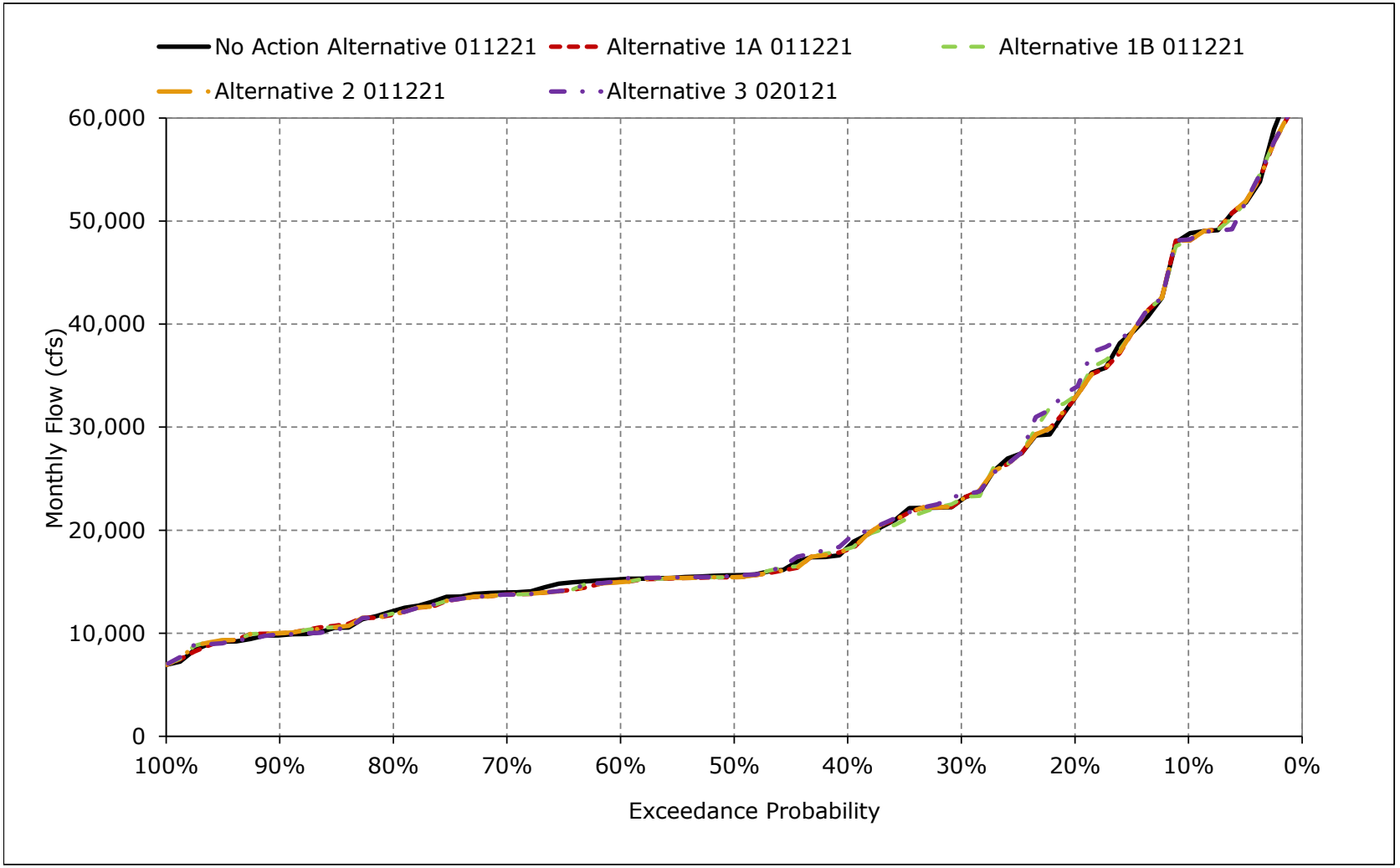


Figure 5B3-1-10. Sacramento River Flow at Freeport, January

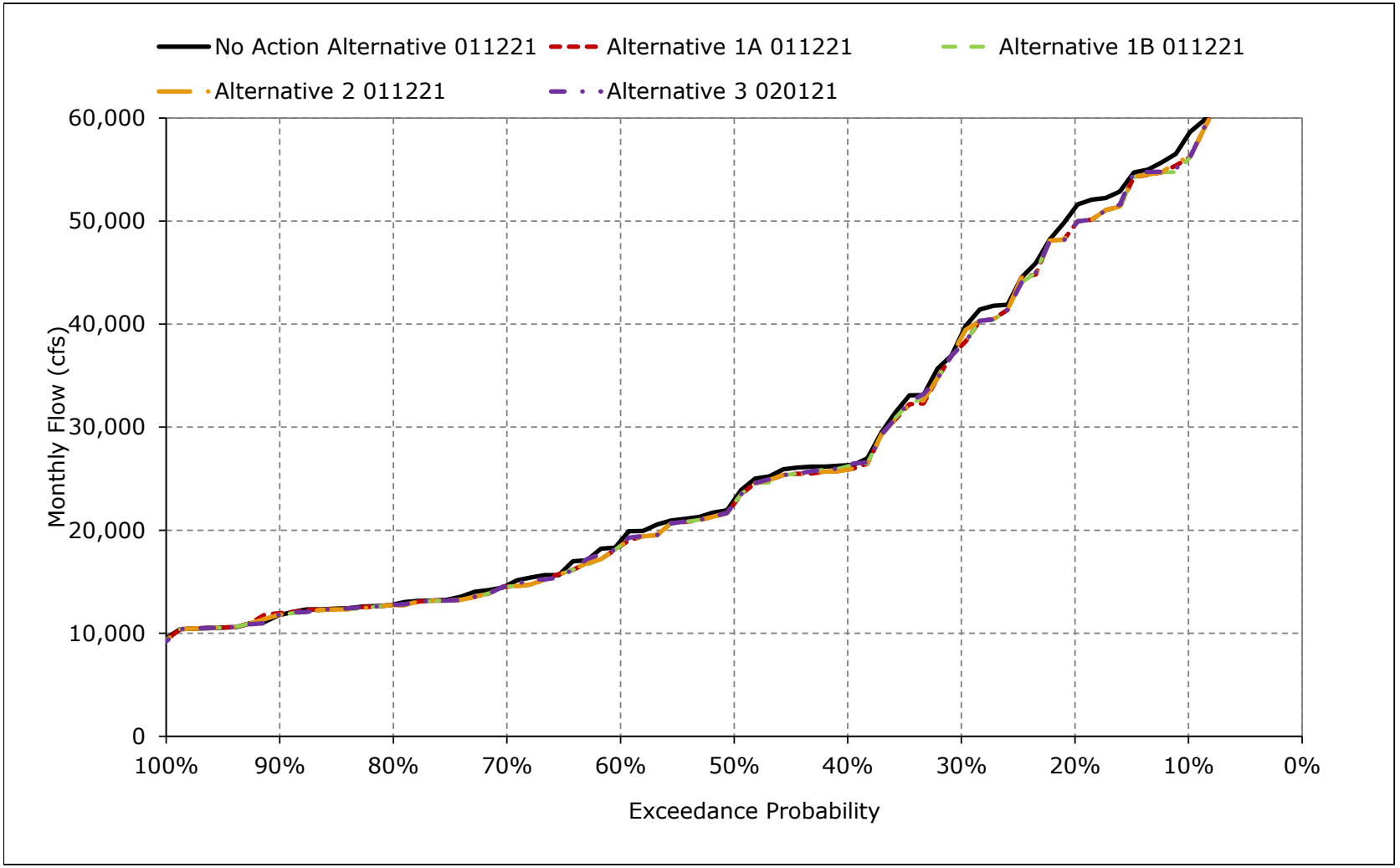


Figure 5B3-1-11. Sacramento River Flow at Freeport, February

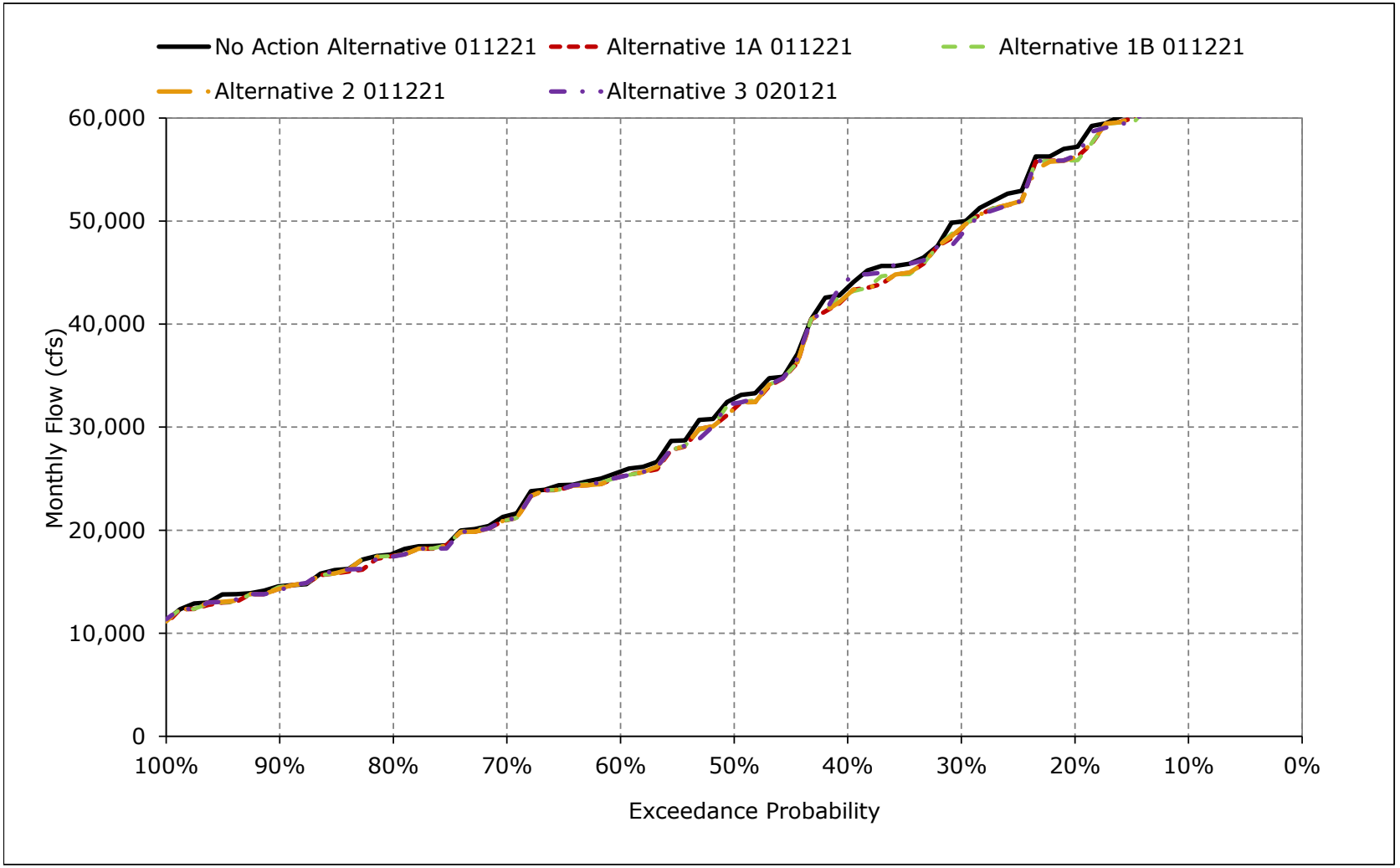


Figure 5B3-1-12. Sacramento River Flow at Freeport, March

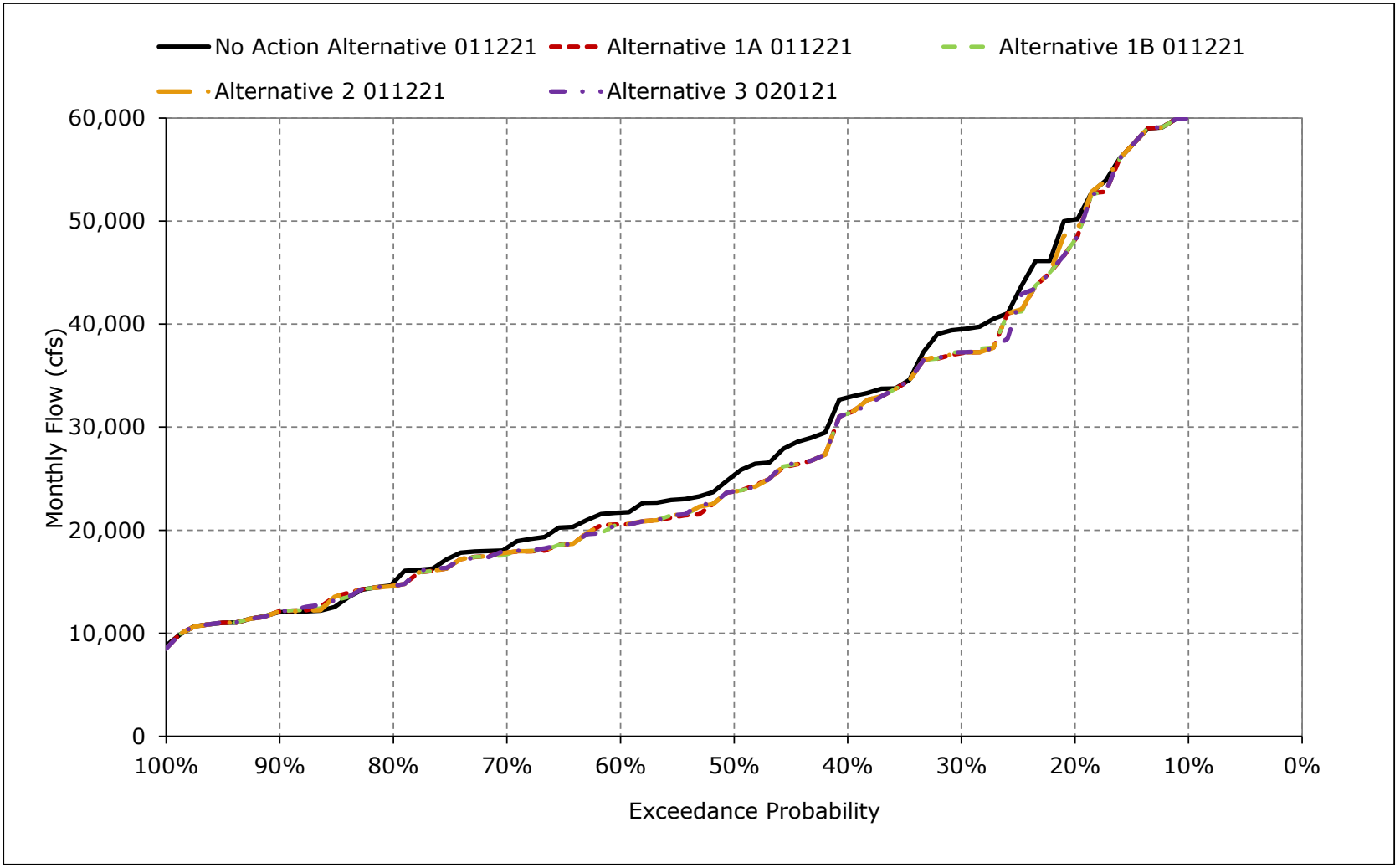


Figure 5B3-1-13. Sacramento River Flow at Freeport, April

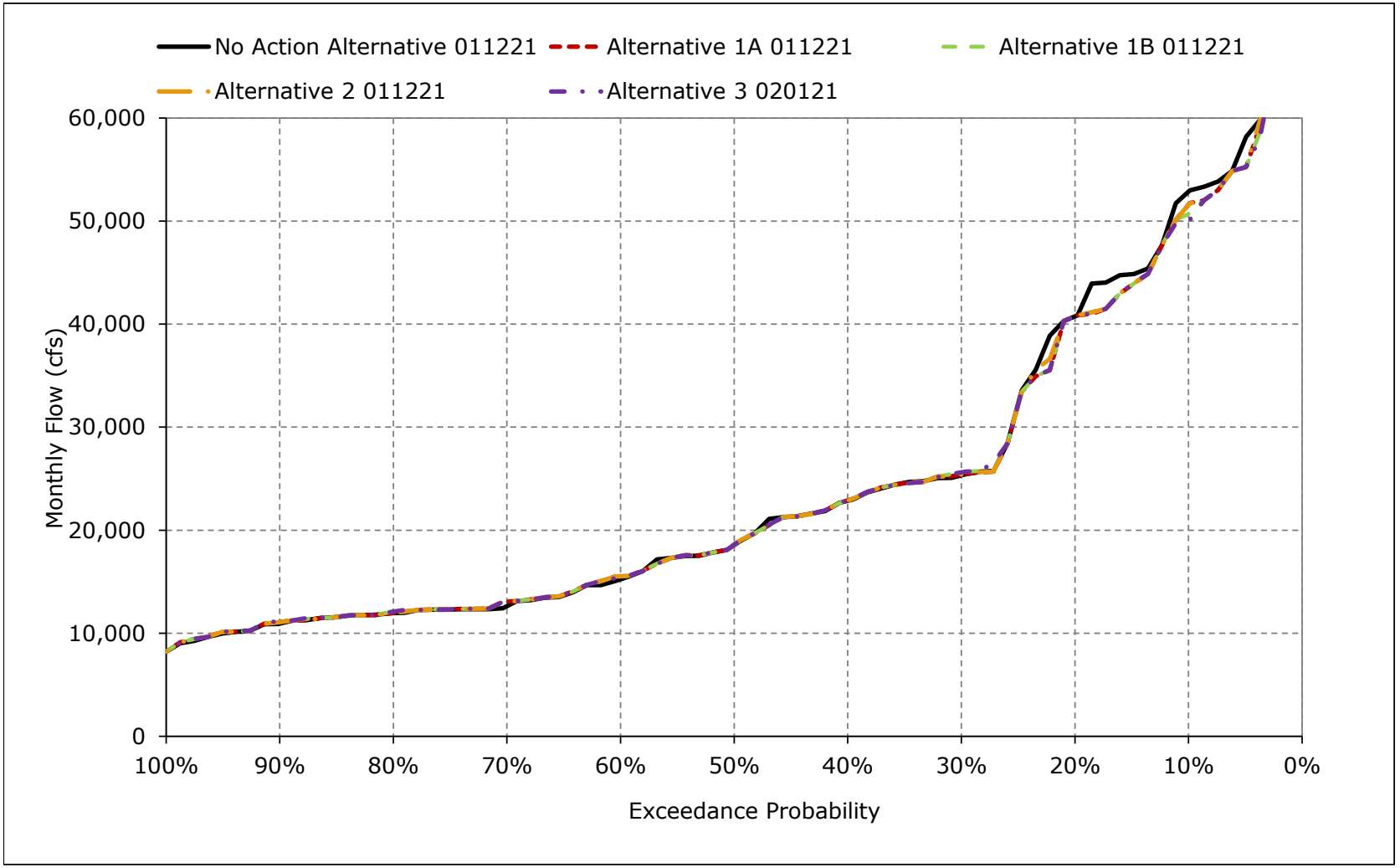


Figure 5B3-1-14. Sacramento River Flow at Freeport, May

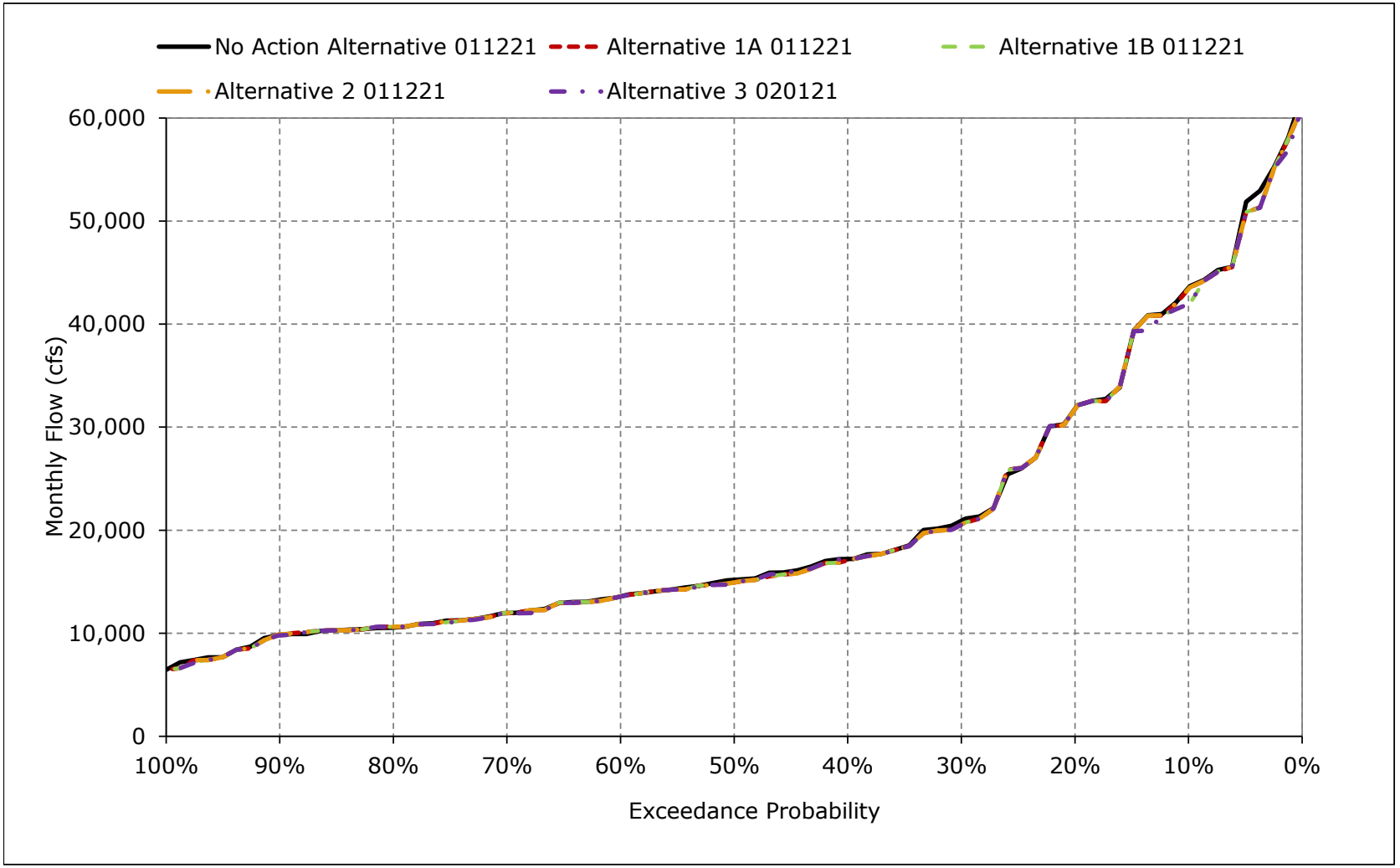


Figure 5B3-1-15. Sacramento River Flow at Freeport, June

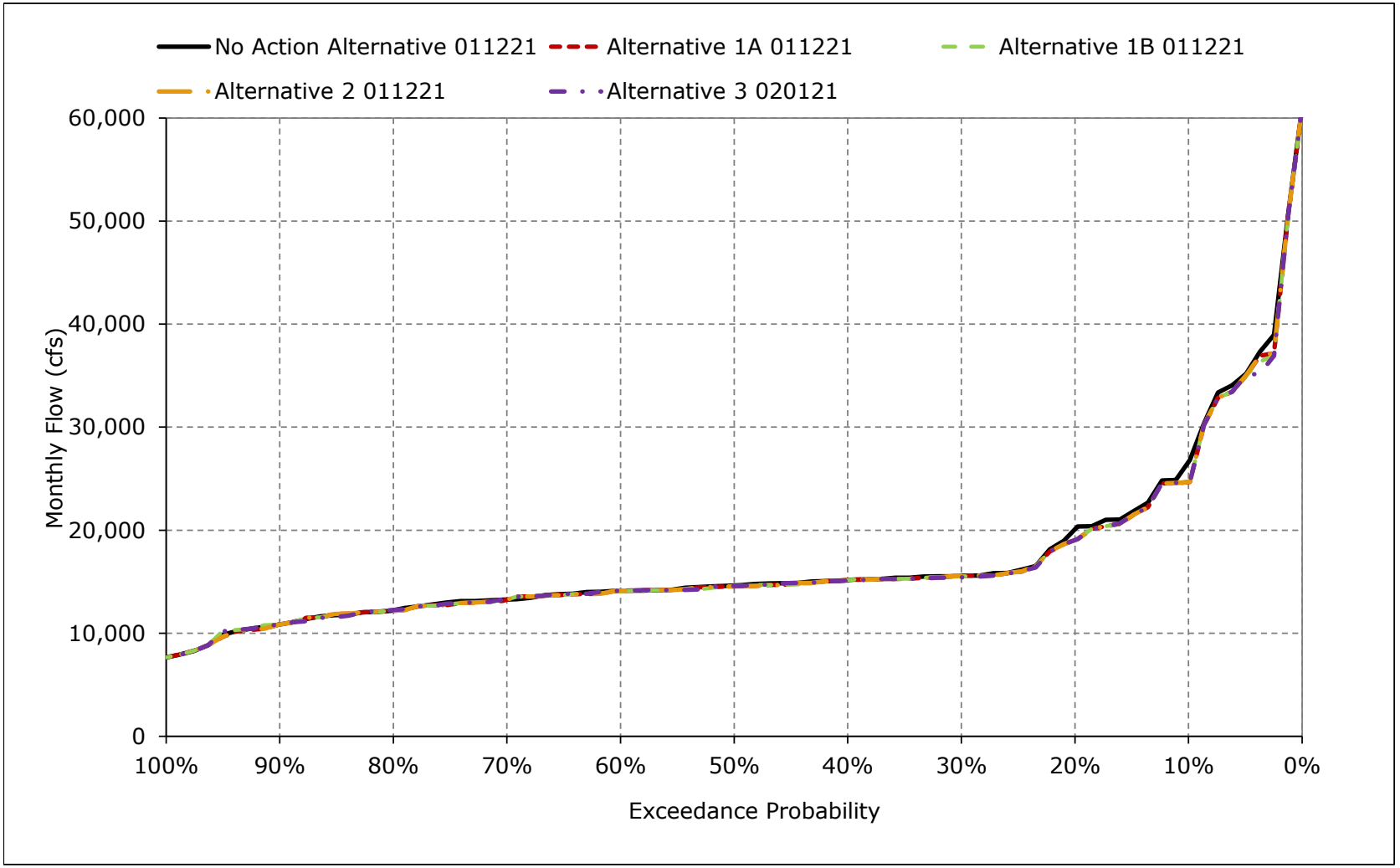


Figure 5B3-1-16. Sacramento River Flow at Freeport, July

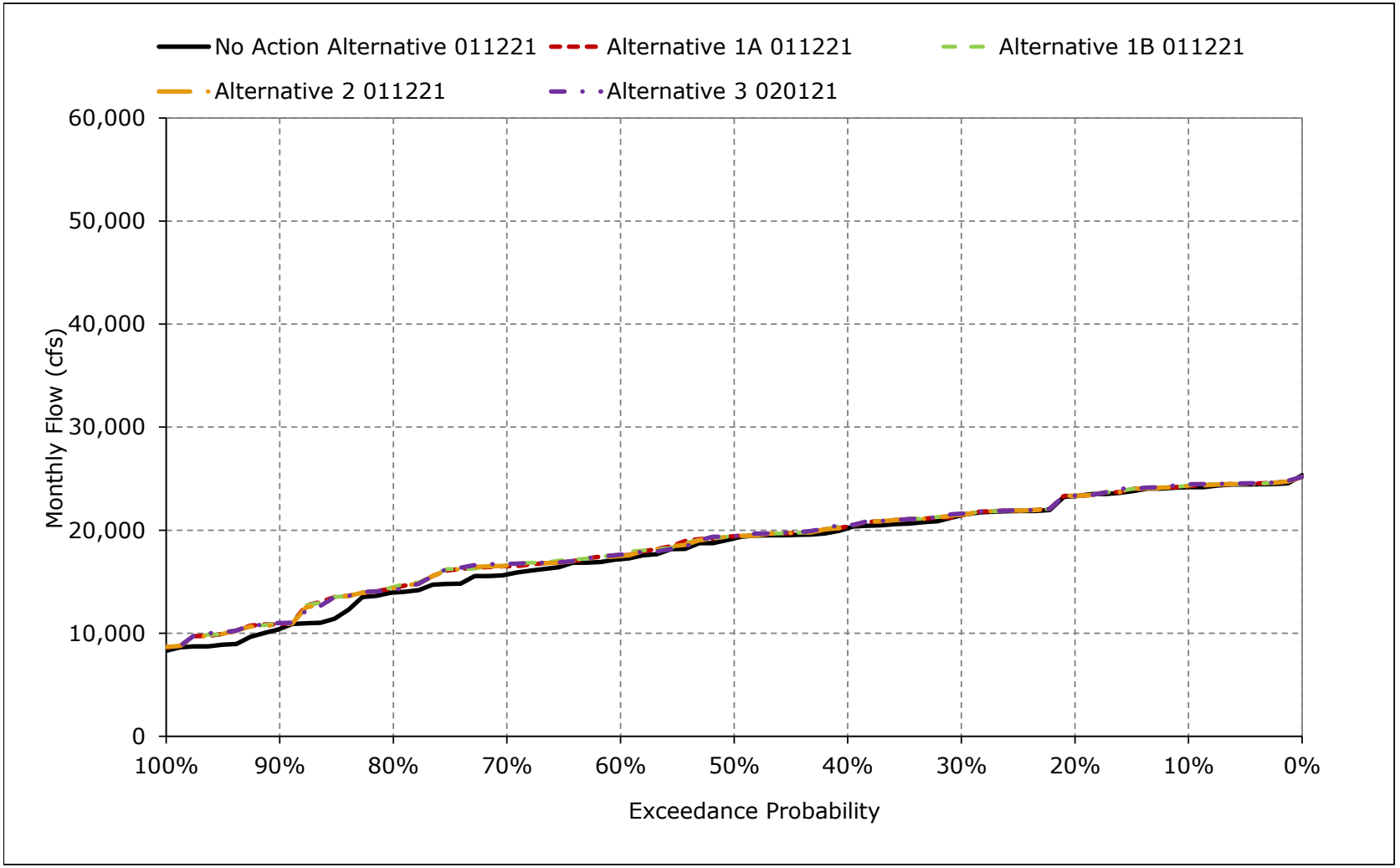


Figure 5B3-1-17. Sacramento River Flow at Freeport, August

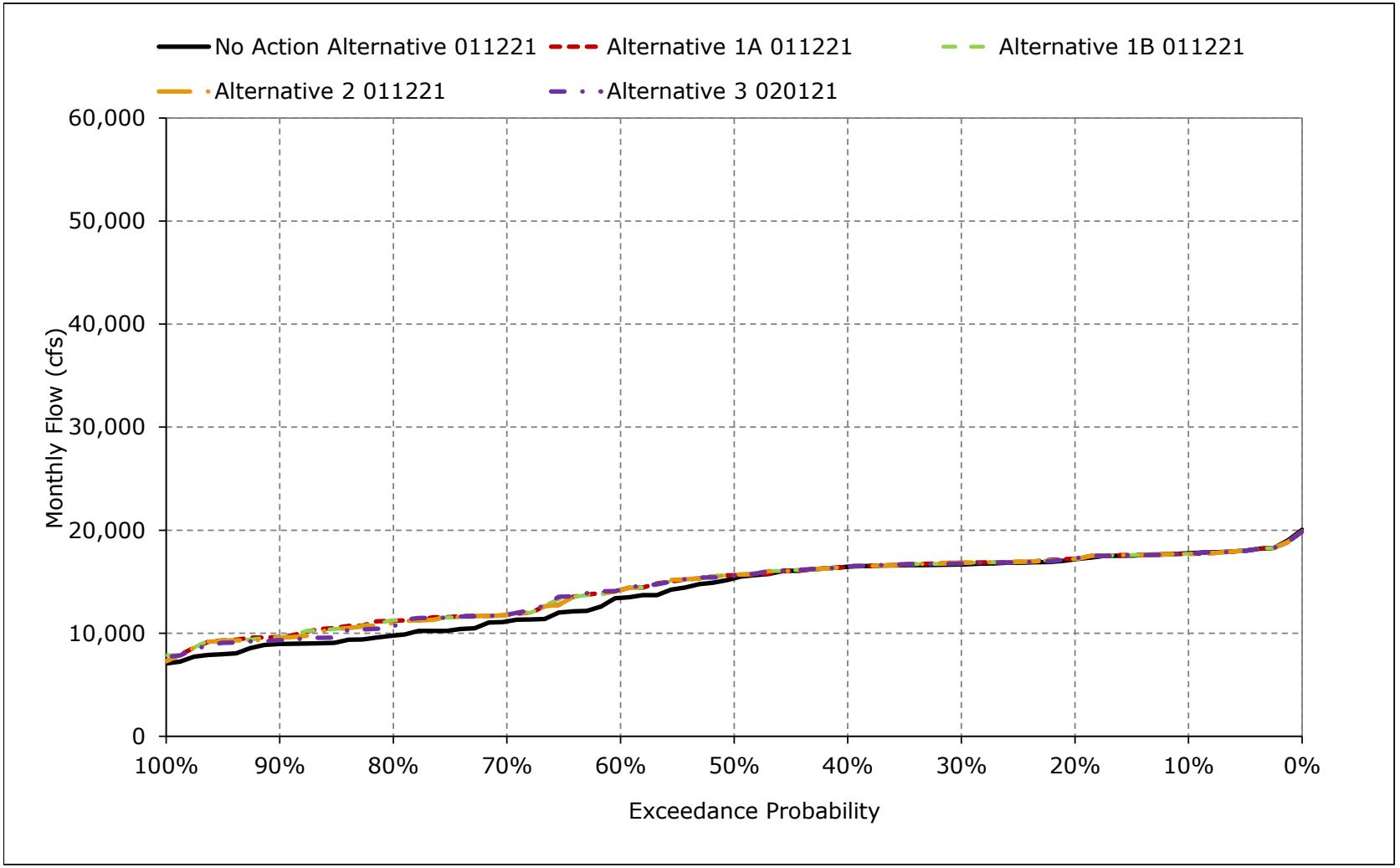


Figure 5B3-1-18. Sacramento River Flow at Freeport, September

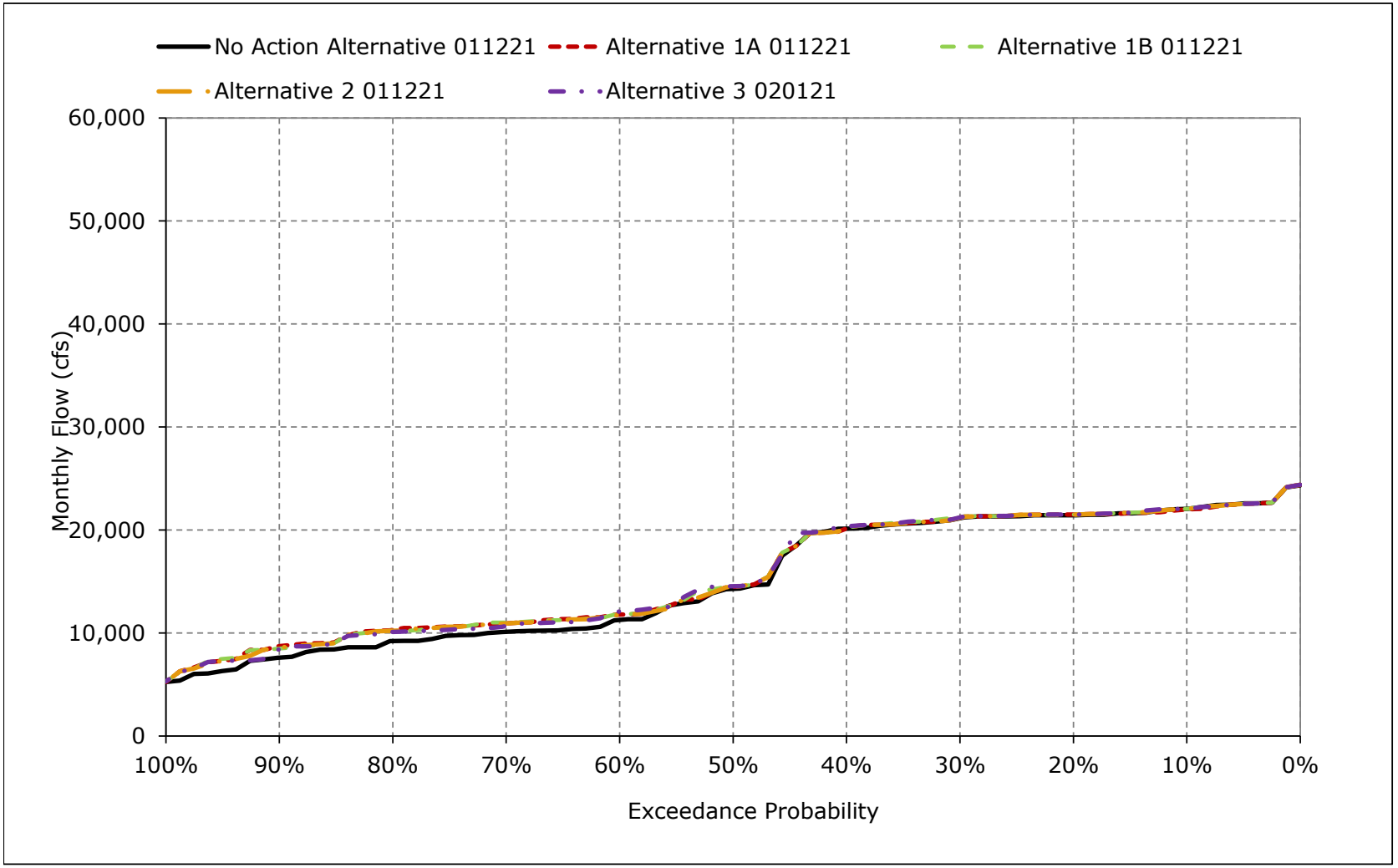


Table 5B3-2-1a. DCC Flow, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,153	1,656	1,006	0	0	0	0	0	3,038	4,496	3,310	4,128
20%	1,954	1,595	879	0	0	0	0	0	2,487	4,281	3,194	4,012
30%	1,739	1,397	768	0	0	0	0	0	2,414	3,925	3,100	3,956
40%	1,601	1,162	634	0	0	0	0	0	2,328	3,685	3,054	3,763
50%	1,456	1,041	416	0	0	0	0	0	2,244	3,506	2,843	2,659
60%	1,354	857	0	0	0	0	0	0	2,104	3,147	2,480	2,084
70%	1,273	734	0	0	0	0	0	0	1,919	2,878	2,050	1,862
80%	749	195	0	0	0	0	0	0	1,684	2,521	1,789	1,692
90%	442	0	0	0	0	0	0	0	119	1,819	1,636	1,387
Long Term												
Full Simulation Period[a]	1,383	949	431	0	0	0	0	0	2,062	3,298	2,575	2,738
Water Year Types[b,c]												
Wet (32%)	1,243	1,076	517	0	0	0	0	0	2,078	3,461	3,060	4,016
Above Normal (15%)	1,873	1,146	418	0	0	0	0	0	1,871	4,042	3,163	3,920
Below Normal (17%)	1,594	802	370	0	0	0	0	0	2,315	3,939	2,900	2,340
Dry (22%)	1,148	817	357	0	0	0	0	0	2,256	3,056	1,849	1,747
Critical (15%)	1,306	849	443	0	0	0	0	0	1,634	1,813	1,649	737

Table 5B3-2-1b. DCC Flow, Alternative 1A 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,186	1,667	1,016	0	0	0	0	0	3,073	4,529	3,297	4,118
20%	1,977	1,596	875	0	0	0	0	0	2,492	4,345	3,204	4,023
30%	1,900	1,442	803	0	0	0	0	0	2,426	3,987	3,132	3,968
40%	1,816	1,320	727	0	0	0	0	0	2,324	3,786	3,055	3,765
50%	1,584	1,133	485	0	0	0	0	0	2,254	3,604	2,899	2,697
60%	1,467	897	0	0	0	0	0	0	2,121	3,254	2,628	2,181
70%	1,310	757	0	0	0	0	0	0	1,930	3,054	2,173	2,017
80%	839	422	0	0	0	0	0	0	1,715	2,653	2,063	1,901
90%	508	0	0	0	0	0	0	0	1,193	1,978	1,765	1,601
Long Term												
Full Simulation Period[a]	1,471	1,000	446	0	0	0	0	0	2,095	3,438	2,675	2,823
Water Year Types[b,c]												
Wet (32%)	1,282	1,158	531	0	0	0	0	0	2,053	3,630	3,046	4,015
Above Normal (15%)	1,862	1,151	443	0	0	0	0	0	2,187	4,054	3,159	3,933
Below Normal (17%)	1,707	809	374	0	0	0	0	0	2,281	3,992	3,015	2,411
Dry (22%)	1,285	881	367	0	0	0	0	0	2,252	3,276	2,119	1,938
Critical (15%)	1,491	911	464	0	0	0	0	0	1,642	2,004	1,823	940

Table 5B3-2-1c. DCC Flow, Alternative 1A 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	34	12	10	0	0	0	0	0	35	33	-13	-11
20%	23	1	-4	0	0	0	0	0	5	64	10	11
30%	161	45	36	0	0	0	0	0	11	62	31	12
40%	215	158	93	0	0	0	0	0	-5	101	0	1
50%	129	92	69	0	0	0	0	0	10	98	56	38
60%	113	40	0	0	0	0	0	0	17	108	147	97
70%	37	23	0	0	0	0	0	0	11	176	123	155
80%	90	226	0	0	0	0	0	0	31	132	274	209
90%	66	0	0	0	0	0	0	0	1,074	158	129	215
Long Term												
Full Simulation Period[a]	87	51	14	0	0	0	0	0	33	141	99	85
Water Year Types[b,c]												
Wet (32%)	39	81	14	0	0	0	0	0	-25	169	-14	-1
Above Normal (15%)	-11	6	24	0	0	0	0	0	316	13	-4	14
Below Normal (17%)	113	7	4	0	0	0	0	0	-34	53	116	71
Dry (22%)	137	64	10	0	0	0	0	0	-4	220	270	191
Critical (15%)	186	62	21	0	0	0	0	0	8	191	174	203

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-2-2a. DCC Flow, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,153	1,656	1,006	0	0	0	0	0	3,038	4,496	3,310	4,128
20%	1,954	1,595	879	0	0	0	0	0	2,487	4,281	3,194	4,012
30%	1,739	1,397	768	0	0	0	0	0	2,414	3,925	3,100	3,956
40%	1,601	1,162	634	0	0	0	0	0	2,328	3,685	3,054	3,763
50%	1,456	1,041	416	0	0	0	0	0	2,244	3,506	2,843	2,659
60%	1,354	857	0	0	0	0	0	0	2,104	3,147	2,480	2,084
70%	1,273	734	0	0	0	0	0	0	1,919	2,878	2,050	1,862
80%	749	195	0	0	0	0	0	0	1,684	2,521	1,789	1,692
90%	442	0	0	0	0	0	0	0	119	1,819	1,636	1,387
Long Term												
Full Simulation Period[a]	1,383	949	431	0	0	0	0	0	2,062	3,298	2,575	2,738
Water Year Types[b,c]												
Wet (32%)	1,243	1,076	517	0	0	0	0	0	2,078	3,461	3,060	4,016
Above Normal (15%)	1,873	1,146	418	0	0	0	0	0	1,871	4,042	3,163	3,920
Below Normal (17%)	1,594	802	370	0	0	0	0	0	2,315	3,939	2,900	2,340
Dry (22%)	1,148	817	357	0	0	0	0	0	2,256	3,056	1,849	1,747
Critical (15%)	1,306	849	443	0	0	0	0	0	1,634	1,813	1,649	737

Table 5B3-2-2b. DCC Flow, Alternative 1B 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,189	1,678	1,016	0	0	0	0	0	3,073	4,536	3,297	4,128
20%	1,970	1,596	883	0	0	0	0	0	2,483	4,347	3,201	4,023
30%	1,887	1,443	805	0	0	0	0	0	2,425	3,991	3,128	3,978
40%	1,782	1,291	726	0	0	0	0	0	2,327	3,802	3,055	3,762
50%	1,566	1,121	489	0	0	0	0	0	2,246	3,602	2,905	2,701
60%	1,498	926	0	0	0	0	0	0	2,121	3,278	2,628	2,183
70%	1,368	794	0	0	0	0	0	0	1,930	3,072	2,165	2,036
80%	853	469	0	0	0	0	0	0	1,715	2,675	2,071	1,881
90%	438	0	0	0	0	0	0	0	1,193	1,990	1,759	1,556
Long Term												
Full Simulation Period[a]	1,464	1,010	445	0	0	0	0	0	2,096	3,443	2,675	2,806
Water Year Types[b,c]												
Wet (32%)	1,288	1,158	529	0	0	0	0	0	2,053	3,631	3,045	4,020
Above Normal (15%)	1,863	1,154	443	0	0	0	0	0	2,188	4,056	3,159	3,945
Below Normal (17%)	1,666	795	375	0	0	0	0	0	2,277	3,993	3,016	2,429
Dry (22%)	1,288	928	367	0	0	0	0	0	2,260	3,294	2,122	1,923
Critical (15%)	1,475	918	461	0	0	0	0	0	1,641	2,006	1,824	802

Table 5B3-2-2c. DCC Flow, Alternative 1B 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	36	22	10	0	0	0	0	0	35	40	-13	0
20%	16	1	3	0	0	0	0	0	-4	66	7	10
30%	147	46	38	0	0	0	0	0	11	66	28	22
40%	182	128	92	0	0	0	0	0	-1	117	0	-2
50%	110	80	73	0	0	0	0	0	2	96	61	43
60%	144	68	0	0	0	0	0	0	17	132	148	99
70%	95	60	0	0	0	0	0	0	11	194	115	174
80%	105	273	0	0	0	0	0	0	31	155	283	190
90%	-4	0	0	0	0	0	0	0	1,074	170	123	170
Long Term												
Full Simulation Period[a]	81	60	13	0	0	0	0	0	34	145	100	68
Water Year Types[b,c]												
Wet (32%)	46	82	12	0	0	0	0	0	-25	169	-15	4
Above Normal (15%)	-10	9	25	0	0	0	0	0	318	14	-4	25
Below Normal (17%)	72	-7	5	0	0	0	0	0	-37	53	116	89
Dry (22%)	139	111	10	0	0	0	0	0	4	238	273	176
Critical (15%)	169	69	18	0	0	0	0	0	8	193	174	65

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-2-3a. DCC Flow, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,153	1,656	1,006	0	0	0	0	0	3,038	4,496	3,310	4,128
20%	1,954	1,595	879	0	0	0	0	0	2,487	4,281	3,194	4,012
30%	1,739	1,397	768	0	0	0	0	0	2,414	3,925	3,100	3,956
40%	1,601	1,162	634	0	0	0	0	0	2,328	3,685	3,054	3,763
50%	1,456	1,041	416	0	0	0	0	0	2,244	3,506	2,843	2,659
60%	1,354	857	0	0	0	0	0	0	2,104	3,147	2,480	2,084
70%	1,273	734	0	0	0	0	0	0	1,919	2,878	2,050	1,862
80%	749	195	0	0	0	0	0	0	1,684	2,521	1,789	1,692
90%	442	0	0	0	0	0	0	0	119	1,819	1,636	1,387
Long Term												
Full Simulation Period[a]	1,383	949	431	0	0	0	0	0	2,062	3,298	2,575	2,738
Water Year Types[b,c]												
Wet (32%)	1,243	1,076	517	0	0	0	0	0	2,078	3,461	3,060	4,016
Above Normal (15%)	1,873	1,146	418	0	0	0	0	0	1,871	4,042	3,163	3,920
Below Normal (17%)	1,594	802	370	0	0	0	0	0	2,315	3,939	2,900	2,340
Dry (22%)	1,148	817	357	0	0	0	0	0	2,256	3,056	1,849	1,747
Critical (15%)	1,306	849	443	0	0	0	0	0	1,634	1,813	1,649	737

Table 5B3-2-3b. DCC Flow, Alternative 2 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,186	1,667	1,016	0	0	0	0	0	3,073	4,529	3,297	4,128
20%	1,977	1,596	875	0	0	0	0	0	2,492	4,347	3,201	4,023
30%	1,895	1,442	803	0	0	0	0	0	2,426	3,997	3,132	3,965
40%	1,816	1,310	727	0	0	0	0	0	2,324	3,786	3,055	3,765
50%	1,575	1,118	485	0	0	0	0	0	2,254	3,605	2,903	2,697
60%	1,461	899	0	0	0	0	0	0	2,121	3,239	2,627	2,172
70%	1,379	776	0	0	0	0	0	0	1,930	3,063	2,173	2,016
80%	853	423	0	0	0	0	0	0	1,715	2,653	2,024	1,889
90%	439	0	0	0	0	0	0	0	1,193	1,978	1,750	1,564
Long Term												
Full Simulation Period[a]	1,470	1,001	445	0	0	0	0	0	2,095	3,437	2,669	2,819
Water Year Types[b,c]												
Wet (32%)	1,277	1,158	531	0	0	0	0	0	2,054	3,631	3,053	4,020
Above Normal (15%)	1,862	1,153	443	0	0	0	0	0	2,187	4,055	3,159	3,934
Below Normal (17%)	1,694	812	375	0	0	0	0	0	2,281	3,993	3,007	2,408
Dry (22%)	1,310	875	367	0	0	0	0	0	2,252	3,273	2,108	1,927
Critical (15%)	1,475	922	458	0	0	0	0	0	1,642	1,994	1,793	921

Table 5B3-2-3c. DCC Flow, Alternative 2 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	34	12	10	0	0	0	0	0	35	33	-13	0
20%	23	1	-4	0	0	0	0	0	5	66	8	11
30%	155	45	35	0	0	0	0	0	11	72	31	9
40%	216	148	93	0	0	0	0	0	-5	101	0	2
50%	120	77	69	0	0	0	0	0	10	98	60	38
60%	107	42	0	0	0	0	0	0	17	92	147	89
70%	106	42	0	0	0	0	0	0	11	185	123	154
80%	105	227	0	0	0	0	0	0	31	132	236	197
90%	-3	0	0	0	0	0	0	0	1,074	159	115	178
Long Term												
Full Simulation Period[a]	87	52	13	0	0	0	0	0	33	139	93	82
Water Year Types[b,c]												
Wet (32%)	35	82	14	0	0	0	0	0	-25	170	-7	4
Above Normal (15%)	-11	7	24	0	0	0	0	0	316	13	-4	14
Below Normal (17%)	100	10	4	0	0	0	0	0	-34	53	107	69
Dry (22%)	162	57	10	0	0	0	0	0	-4	217	258	180
Critical (15%)	170	73	16	0	0	0	0	0	8	181	143	184

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-2-4a. DCC Flow, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,153	1,656	1,006	0	0	0	0	0	3,038	4,496	3,310	4,128
20%	1,954	1,595	879	0	0	0	0	0	2,487	4,281	3,194	4,012
30%	1,739	1,397	768	0	0	0	0	0	2,414	3,925	3,100	3,956
40%	1,601	1,162	634	0	0	0	0	0	2,328	3,685	3,054	3,763
50%	1,456	1,041	416	0	0	0	0	0	2,244	3,506	2,843	2,659
60%	1,354	857	0	0	0	0	0	0	2,104	3,147	2,480	2,084
70%	1,273	734	0	0	0	0	0	0	1,919	2,878	2,050	1,862
80%	749	195	0	0	0	0	0	0	1,684	2,521	1,789	1,692
90%	442	0	0	0	0	0	0	0	119	1,819	1,636	1,387
Long Term												
Full Simulation Period[a]	1,383	949	431	0	0	0	0	0	2,062	3,298	2,575	2,738
Water Year Types[b,c]												
Wet (32%)	1,243	1,076	517	0	0	0	0	0	2,078	3,461	3,060	4,016
Above Normal (15%)	1,873	1,146	418	0	0	0	0	0	1,871	4,042	3,163	3,920
Below Normal (17%)	1,594	802	370	0	0	0	0	0	2,315	3,939	2,900	2,340
Dry (22%)	1,148	817	357	0	0	0	0	0	2,256	3,056	1,849	1,747
Critical (15%)	1,306	849	443	0	0	0	0	0	1,634	1,813	1,649	737

Table 5B3-2-4b. DCC Flow, Alternative 3 020121, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,247	1,681	1,015	0	0	0	0	0	3,074	4,557	3,297	4,129
20%	1,970	1,608	873	0	0	0	0	0	2,467	4,350	3,211	4,024
30%	1,912	1,444	752	0	0	0	0	0	2,417	4,018	3,116	3,970
40%	1,702	1,249	714	0	0	0	0	0	2,326	3,812	3,057	3,807
50%	1,502	1,048	490	0	0	0	0	0	2,255	3,607	2,893	2,708
60%	1,410	918	0	0	0	0	0	0	2,127	3,264	2,633	2,236
70%	1,312	851	0	0	0	0	0	0	1,946	3,096	2,172	1,973
80%	956	425	0	0	0	0	0	0	1,715	2,614	1,951	1,860
90%	571	0	0	0	0	0	0	0	1,213	2,005	1,703	1,539
Long Term												
Full Simulation Period[a]	1,468	1,000	440	0	0	0	0	0	2,096	3,445	2,663	2,805
Water Year Types[b,c]												
Wet (32%)	1,282	1,158	525	0	0	0	0	0	2,054	3,632	3,043	4,008
Above Normal (15%)	1,742	1,139	447	0	0	0	0	0	2,189	4,073	3,159	4,002
Below Normal (17%)	1,611	778	372	0	0	0	0	0	2,276	4,004	3,009	2,438
Dry (22%)	1,495	913	361	0	0	0	0	0	2,264	3,289	2,067	1,899
Critical (15%)	1,387	907	445	0	0	0	0	0	1,635	1,991	1,834	791

Table 5B3-2-4c. DCC Flow, Alternative 3 020121 minus No Action Alternative 011221, Monthly Flow (cfs)

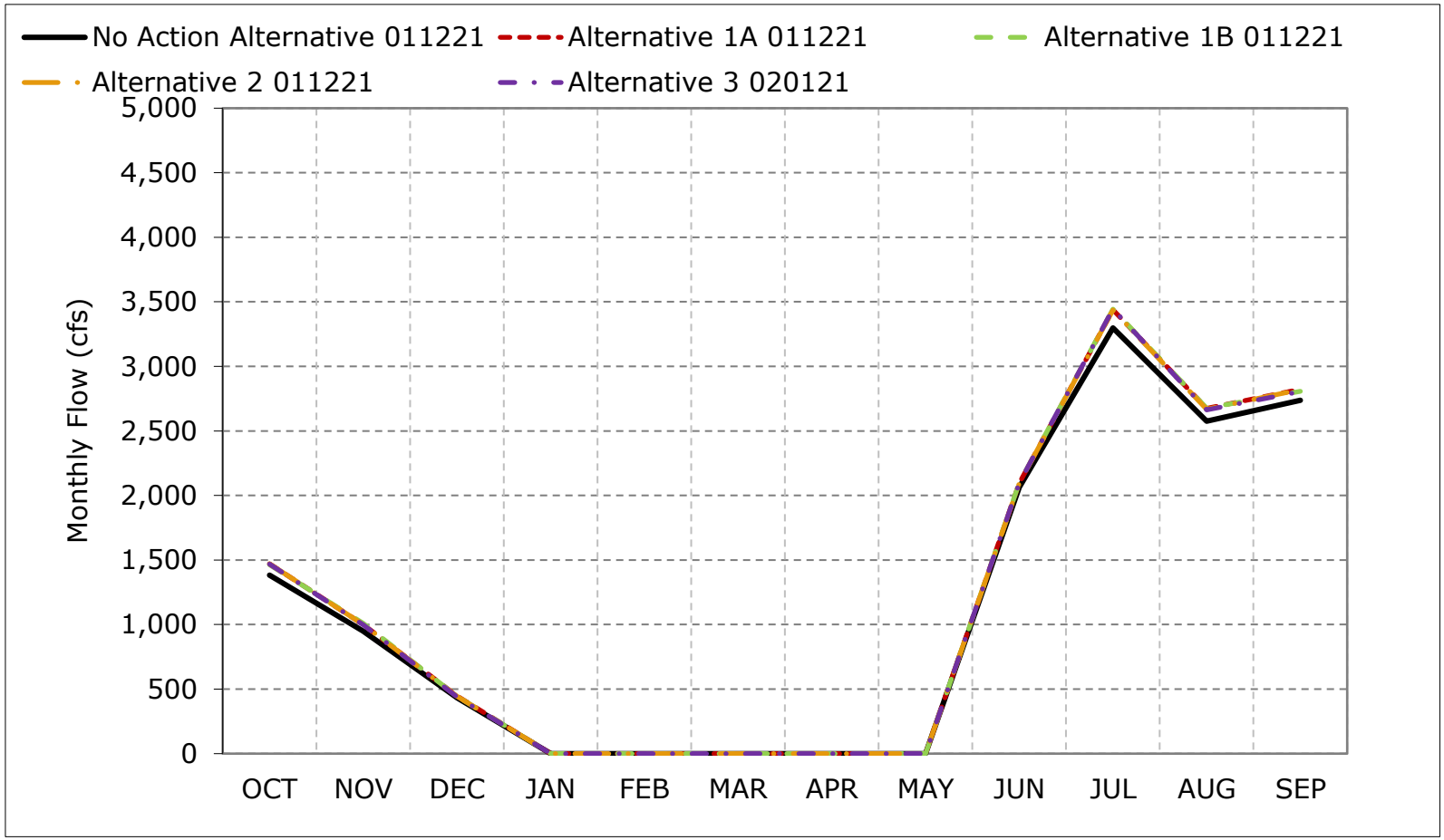
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	94	25	9	0	0	0	0	0	36	60	-13	0
20%	16	13	-6	0	0	0	0	0	-20	69	17	11
30%	172	47	-15	0	0	0	0	0	2	93	16	14
40%	101	87	80	0	0	0	0	0	-3	126	2	44
50%	46	6	75	0	0	0	0	0	11	101	50	49
60%	55	60	0	0	0	0	0	0	24	118	153	152
70%	39	116	0	0	0	0	0	0	28	218	122	111
80%	207	229	0	0	0	0	0	0	31	94	162	169
90%	129	0	0	0	0	0	0	0	1,094	186	67	152
Long Term												
Full Simulation Period[a]	84	50	8	0	0	0	0	0	34	147	88	68
Water Year Types[b,c]												
Wet (32%)	40	82	9	0	0	0	0	0	-24	170	-17	-8
Above Normal (15%)	-131	-7	29	0	0	0	0	0	318	32	-3	82
Below Normal (17%)	17	-24	1	0	0	0	0	0	-39	65	110	99
Dry (22%)	346	96	4	0	0	0	0	0	7	233	218	152
Critical (15%)	81	58	2	0	0	0	0	0	1	178	184	55

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

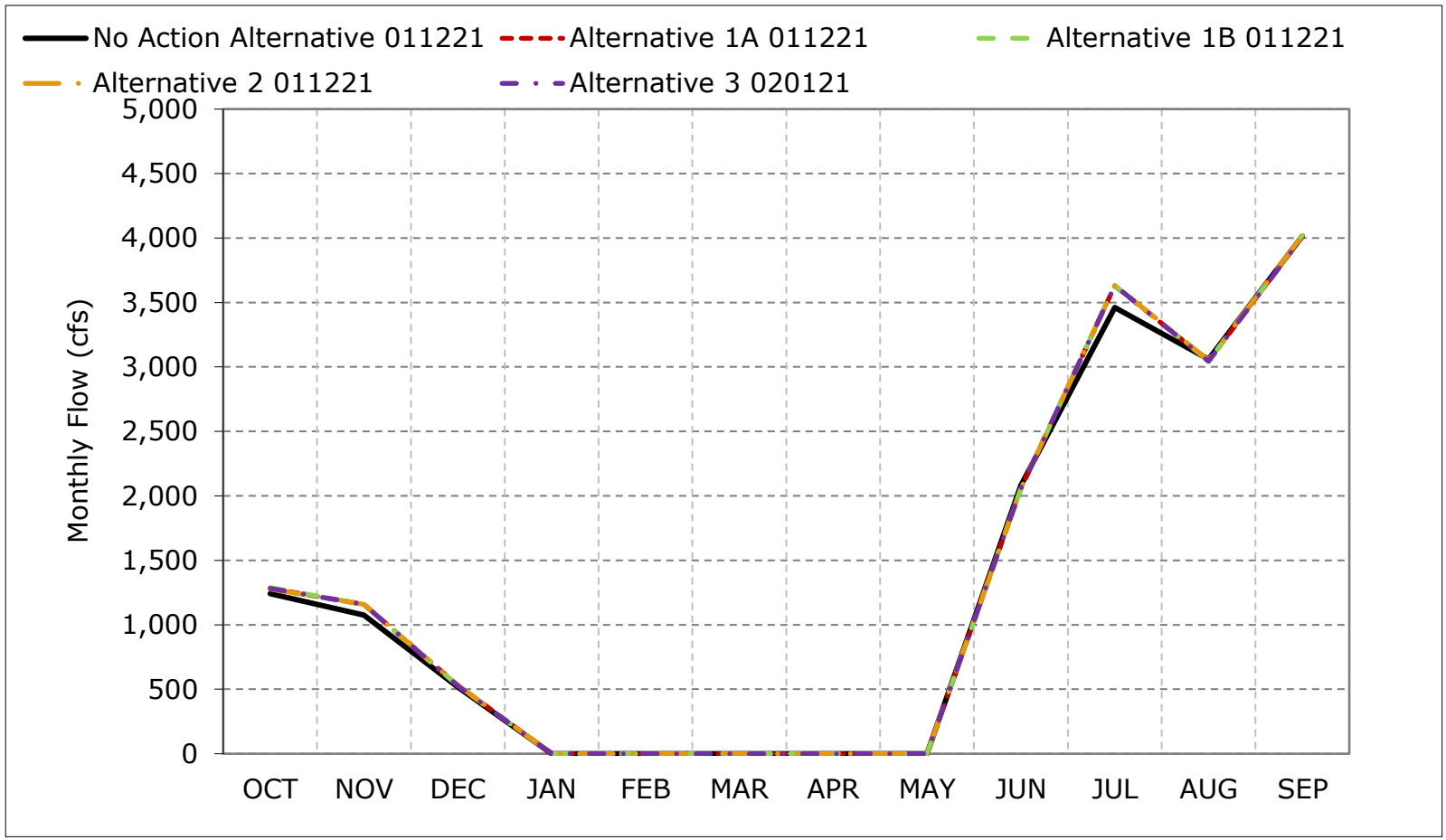
c These results are displayed with calendar year - year type sorting.

Figure 5B3-2-1. DCC Flow, Long-Term Average Flow



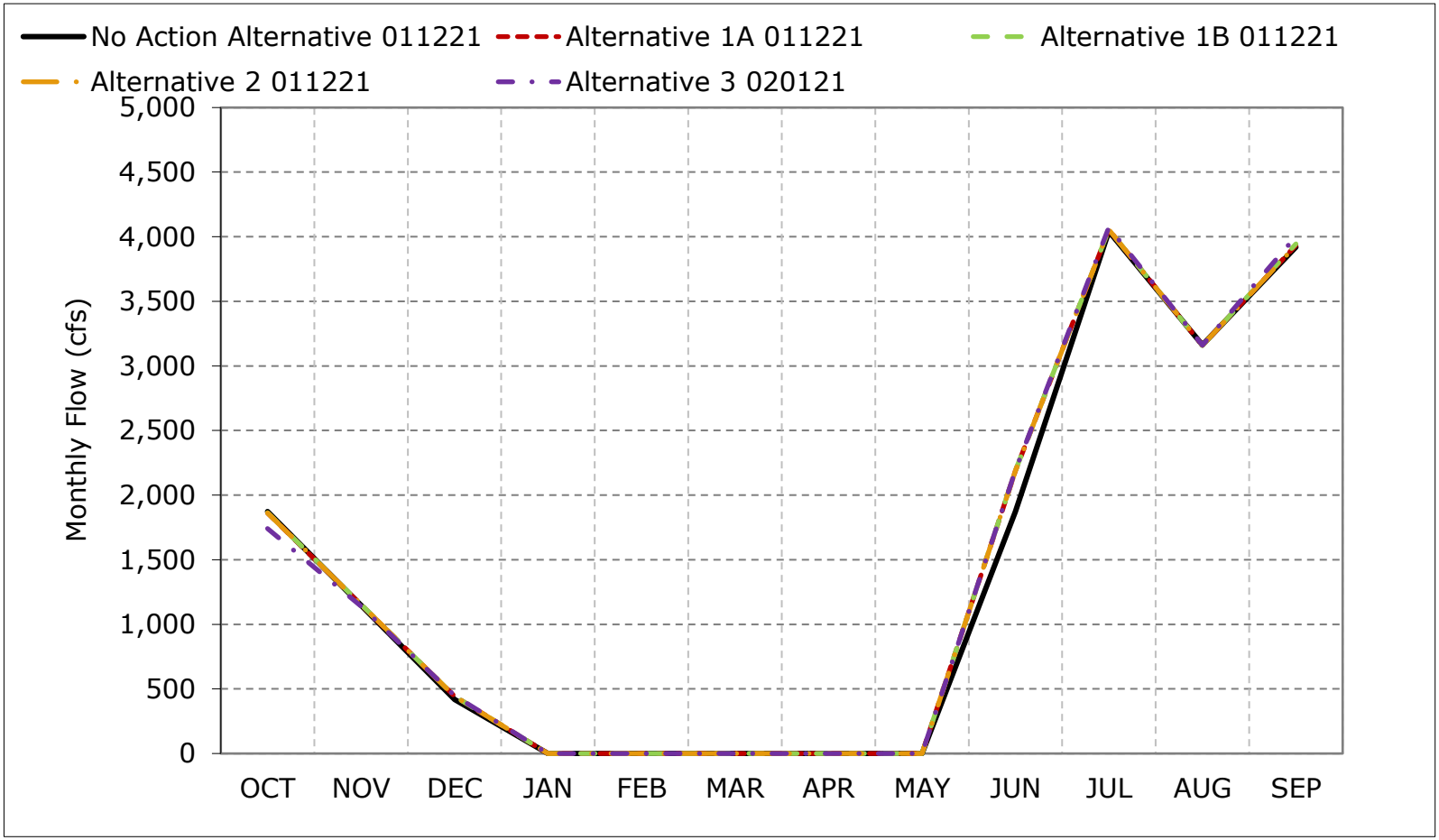
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-2-2. DCC Flow, Wet Year Average Flow



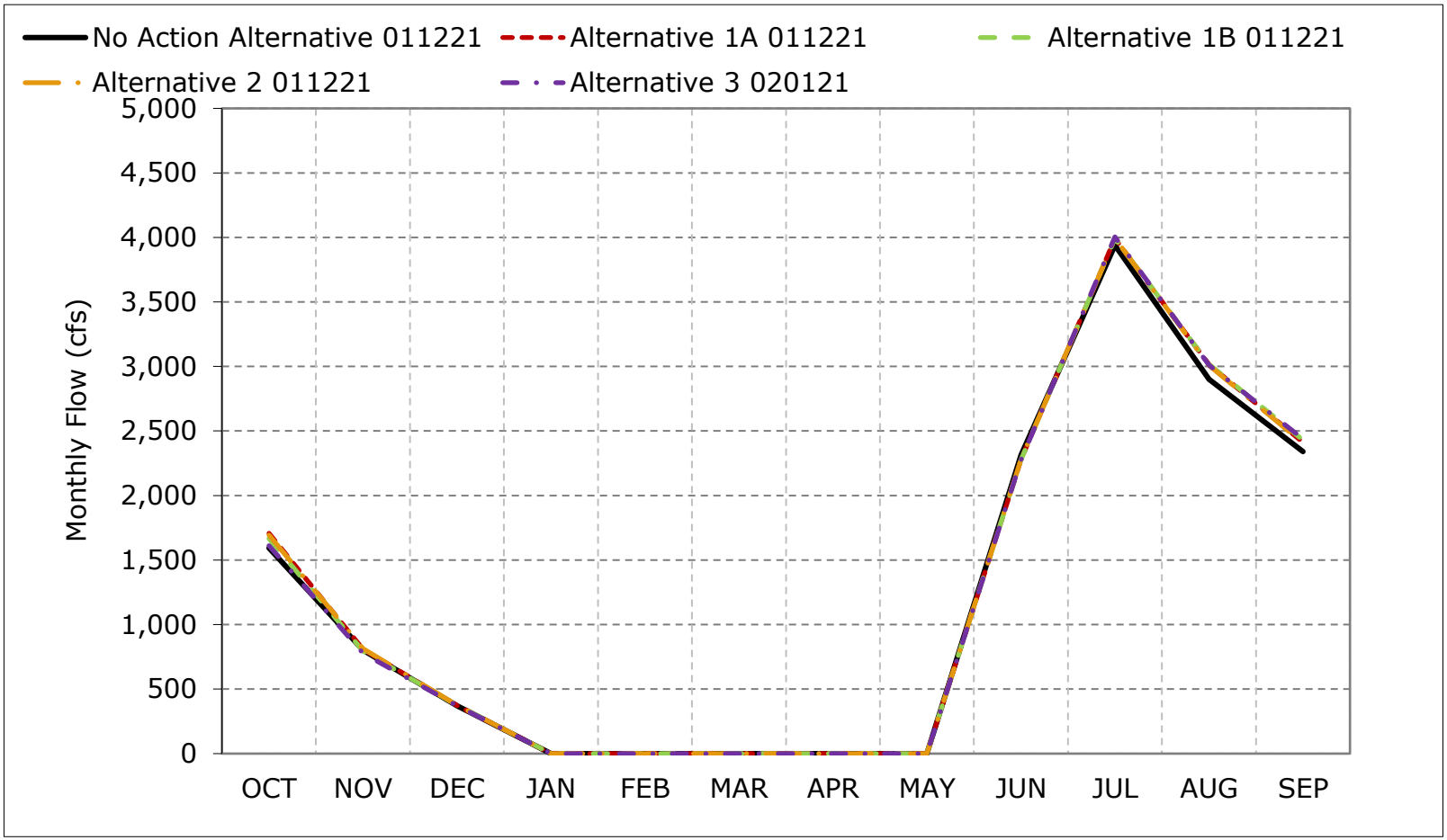
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-2-3. DCC Flow, Above Normal Year Average Flow



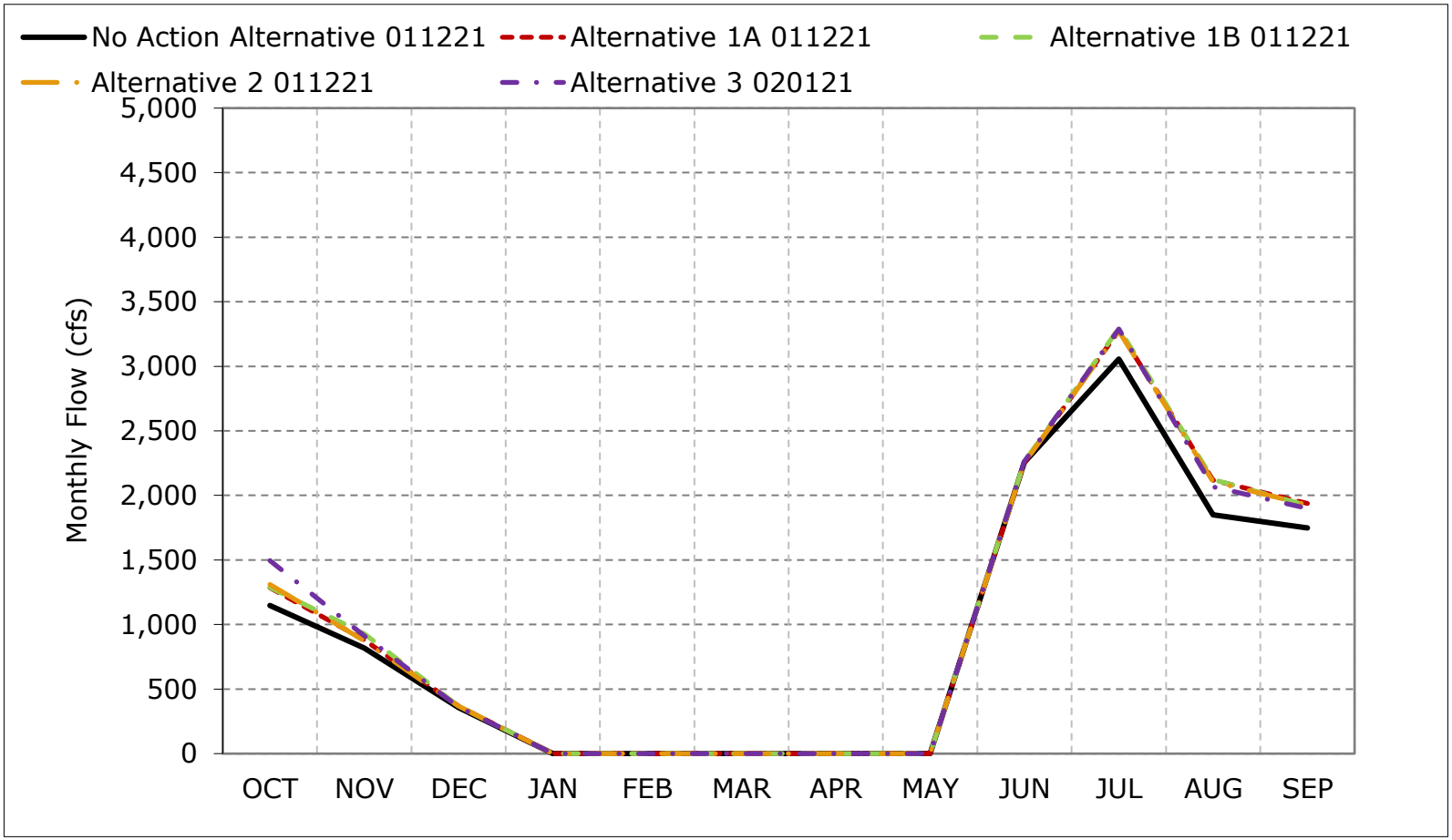
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-2-4. DCC Flow, Below Normal Year Average Flow



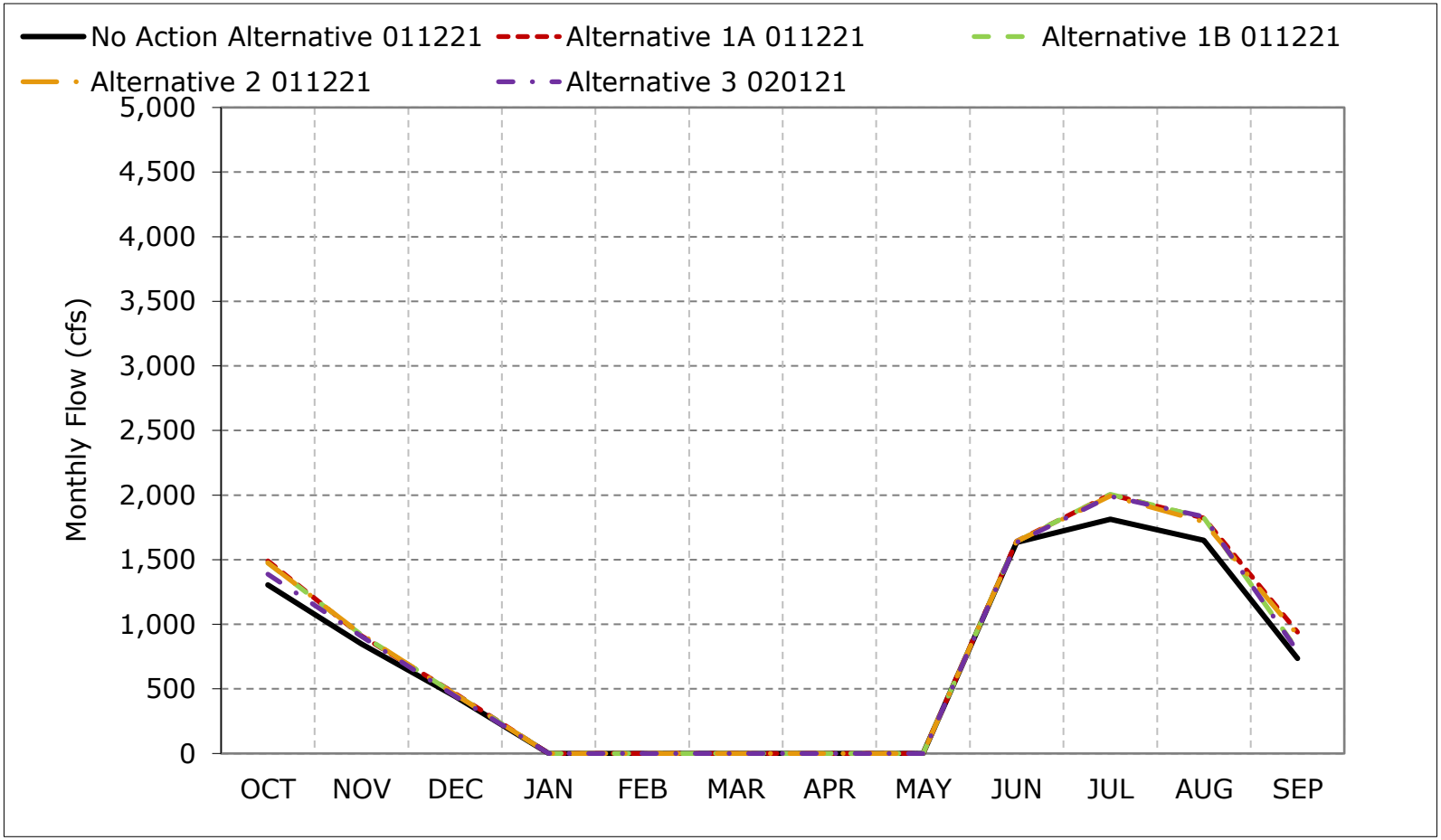
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-2-5. DCC Flow, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-2-6. DCC Flow, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-2-7. DCC Flow, October

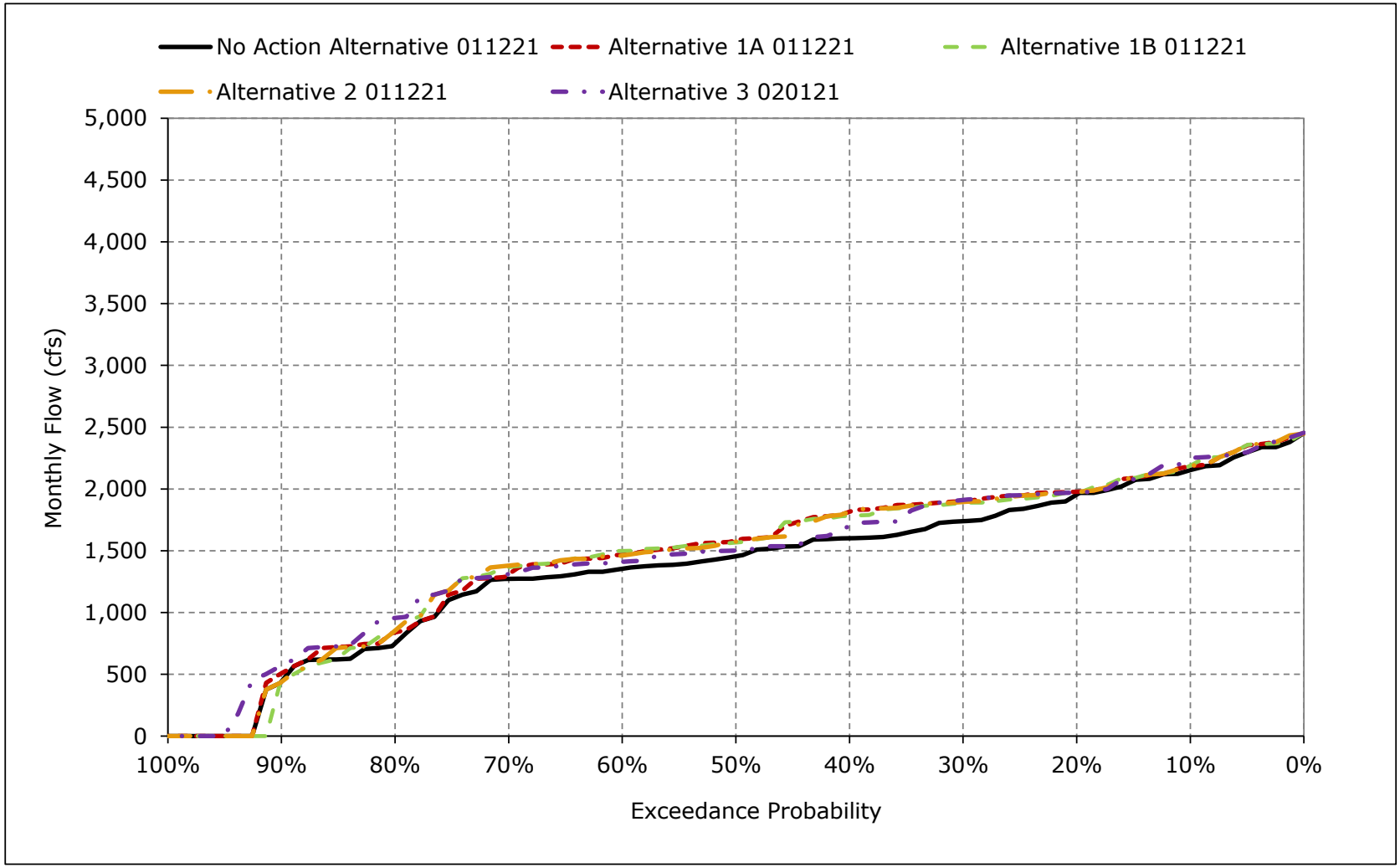


Figure 5B3-2-8. DCC Flow, November

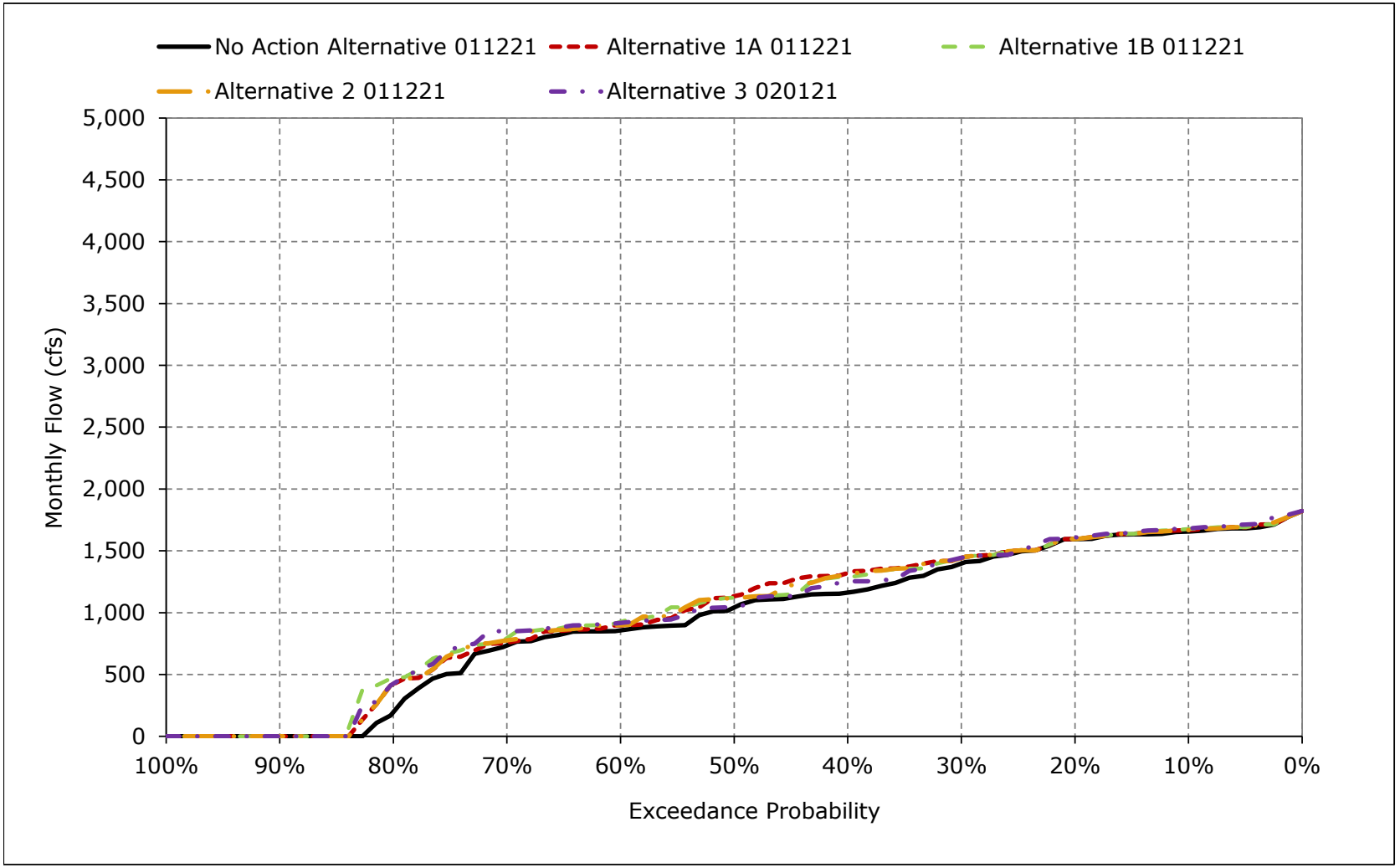


Figure 5B3-2-9. DCC Flow, December

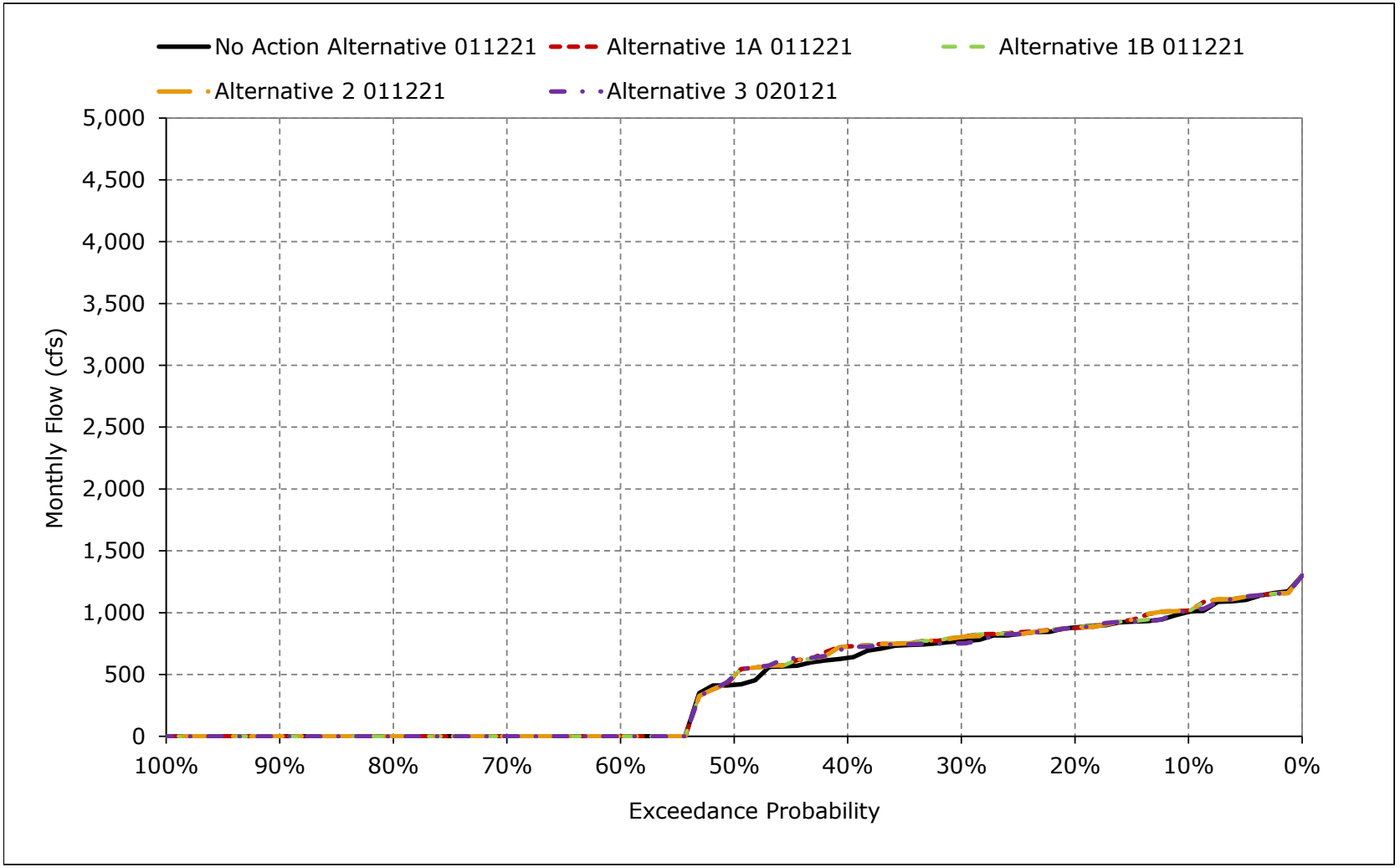


Figure 5B3-2-10. DCC Flow, January

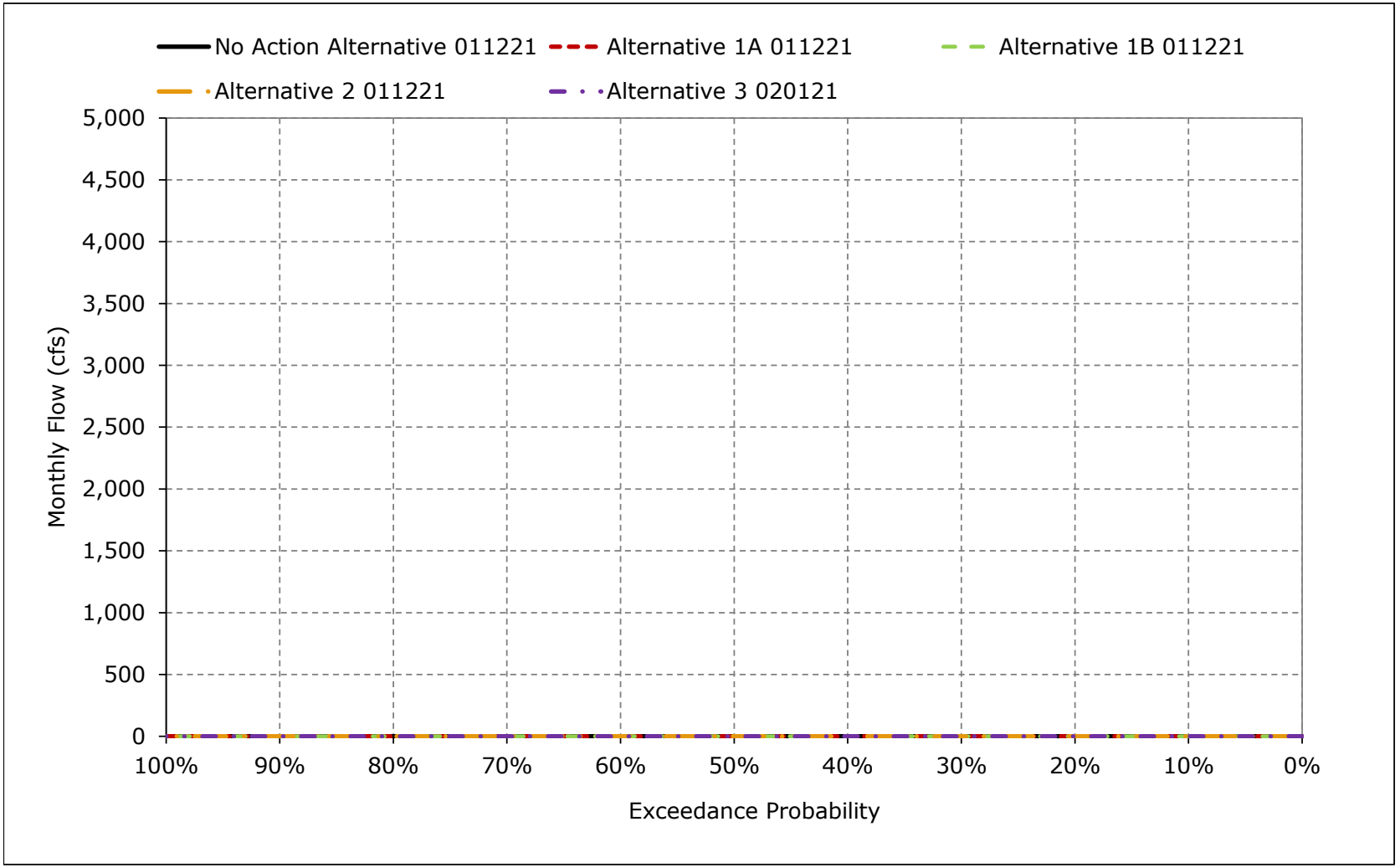


Figure 5B3-2-11. DCC Flow, February

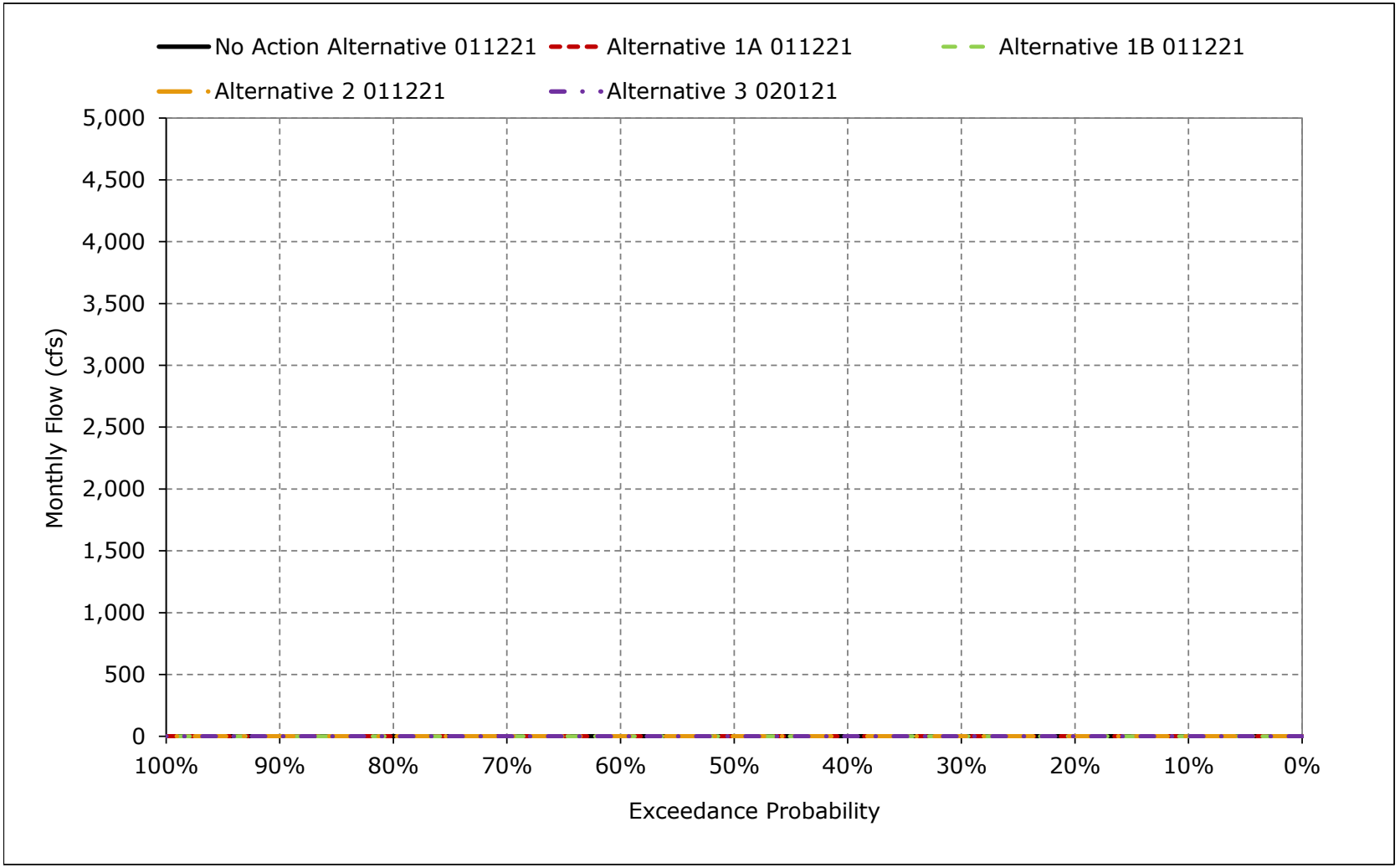


Figure 5B3-2-12. DCC Flow, March

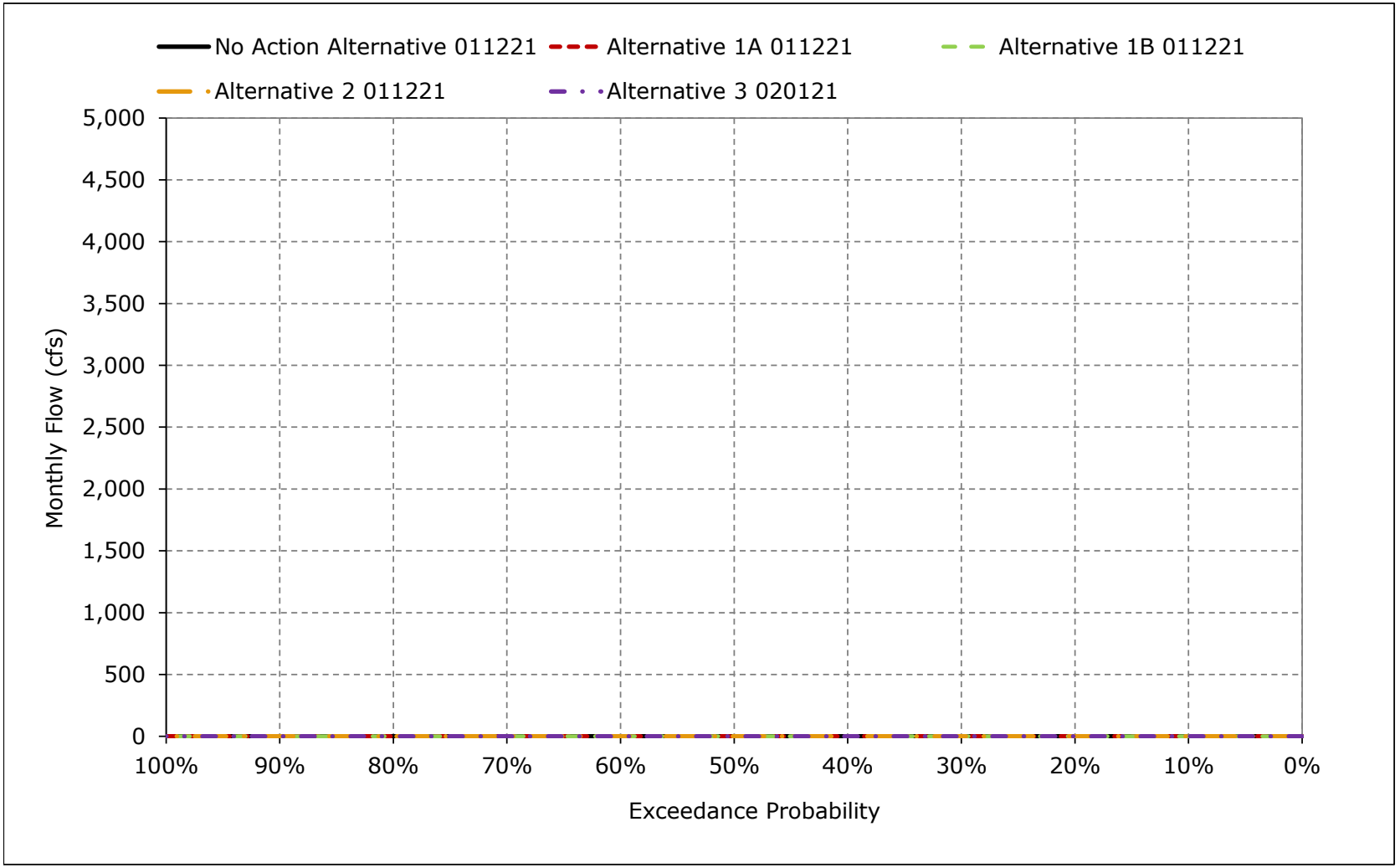


Figure 5B3-2-13. DCC Flow, April

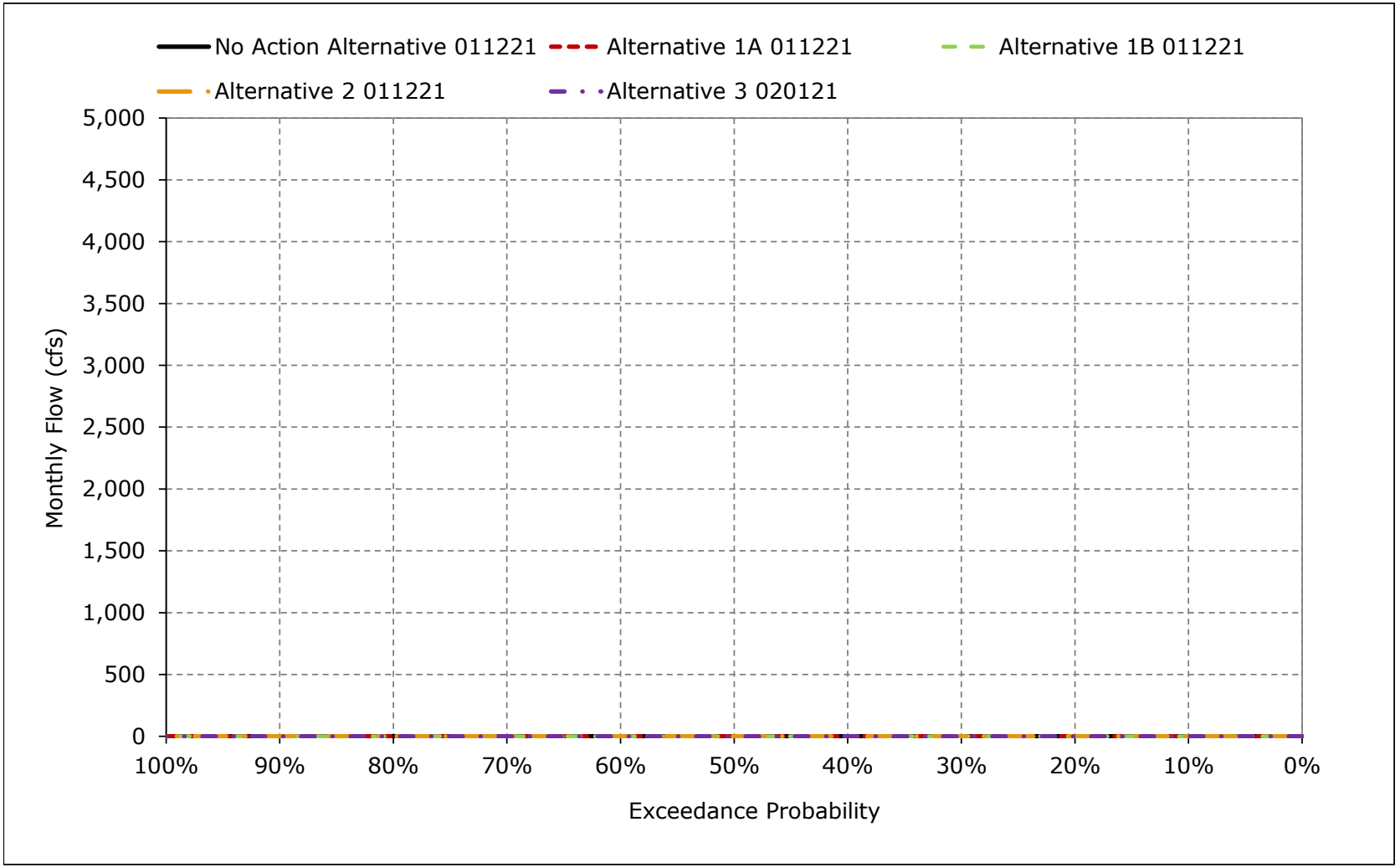


Figure 5B3-2-14. DCC Flow, May

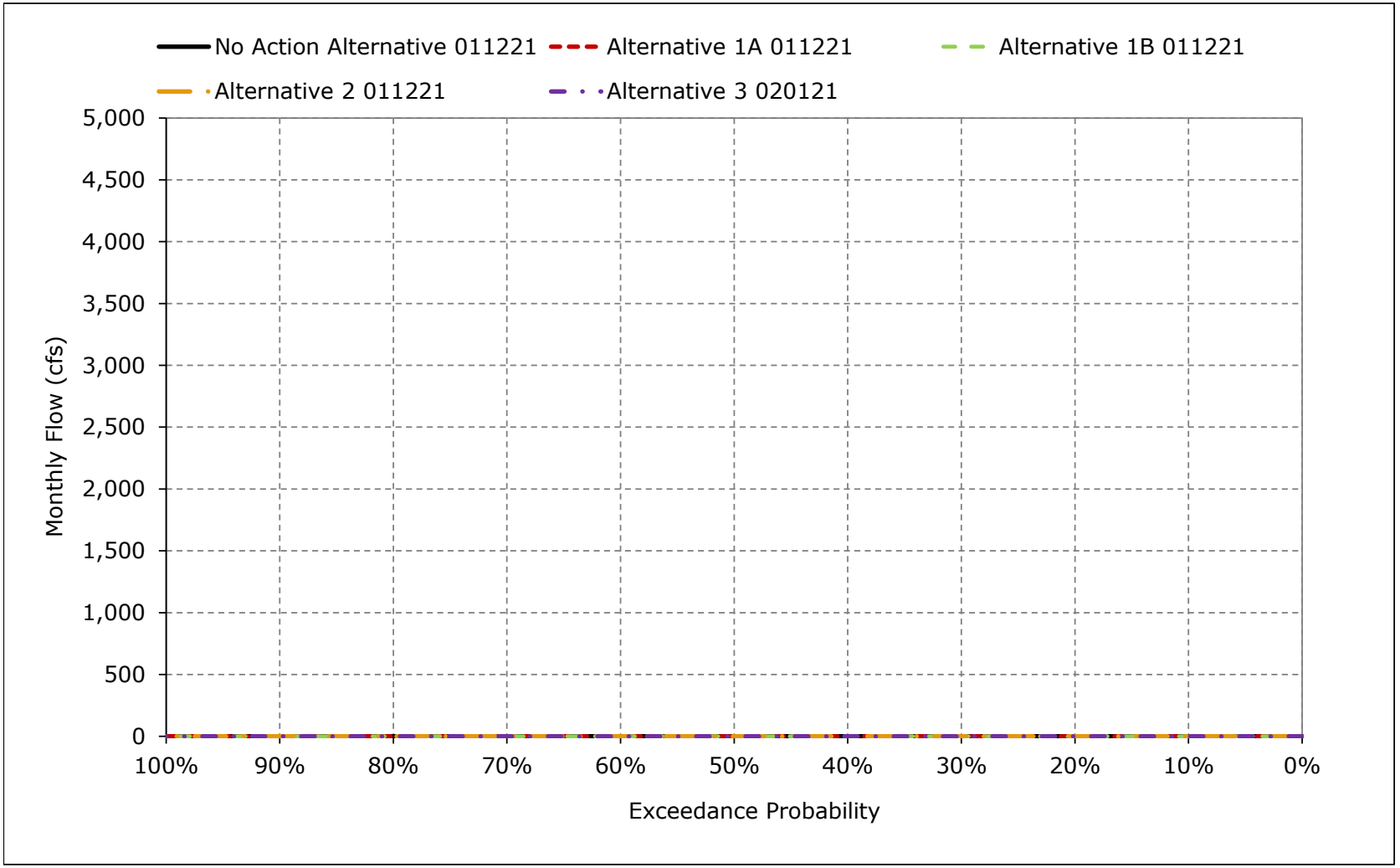


Figure 5B3-2-15. DCC Flow, June

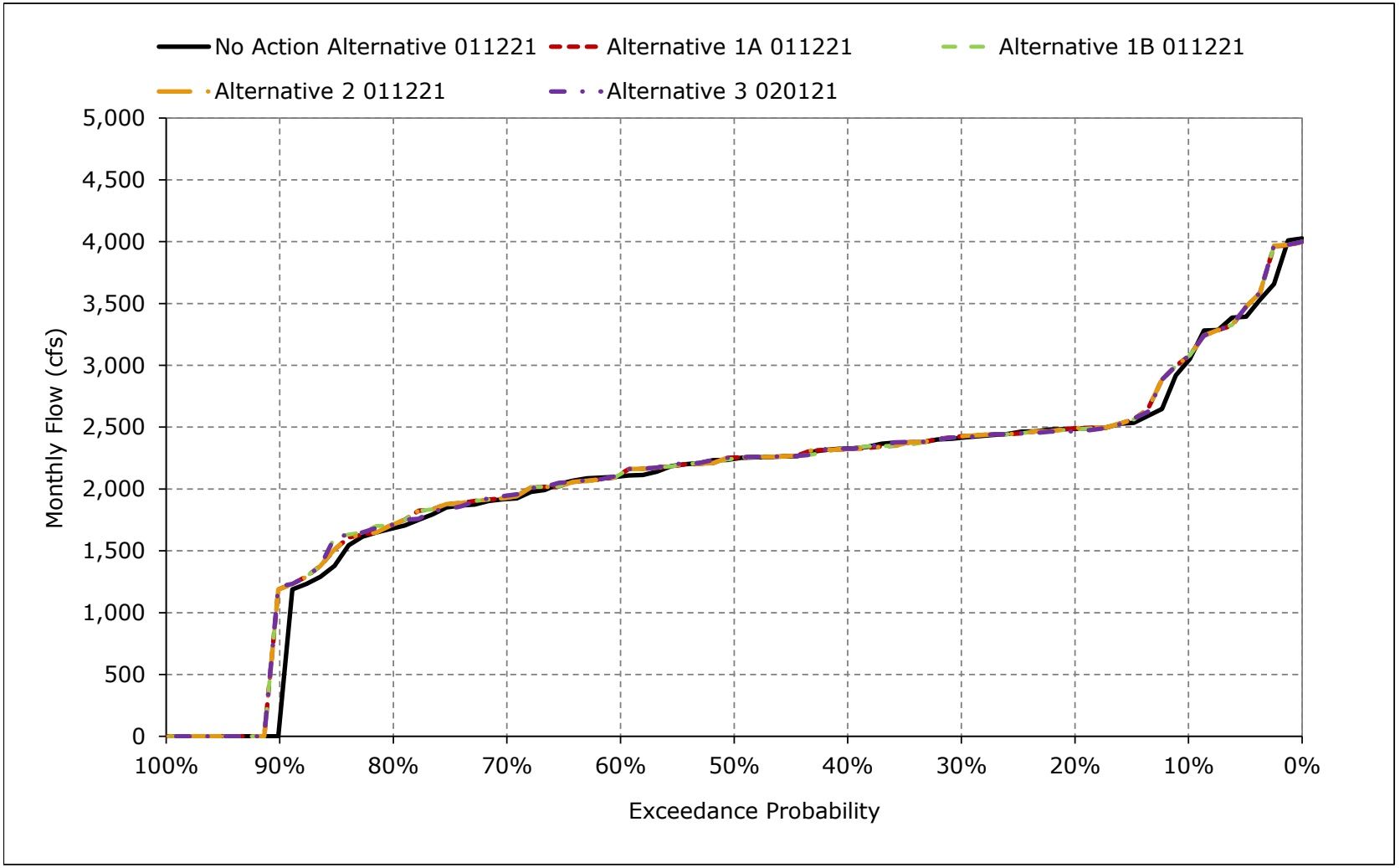


Figure 5B3-2-16. DCC Flow, July

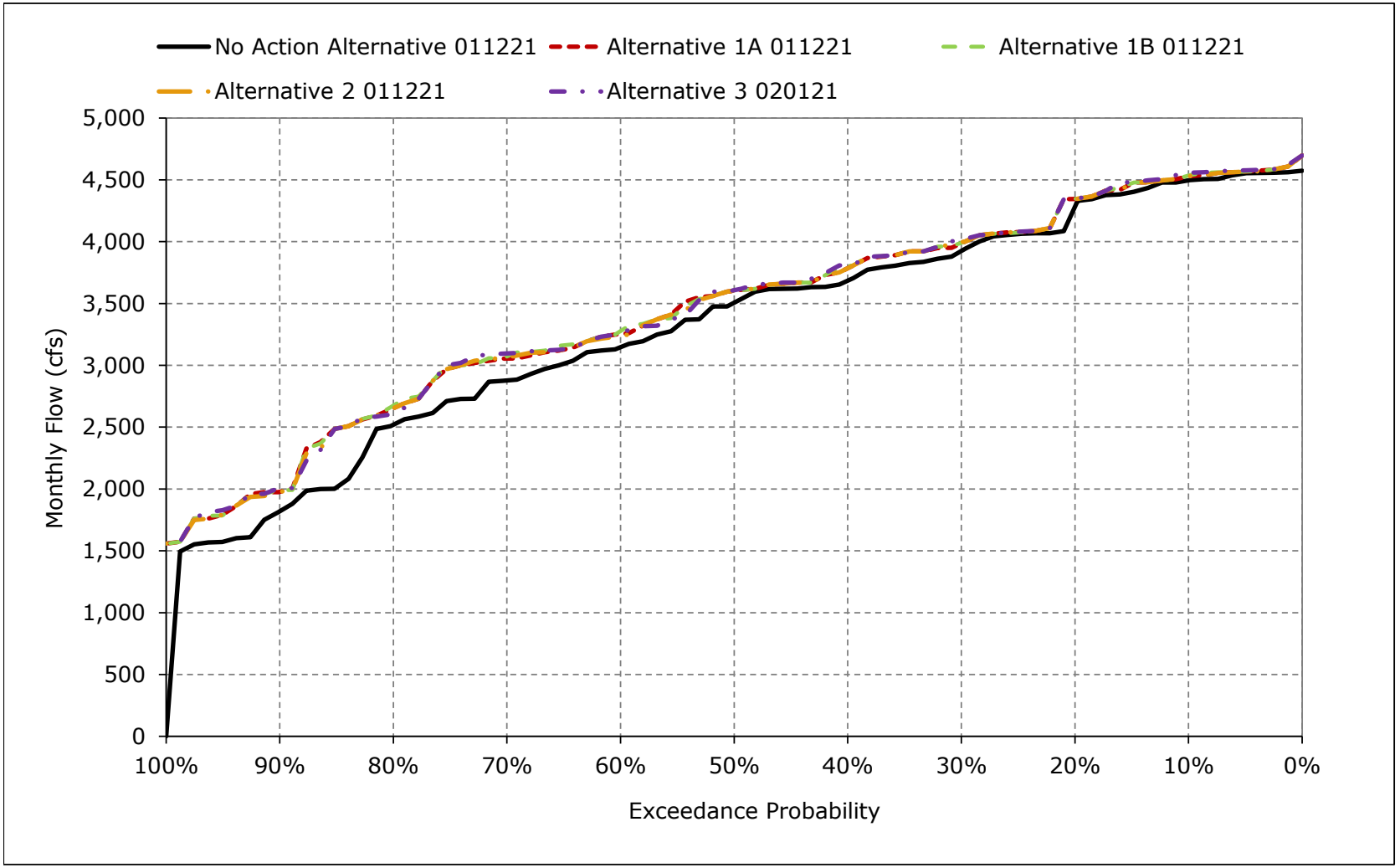


Figure 5B3-2-17. DCC Flow, August

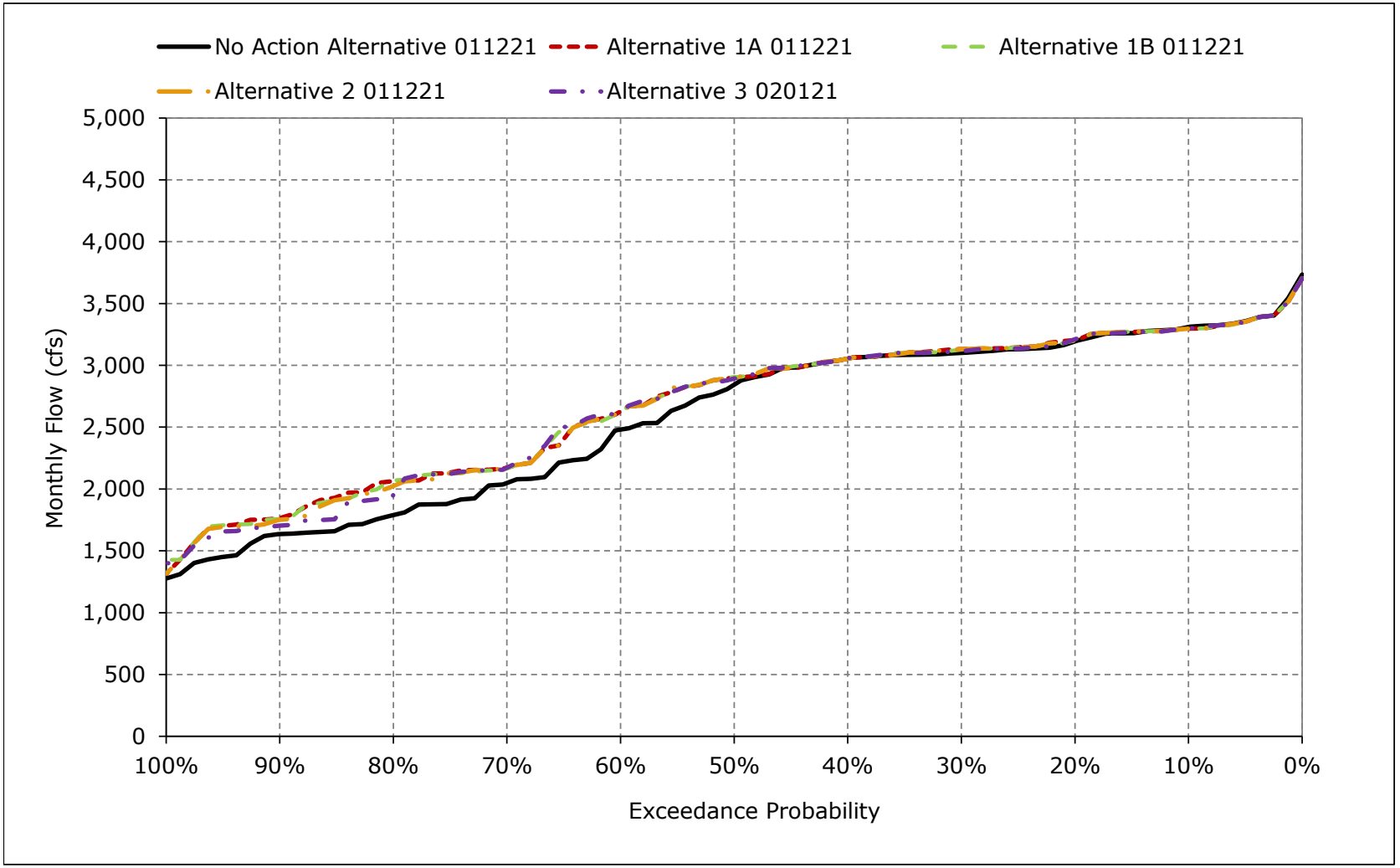


Figure 5B3-2-18. DCC Flow, September

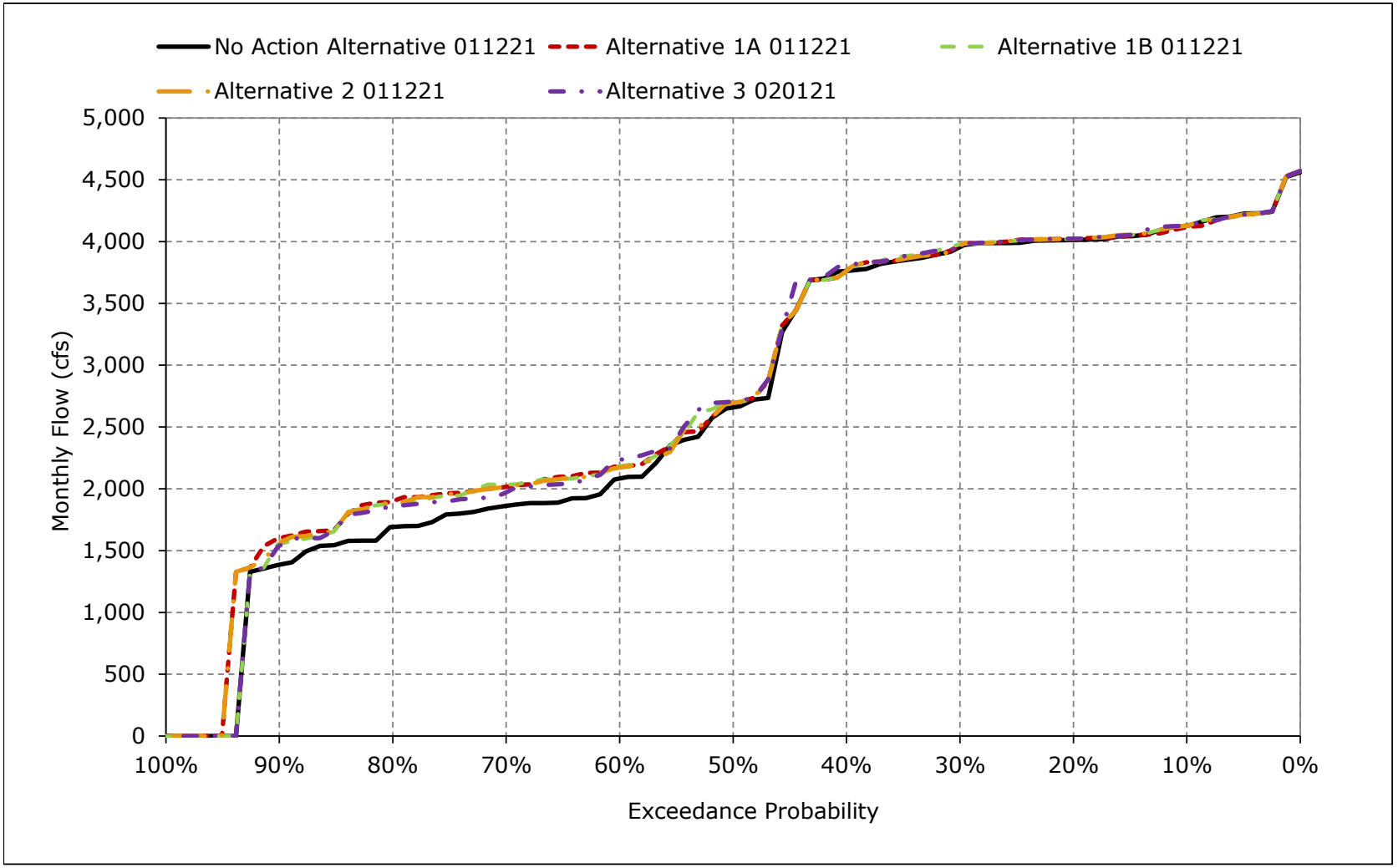


Table 5B3-3-1a. Yolo Bypass Flow, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	63	712	15,514	34,446	48,177	24,268	6,840	784	68	48	183	140
20%	61	158	4,823	15,924	20,367	9,332	3,162	78	68	48	55	60
30%	58	60	1,604	6,573	12,261	4,573	1,070	74	68	48	55	59
40%	53	27	550	3,070	8,634	2,772	331	71	68	48	55	59
50%	45	11	220	854	3,577	1,481	139	68	67	48	55	59
60%	40	8	128	487	1,380	592	113	65	67	48	55	59
70%	29	5	55	209	502	201	92	63	66	48	55	58
80%	15	1	22	69	160	78	80	59	64	48	55	55
90%	4	0	0	23	44	37	58	53	62	48	54	52
Long Term												
Full Simulation Period[a]	104	467	4,363	11,141	15,097	8,739	2,735	302	100	48	98	80
Water Year Types[b,c]												
Wet (32%)	86	596	5,365	29,169	35,753	21,857	7,148	688	172	48	139	79
Above Normal (15%)	37	956	2,211	9,403	16,160	9,300	1,999	308	66	48	87	65
Below Normal (17%)	327	422	4,697	1,701	4,934	1,040	541	67	66	48	114	113
Dry (22%)	42	287	6,742	757	2,122	996	308	77	67	48	62	65
Critical (15%)	41	22	385	406	599	351	107	68	64	48	54	78

Table 5B3-3-1b. Yolo Bypass Flow, Alternative 1A 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	442	715	15,595	32,704	46,176	24,143	6,540	773	68	48	449	463
20%	402	157	4,848	15,073	19,873	9,331	3,163	78	68	48	445	416
30%	390	55	1,584	6,393	11,369	4,296	1,074	74	68	48	445	403
40%	257	29	543	3,001	8,337	2,504	331	71	68	48	445	403
50%	64	13	214	830	3,422	1,349	139	68	67	48	437	381
60%	61	9	134	469	1,298	528	113	65	67	48	390	291
70%	53	6	58	204	497	202	92	63	66	48	152	141
80%	40	1	20	68	156	63	80	59	64	48	55	59
90%	16	0	3	24	43	37	58	53	62	48	55	59
Long Term												
Full Simulation Period[a]	252	452	4,317	10,764	14,624	8,429	2,633	276	99	48	325	297
Water Year Types[b,c]												
Wet (32%)	316	587	5,385	28,362	34,865	21,307	6,910	611	171	48	443	395
Above Normal (15%)	259	865	2,212	8,753	15,476	8,629	1,863	304	66	48	368	374
Below Normal (17%)	412	428	4,497	1,611	4,567	950	507	67	66	48	309	250
Dry (22%)	152	286	6,660	713	2,005	906	308	77	67	48	251	252
Critical (15%)	72	22	383	398	577	336	107	68	64	48	157	132

Table 5B3-3-1c. Yolo Bypass Flow, Alternative 1A 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	379	3	82	-1,742	-2,001	-125	-300	-11	0	0	266	323
20%	340	-1	25	-851	-494	-1	1	0	0	0	390	356
30%	333	-5	-20	-180	-891	-277	4	0	0	0	390	344
40%	204	2	-7	-70	-296	-268	0	0	0	0	390	344
50%	19	2	-7	-24	-155	-132	0	0	0	0	382	321
60%	21	0	6	-19	-82	-63	0	0	0	0	335	232
70%	23	1	3	-5	-5	0	0	0	0	0	97	83
80%	26	0	-1	-1	-5	-16	0	0	0	0	0	4
90%	11	0	3	2	-1	0	0	0	0	0	1	7
Long Term												
Full Simulation Period[a]	149	-16	-46	-377	-473	-310	-101	-25	0	0	227	218
Water Year Types[b,c]												
Wet (32%)	230	-9	20	-807	-888	-550	-238	-77	-1	0	304	316
Above Normal (15%)	222	-91	1	-650	-683	-671	-135	-5	0	0	281	309
Below Normal (17%)	85	5	-200	-90	-367	-90	-34	0	0	0	195	137
Dry (22%)	110	-2	-82	-44	-117	-90	0	0	0	0	189	187
Critical (15%)	31	0	-2	-8	-22	-15	0	0	0	0	103	54

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-3-2a. Yolo Bypass Flow, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	63	712	15,514	34,446	48,177	24,268	6,840	784	68	48	183	140
20%	61	158	4,823	15,924	20,367	9,332	3,162	78	68	48	55	60
30%	58	60	1,604	6,573	12,261	4,573	1,070	74	68	48	55	59
40%	53	27	550	3,070	8,634	2,772	331	71	68	48	55	59
50%	45	11	220	854	3,577	1,481	139	68	67	48	55	59
60%	40	8	128	487	1,380	592	113	65	67	48	55	59
70%	29	5	55	209	502	201	92	63	66	48	55	58
80%	15	1	22	69	160	78	80	59	64	48	55	55
90%	4	0	0	23	44	37	58	53	62	48	54	52
Long Term												
Full Simulation Period[a]	104	467	4,363	11,141	15,097	8,739	2,735	302	100	48	98	80
Water Year Types[b,c]												
Wet (32%)	86	596	5,365	29,169	35,753	21,857	7,148	688	172	48	139	79
Above Normal (15%)	37	956	2,211	9,403	16,160	9,300	1,999	308	66	48	87	65
Below Normal (17%)	327	422	4,697	1,701	4,934	1,040	541	67	66	48	114	113
Dry (22%)	42	287	6,742	757	2,122	996	308	77	67	48	62	65
Critical (15%)	41	22	385	406	599	351	107	68	64	48	54	78

Table 5B3-3-2b. Yolo Bypass Flow, Alternative 1B 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	430	748	15,581	32,702	45,697	24,147	6,540	770	68	48	449	463
20%	390	157	5,008	14,858	19,791	9,272	3,163	78	68	48	445	428
30%	390	64	1,581	6,394	11,355	4,296	1,074	74	68	48	445	403
40%	152	33	543	3,003	8,314	2,455	331	71	68	48	445	403
50%	63	16	213	830	3,423	1,344	139	68	67	48	424	325
60%	54	9	133	469	1,322	527	113	65	67	48	390	189
70%	45	6	58	200	497	202	92	63	66	48	216	81
80%	36	1	21	68	163	63	80	59	64	48	55	59
90%	11	0	3	24	43	37	58	53	62	48	55	58
Long Term												
Full Simulation Period[a]	234	460	4,301	10,746	14,571	8,424	2,612	276	99	48	324	276
Water Year Types[b,c]												
Wet (32%)	314	587	5,416	28,307	34,691	21,293	6,841	610	171	48	442	387
Above Normal (15%)	202	890	2,201	8,755	15,423	8,632	1,864	304	66	48	364	311
Below Normal (17%)	411	440	4,509	1,613	4,609	951	507	67	66	48	309	231
Dry (22%)	104	299	6,547	711	2,018	902	308	77	67	48	267	216
Critical (15%)	83	22	373	398	577	336	107	68	64	48	135	145

Table 5B3-3-2c. Yolo Bypass Flow, Alternative 1B 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	367	36	67	-1,744	-2,481	-120	-300	-14	0	0	266	323
20%	329	-1	186	-1,066	-576	-60	1	0	0	0	390	368
30%	333	4	-23	-180	-906	-278	4	0	0	0	390	344
40%	99	6	-7	-68	-320	-317	0	0	0	0	390	344
50%	18	5	-7	-23	-154	-138	0	0	0	0	369	266
60%	13	0	5	-19	-58	-65	0	0	0	0	335	130
70%	15	1	3	-9	-5	0	0	0	0	0	161	23
80%	21	1	-1	-1	2	-16	0	0	0	0	0	4
90%	7	0	3	2	-1	0	0	0	0	0	1	6
Long Term												
Full Simulation Period[a]	130	-7	-62	-394	-526	-314	-123	-26	0	0	227	197
Water Year Types[b,c]												
Wet (32%)	228	-9	51	-863	-1,063	-564	-307	-78	-1	0	303	308
Above Normal (15%)	165	-66	-10	-648	-737	-668	-135	-5	0	0	277	246
Below Normal (17%)	84	17	-188	-88	-325	-89	-34	0	0	0	195	118
Dry (22%)	62	12	-195	-45	-104	-94	0	0	0	0	205	152
Critical (15%)	42	0	-12	-8	-22	-15	0	0	0	0	80	67

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-3-3a. Yolo Bypass Flow, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	63	712	15,514	34,446	48,177	24,268	6,840	784	68	48	183	140
20%	61	158	4,823	15,924	20,367	9,332	3,162	78	68	48	55	60
30%	58	60	1,604	6,573	12,261	4,573	1,070	74	68	48	55	59
40%	53	27	550	3,070	8,634	2,772	331	71	68	48	55	59
50%	45	11	220	854	3,577	1,481	139	68	67	48	55	59
60%	40	8	128	487	1,380	592	113	65	67	48	55	59
70%	29	5	55	209	502	201	92	63	66	48	55	58
80%	15	1	22	69	160	78	80	59	64	48	55	55
90%	4	0	0	23	44	37	58	53	62	48	54	52
Long Term												
Full Simulation Period[a]	104	467	4,363	11,141	15,097	8,739	2,735	302	100	48	98	80
Water Year Types[b,c]												
Wet (32%)	86	596	5,365	29,169	35,753	21,857	7,148	688	172	48	139	79
Above Normal (15%)	37	956	2,211	9,403	16,160	9,300	1,999	308	66	48	87	65
Below Normal (17%)	327	422	4,697	1,701	4,934	1,040	541	67	66	48	114	113
Dry (22%)	42	287	6,742	757	2,122	996	308	77	67	48	62	65
Critical (15%)	41	22	385	406	599	351	107	68	64	48	54	78

Table 5B3-3-3b. Yolo Bypass Flow, Alternative 2 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	442	715	15,596	32,703	47,164	24,143	6,556	775	68	48	449	474
20%	400	157	4,859	15,075	19,899	9,329	3,163	78	68	48	445	434
30%	390	55	1,584	6,393	11,370	4,296	1,074	74	68	48	445	403
40%	281	29	543	3,001	8,363	2,506	331	71	68	48	445	403
50%	69	13	214	830	3,422	1,344	139	68	67	48	444	400
60%	61	9	134	469	1,309	529	113	65	67	48	390	312
70%	53	6	58	204	497	202	92	63	66	48	390	157
80%	42	0	20	68	156	63	80	59	64	48	55	59
90%	17	0	3	24	43	37	58	53	62	48	55	59
Long Term												
Full Simulation Period[a]	254	446	4,322	10,760	14,651	8,456	2,643	276	99	48	349	306
Water Year Types[b,c]												
Wet (32%)	304	587	5,387	28,351	34,946	21,388	6,941	611	171	48	443	423
Above Normal (15%)	263	868	2,212	8,753	15,494	8,634	1,863	304	66	48	383	375
Below Normal (17%)	422	392	4,514	1,613	4,560	951	507	67	66	48	365	296
Dry (22%)	167	286	6,664	713	2,005	907	308	77	67	48	292	228
Critical (15%)	72	22	386	398	577	336	107	68	64	48	180	111

Table 5B3-3-3c. Yolo Bypass Flow, Alternative 2 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	379	4	82	-1,743	-1,013	-125	-284	-9	0	0	266	334
20%	338	-1	37	-848	-468	-3	1	0	0	0	390	374
30%	333	-5	-20	-180	-891	-277	4	0	0	0	390	344
40%	228	2	-7	-70	-271	-266	0	0	0	0	390	344
50%	24	2	-6	-24	-155	-137	0	0	0	0	389	340
60%	21	0	6	-19	-71	-63	0	0	0	0	335	253
70%	23	1	3	-5	-5	0	0	0	0	0	335	98
80%	28	0	-1	-1	-5	-16	0	0	0	0	0	4
90%	13	0	3	2	-1	0	0	0	0	0	1	7
Long Term												
Full Simulation Period[a]	151	-21	-41	-380	-446	-283	-91	-25	0	0	251	227
Water Year Types[b,c]												
Wet (32%)	219	-9	23	-818	-808	-469	-207	-77	-1	0	304	344
Above Normal (15%)	226	-88	1	-650	-665	-666	-135	-5	0	0	296	310
Below Normal (17%)	95	-31	-183	-88	-374	-89	-34	0	0	0	251	183
Dry (22%)	125	-1	-78	-44	-117	-89	0	0	0	0	230	164
Critical (15%)	31	0	0	-8	-22	-15	0	0	0	0	126	33

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-3-4a. Yolo Bypass Flow, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	63	712	15,514	34,446	48,177	24,268	6,840	784	68	48	183	140
20%	61	158	4,823	15,924	20,367	9,332	3,162	78	68	48	55	60
30%	58	60	1,604	6,573	12,261	4,573	1,070	74	68	48	55	59
40%	53	27	550	3,070	8,634	2,772	331	71	68	48	55	59
50%	45	11	220	854	3,577	1,481	139	68	67	48	55	59
60%	40	8	128	487	1,380	592	113	65	67	48	55	59
70%	29	5	55	209	502	201	92	63	66	48	55	58
80%	15	1	22	69	160	78	80	59	64	48	55	55
90%	4	0	0	23	44	37	58	53	62	48	54	52
Long Term												
Full Simulation Period[a]	104	467	4,363	11,141	15,097	8,739	2,735	302	100	48	98	80
Water Year Types[b,c]												
Wet (32%)	86	596	5,365	29,169	35,753	21,857	7,148	688	172	48	139	79
Above Normal (15%)	37	956	2,211	9,403	16,160	9,300	1,999	308	66	48	87	65
Below Normal (17%)	327	422	4,697	1,701	4,934	1,040	541	67	66	48	114	113
Dry (22%)	42	287	6,742	757	2,122	996	308	77	67	48	62	65
Critical (15%)	41	22	385	406	599	351	107	68	64	48	54	78

Table 5B3-3-4b. Yolo Bypass Flow, Alternative 3 020121, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	430	830	15,584	32,747	45,847	22,551	6,540	770	68	48	450	463
20%	390	157	5,348	14,943	21,190	9,216	3,163	78	68	48	445	410
30%	273	56	1,610	6,394	11,098	4,296	1,074	74	68	48	445	403
40%	64	29	672	3,003	8,308	2,511	331	71	68	48	445	374
50%	61	13	213	830	3,423	1,344	139	68	67	48	426	298
60%	53	9	133	469	1,322	526	113	65	67	48	390	125
70%	44	6	53	200	497	202	92	63	66	48	55	59
80%	36	1	22	68	156	65	80	59	64	48	55	59
90%	11	0	3	24	43	37	58	53	62	48	55	57
Long Term												
Full Simulation Period[a]	215	461	4,370	10,763	14,629	8,366	2,558	273	99	48	308	265
Water Year Types[b,c]												
Wet (32%)	280	587	5,413	28,340	34,830	21,132	6,673	601	171	48	443	379
Above Normal (15%)	179	936	2,222	8,796	15,615	8,571	1,864	304	66	48	344	348
Below Normal (17%)	411	407	4,547	1,615	4,526	950	507	67	66	48	309	243
Dry (22%)	89	296	6,827	712	2,018	912	308	77	67	48	236	163
Critical (15%)	72	22	370	398	577	337	107	68	64	48	87	111

Table 5B3-3-4c. Yolo Bypass Flow, Alternative 3 020121 minus No Action Alternative 011221, Monthly Flow (cfs)

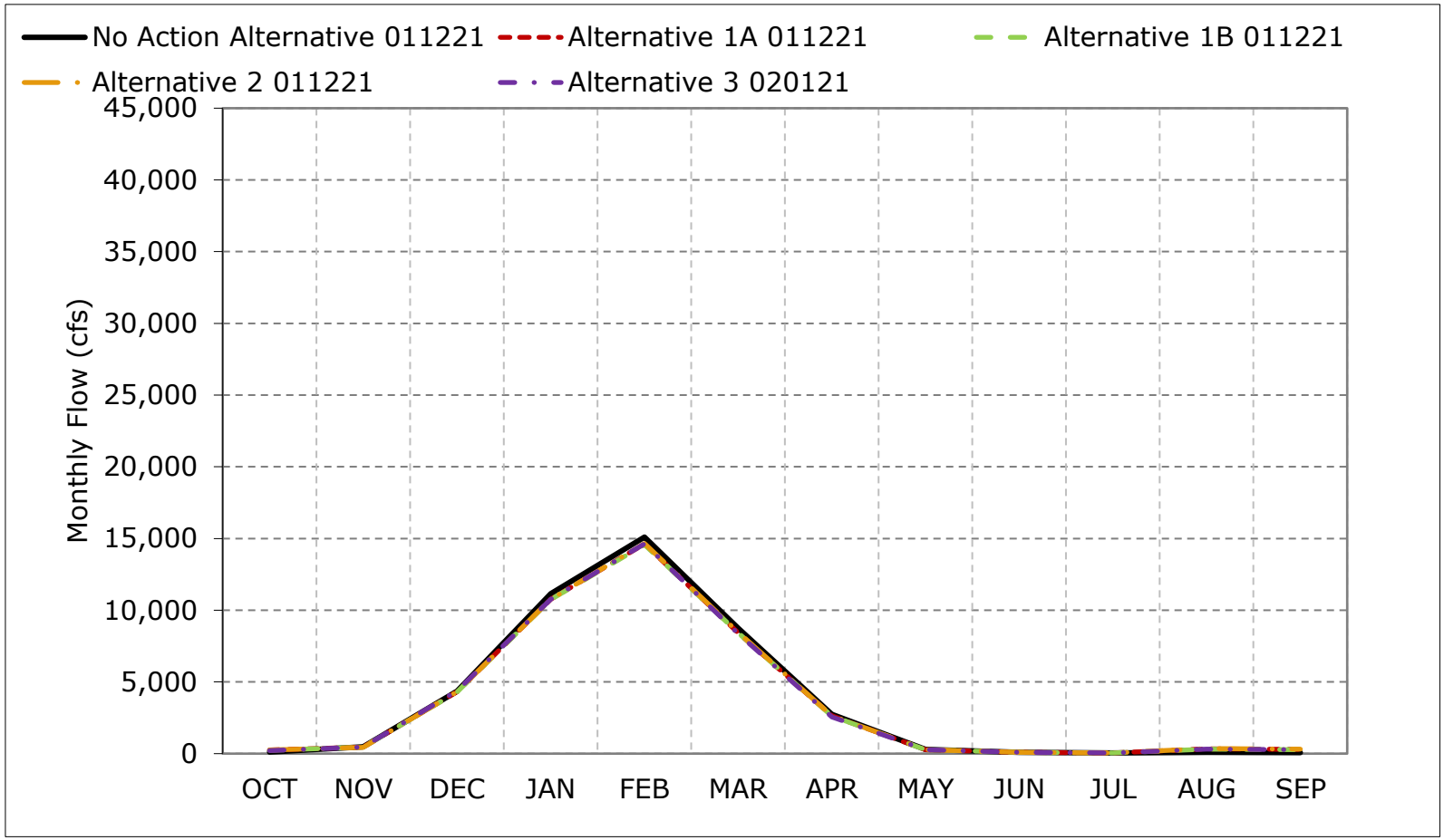
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	367	119	70	-1,699	-2,330	-1,717	-300	-14	0	0	266	323
20%	329	-1	525	-981	823	-116	1	0	0	0	390	350
30%	216	-5	6	-179	-1,163	-278	4	0	0	0	390	344
40%	11	2	122	-67	-326	-261	0	0	0	0	390	314
50%	16	2	-7	-23	-154	-138	0	0	0	0	371	239
60%	13	0	5	-19	-58	-66	0	0	0	0	335	66
70%	15	1	-1	-9	-5	0	0	0	0	0	0	1
80%	21	1	0	-1	-5	-14	0	0	0	0	0	4
90%	7	0	3	2	-1	0	0	0	0	0	1	5
Long Term												
Full Simulation Period[a]	111	-7	8	-378	-468	-372	-176	-28	0	0	210	185
Water Year Types[b,c]												
Wet (32%)	194	-9	48	-829	-923	-725	-475	-87	-1	0	304	299
Above Normal (15%)	142	-20	11	-608	-545	-729	-135	-5	0	0	258	283
Below Normal (17%)	84	-15	-150	-86	-408	-90	-34	0	0	0	195	130
Dry (22%)	47	8	85	-45	-105	-84	0	0	0	0	174	98
Critical (15%)	31	0	-15	-8	-22	-14	0	0	0	0	33	34

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

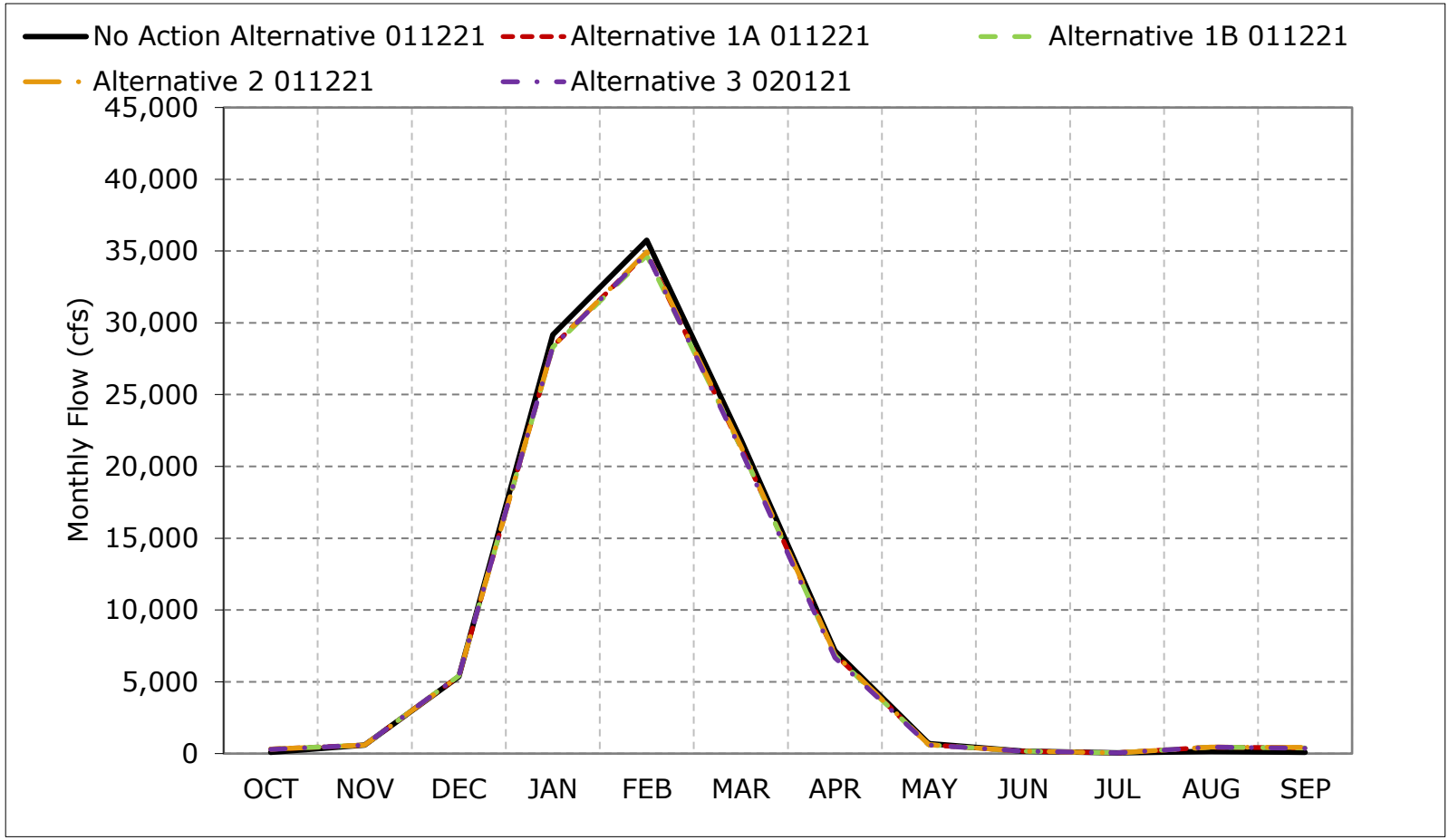
c These results are displayed with calendar year - year type sorting.

Figure 5B3-3-1. Yolo Bypass Flow, Long-Term Average Flow



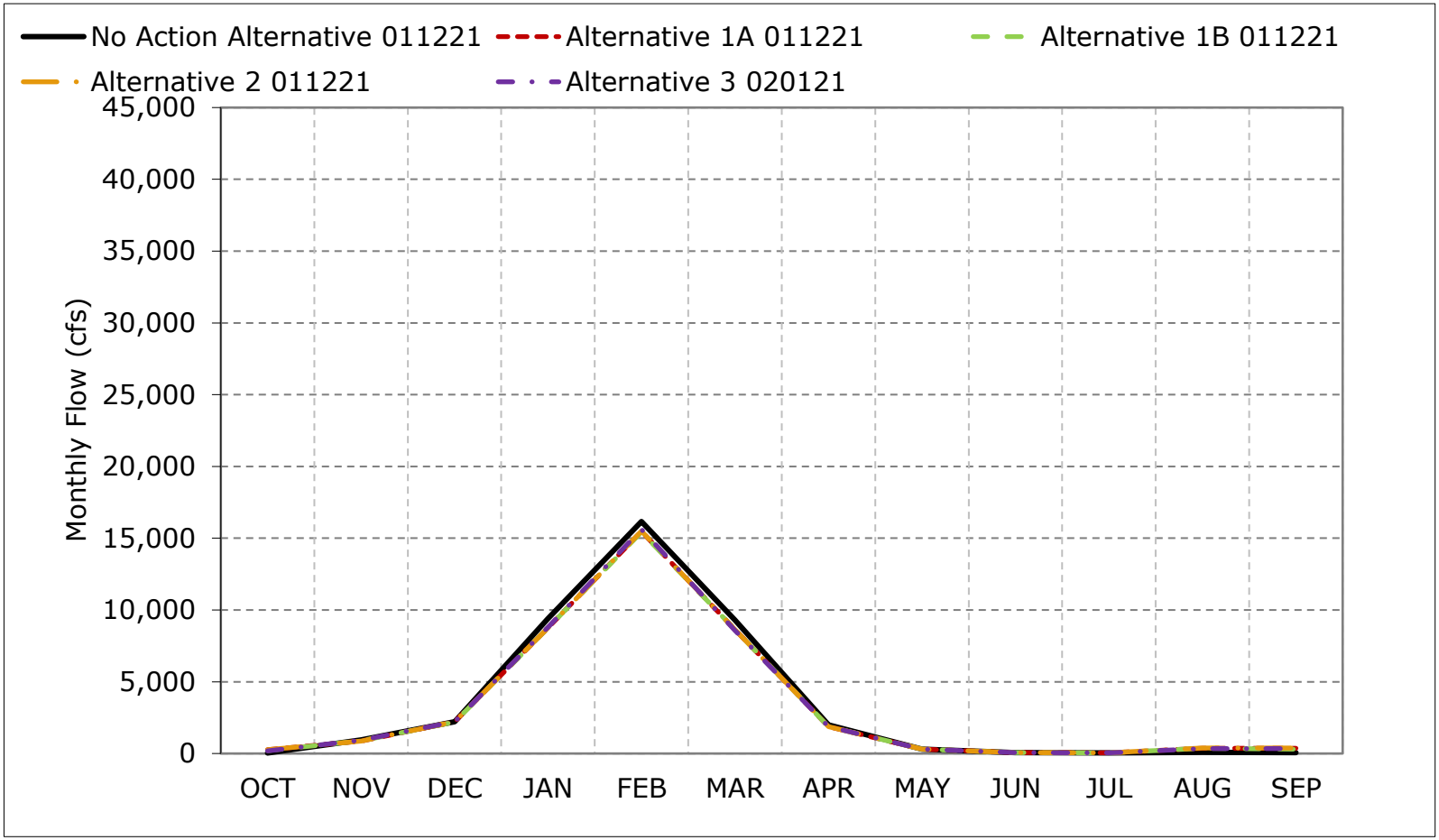
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-3-2. Yolo Bypass Flow, Wet Year Average Flow



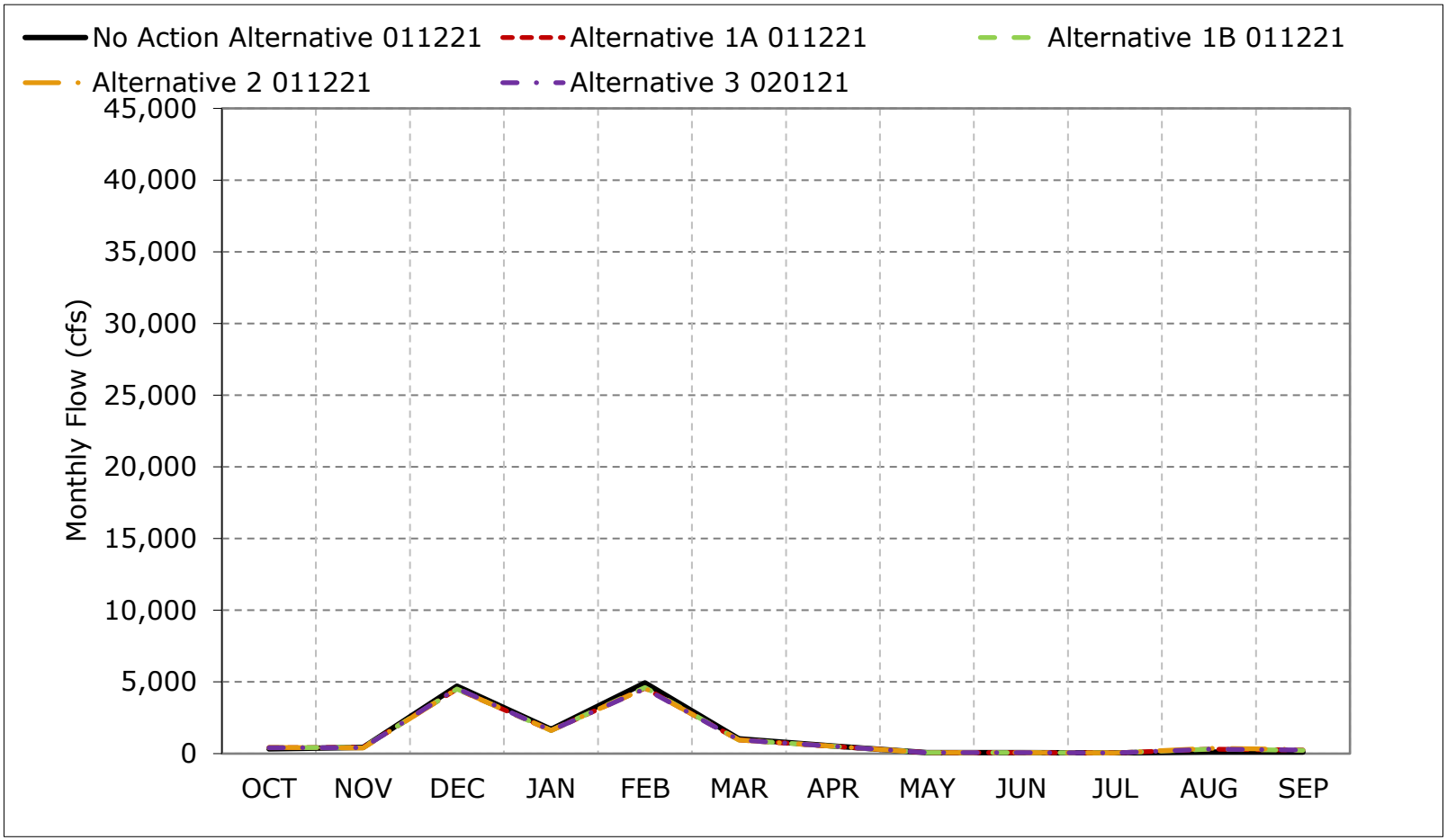
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-3-3. Yolo Bypass Flow, Above Normal Year Average Flow



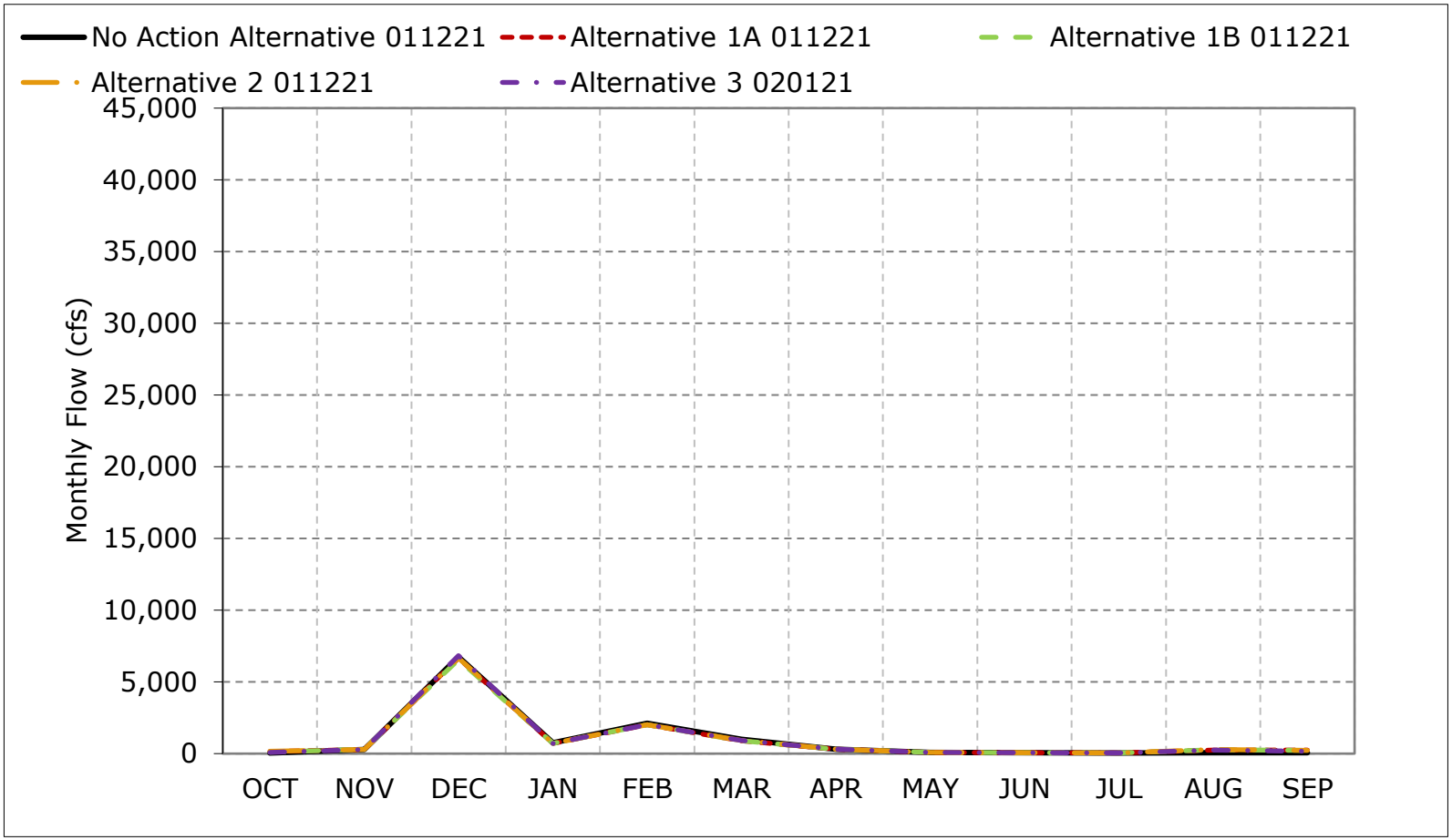
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-3-4. Yolo Bypass Flow, Below Normal Year Average Flow



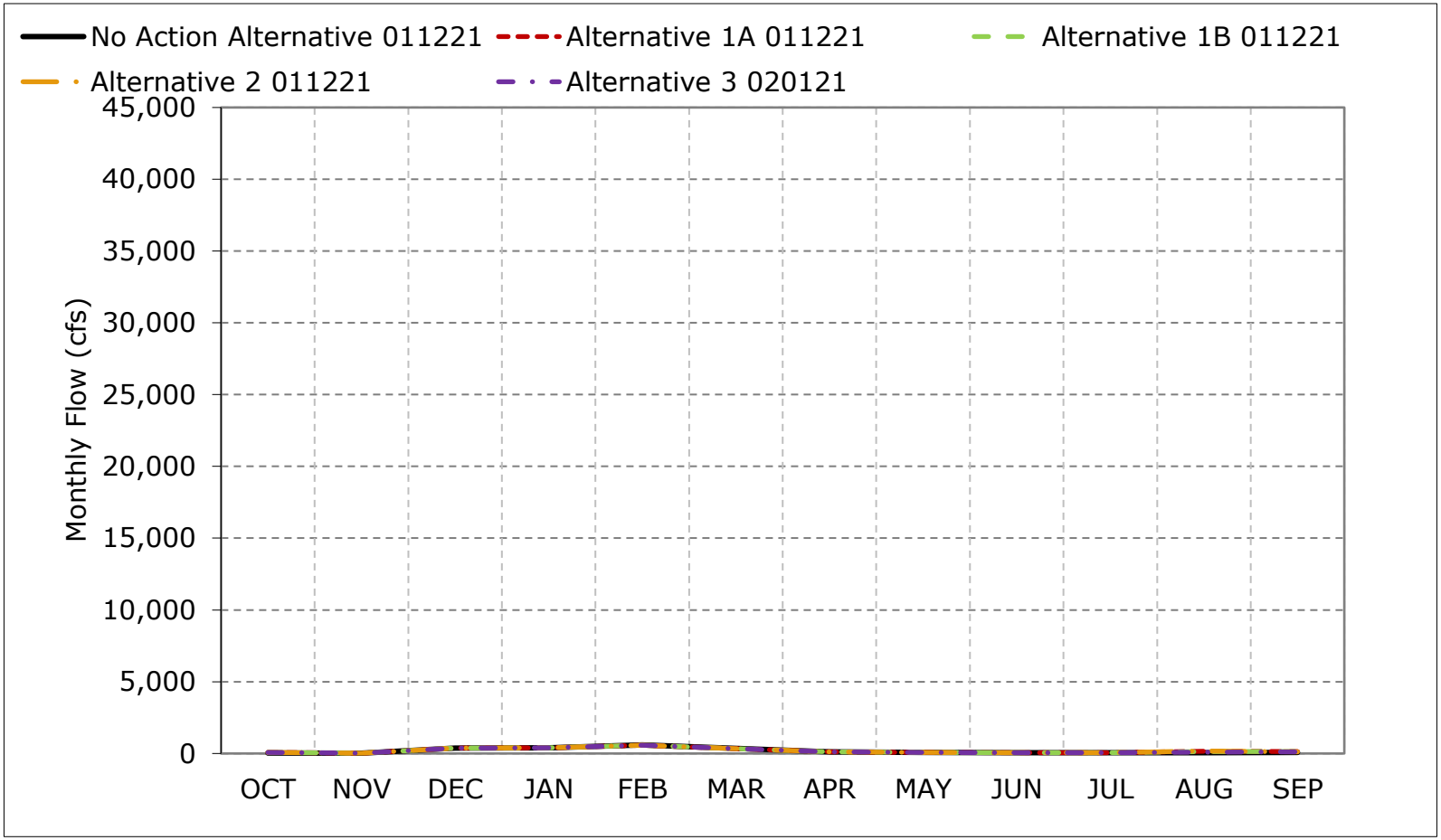
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-3-5. Yolo Bypass Flow, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-3-6. Yolo Bypass Flow, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-3-7. Yolo Bypass Flow, October

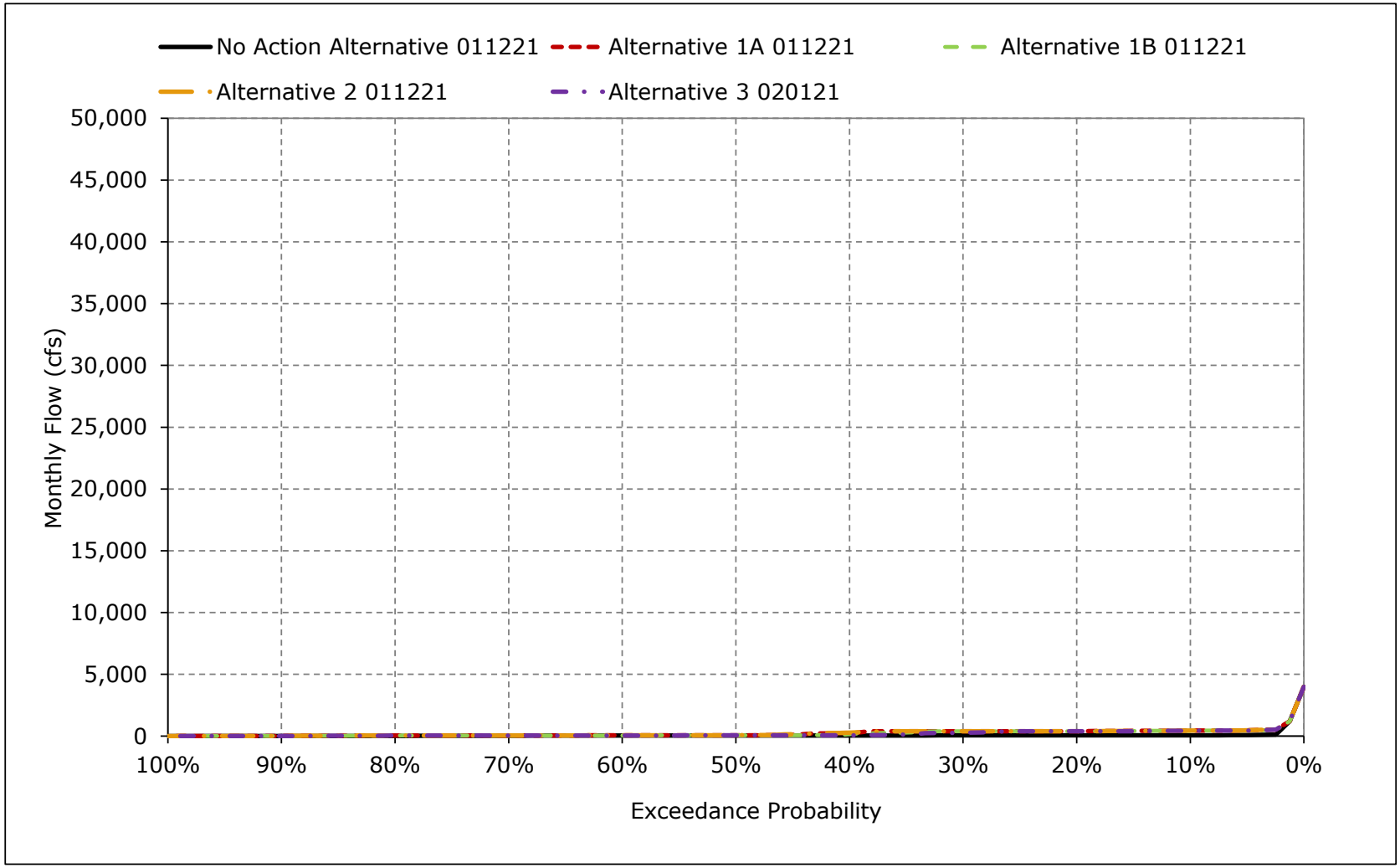


Figure 5B3-3-8. Yolo Bypass Flow, November

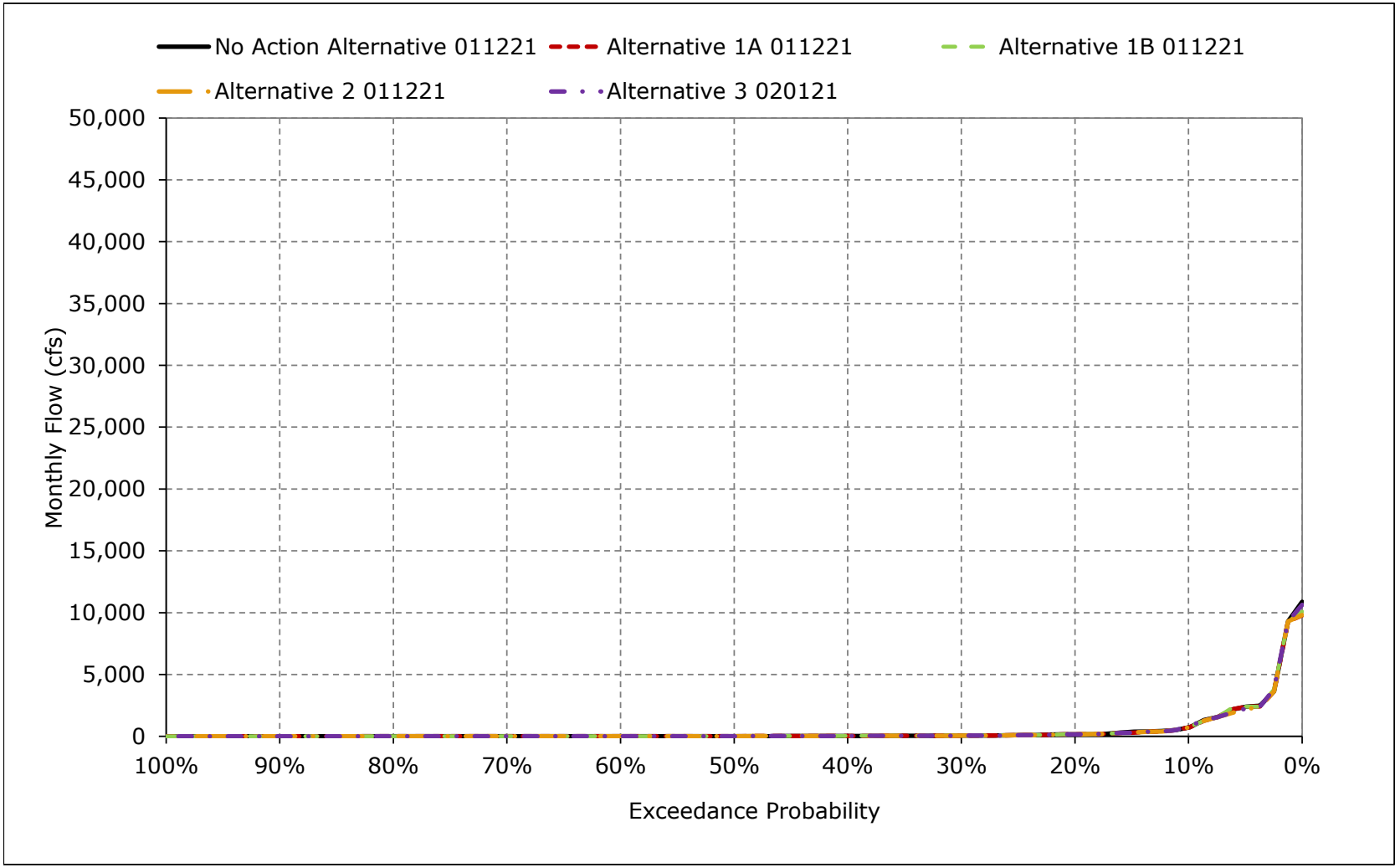


Figure 5B3-3-9. Yolo Bypass Flow, December

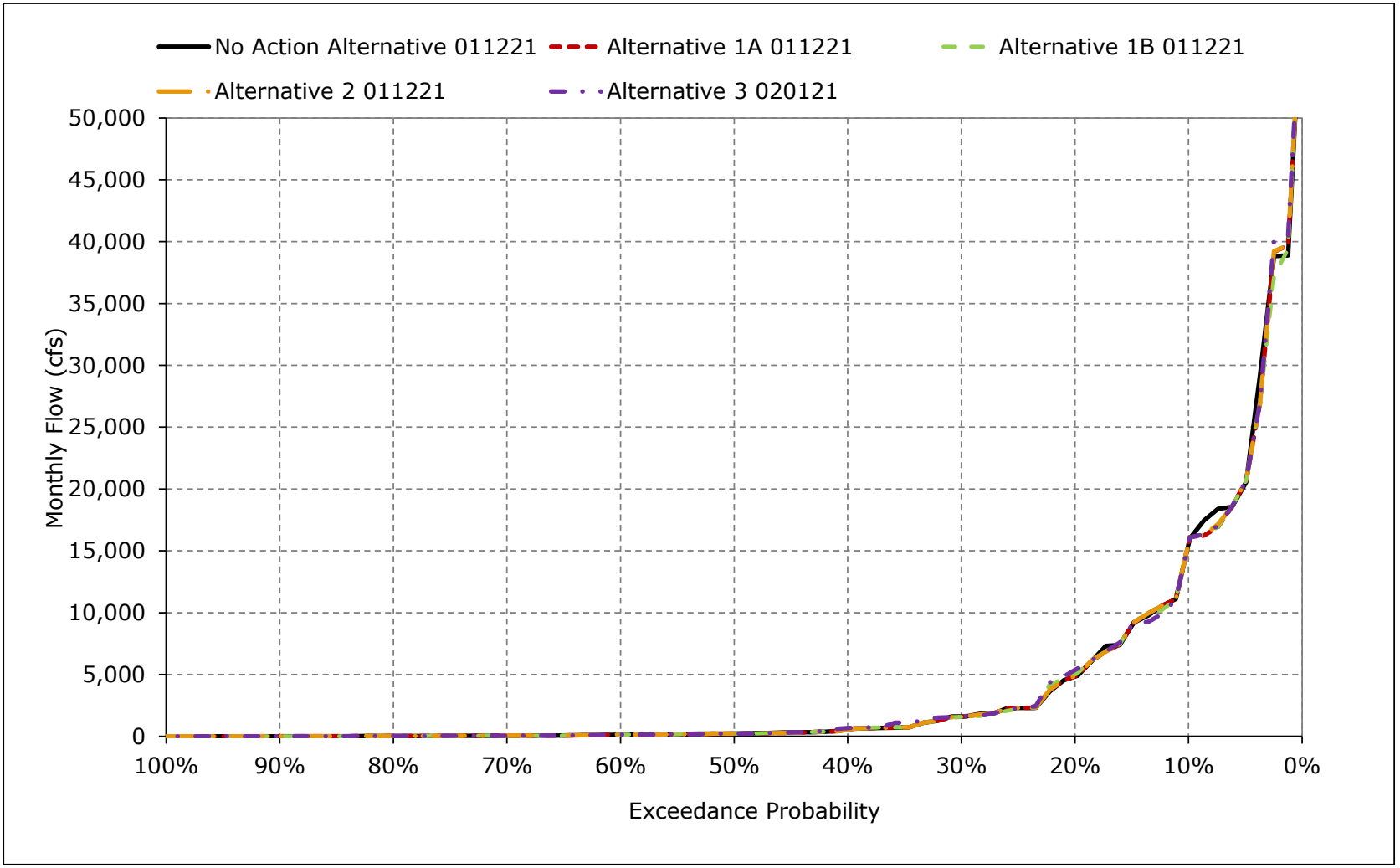


Figure 5B3-3-10. Yolo Bypass Flow, January

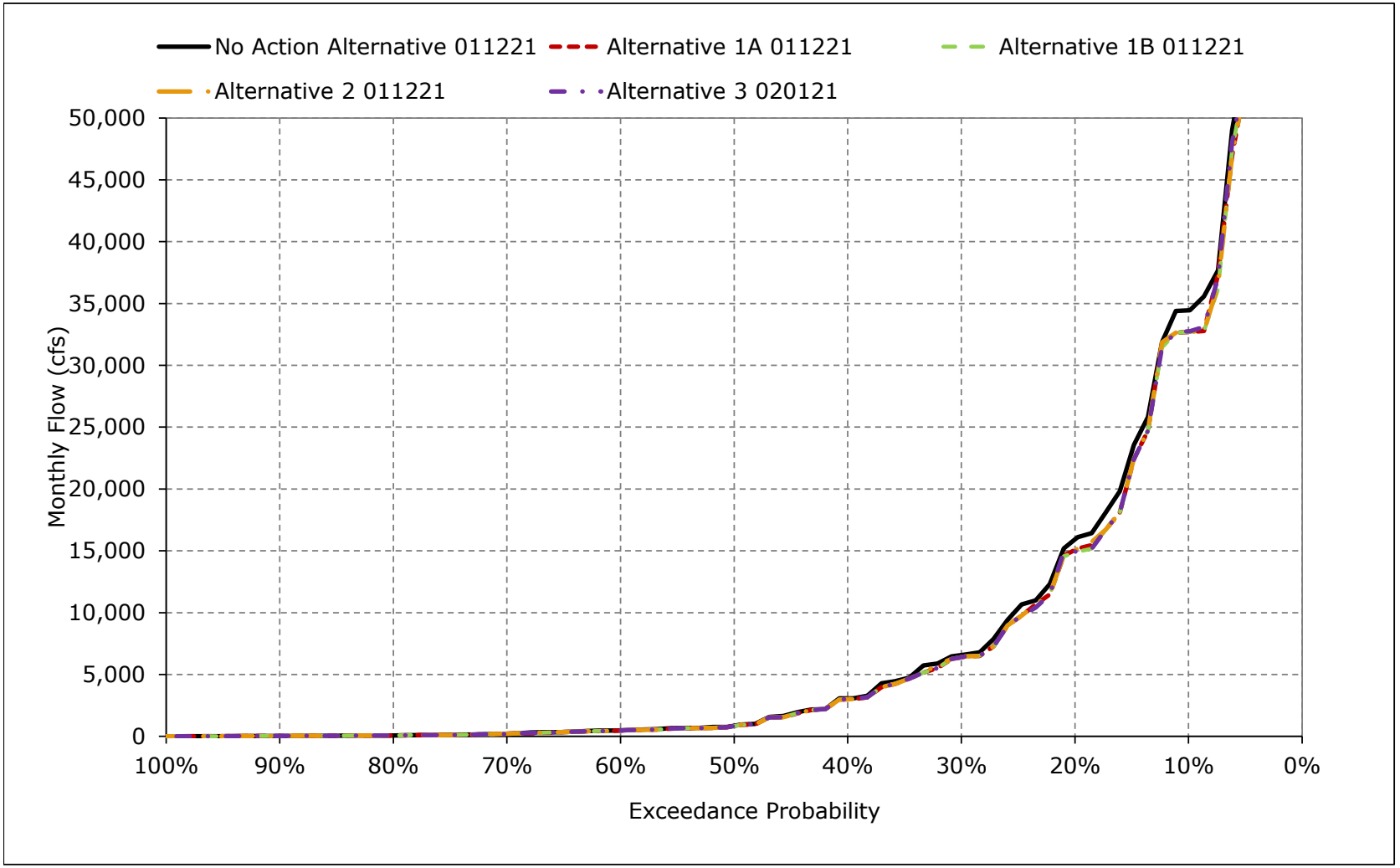


Figure 5B3-3-11. Yolo Bypass Flow, February

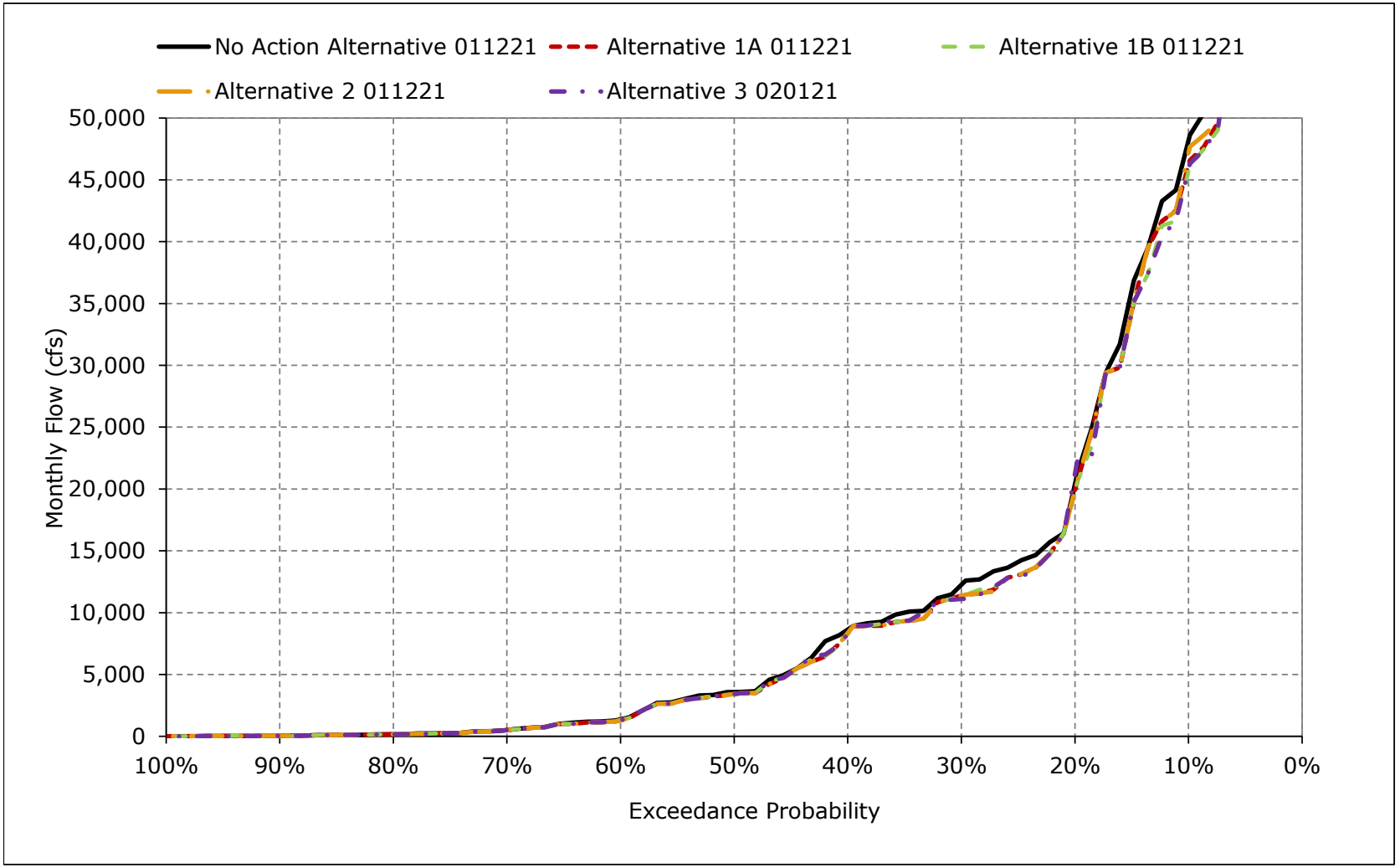


Figure 5B3-3-12. Yolo Bypass Flow, March

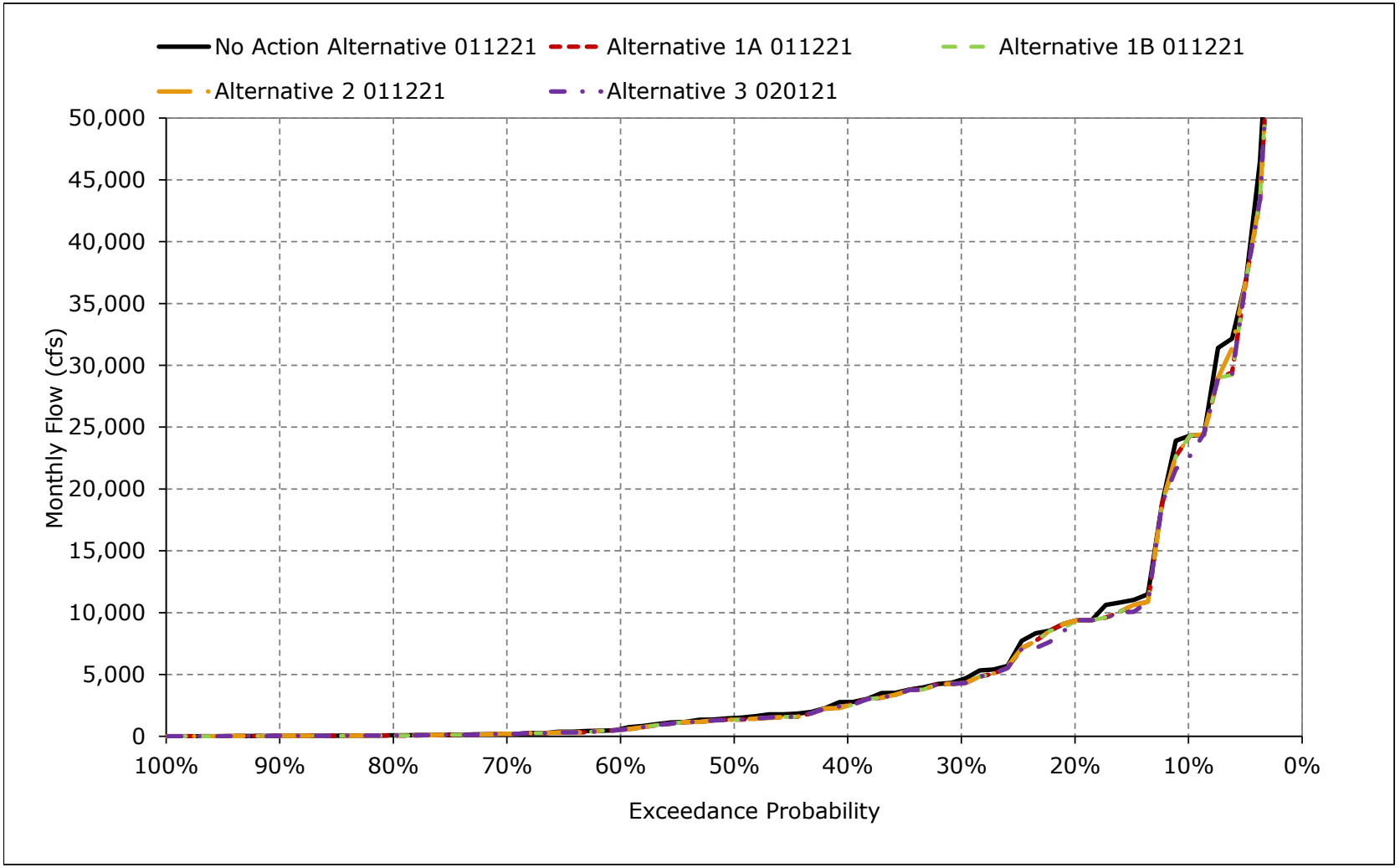


Figure 5B3-3-13. Yolo Bypass Flow, April

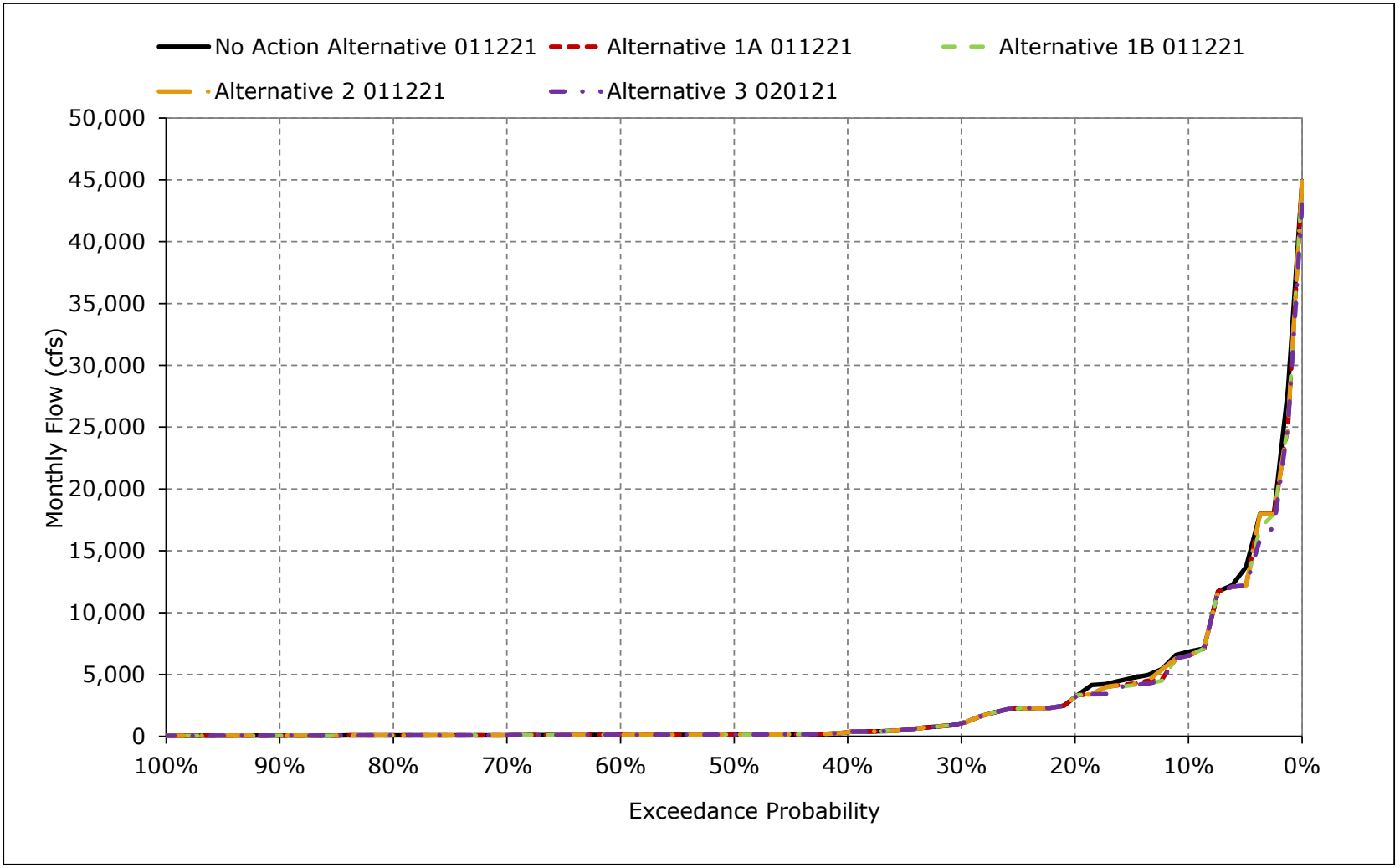


Figure 5B3-3-14. Yolo Bypass Flow, May

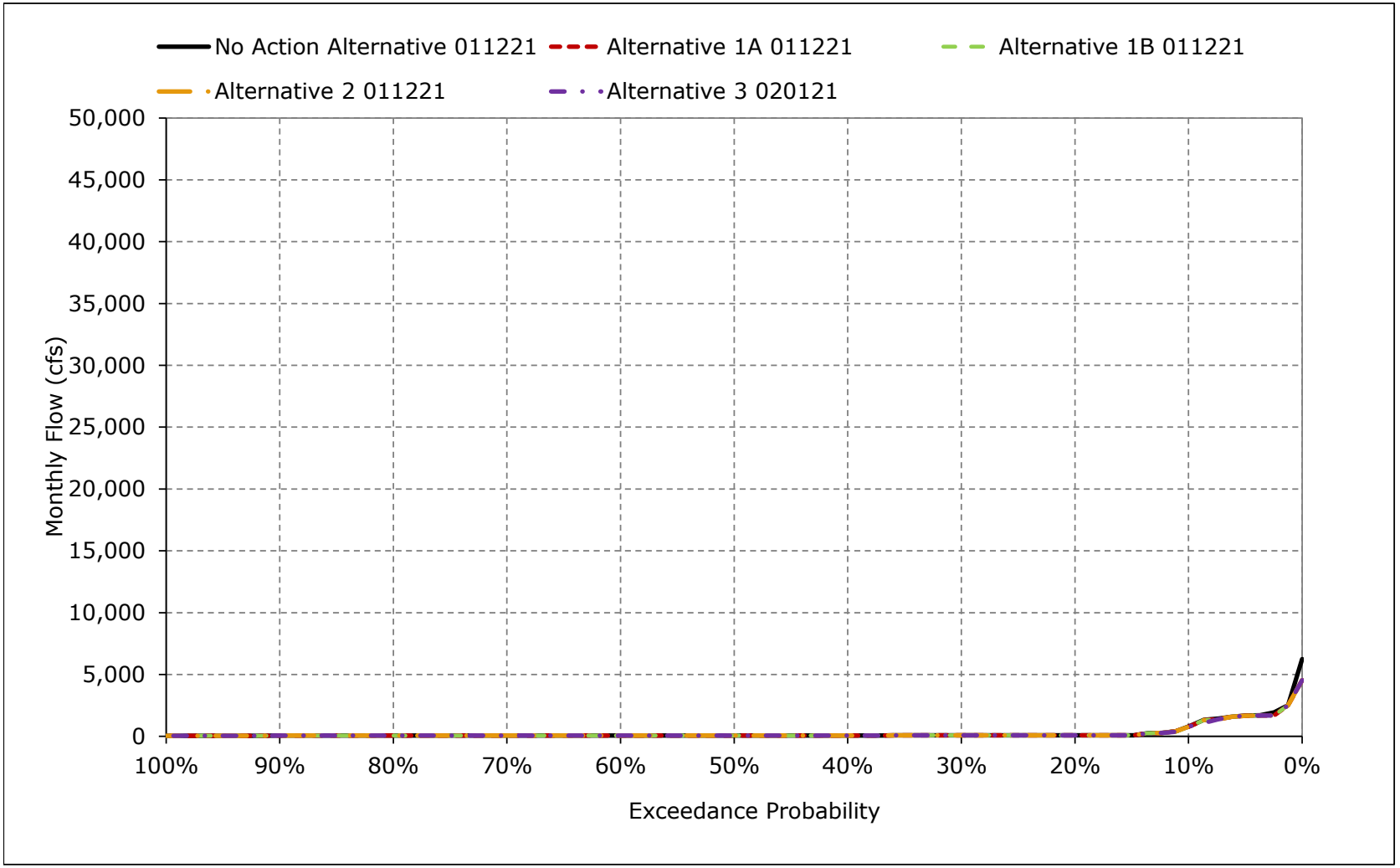


Figure 5B3-3-15. Yolo Bypass Flow, June

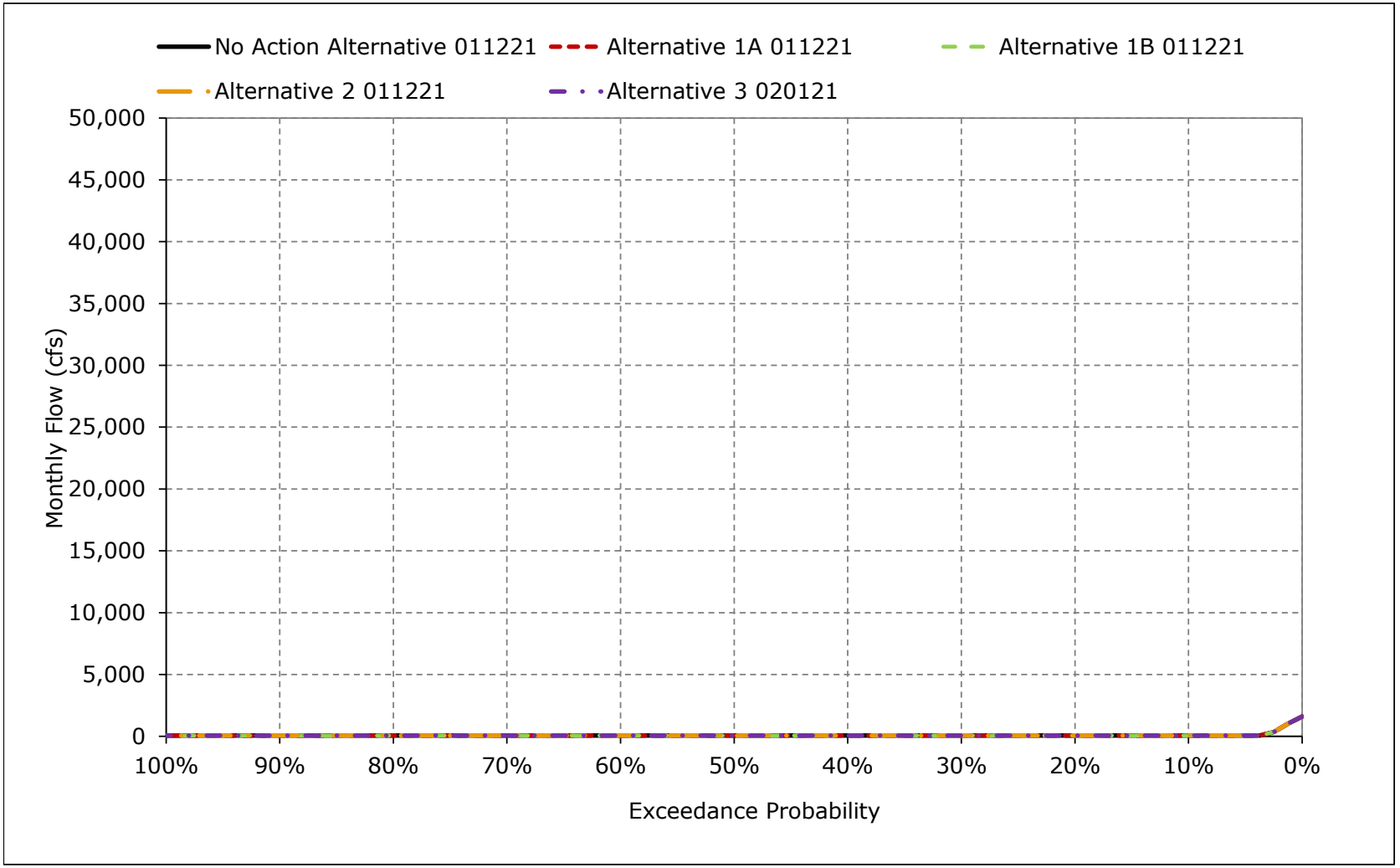


Figure 5B3-3-16. Yolo Bypass Flow, July

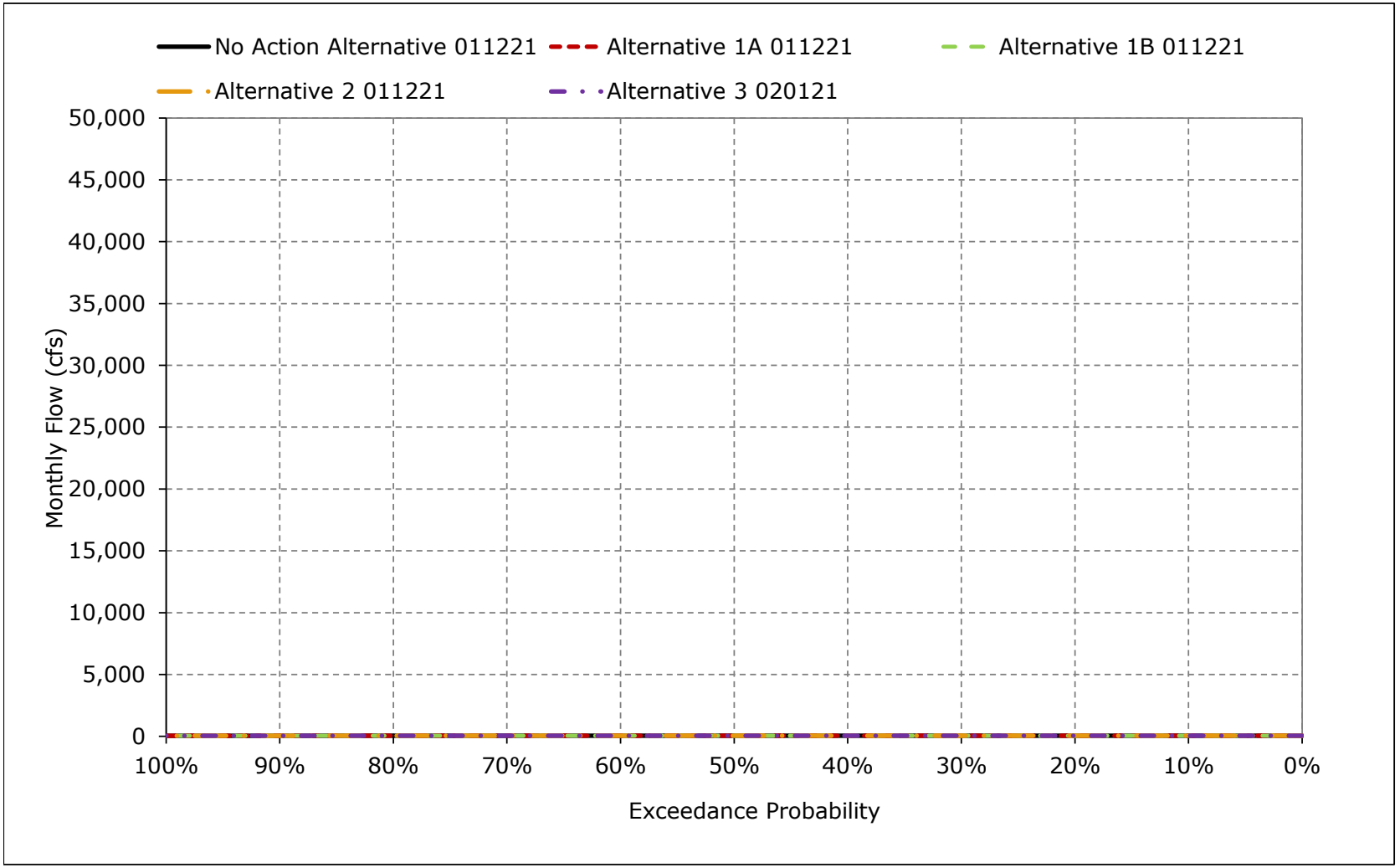


Figure 5B3-3-17. Yolo Bypass Flow, August

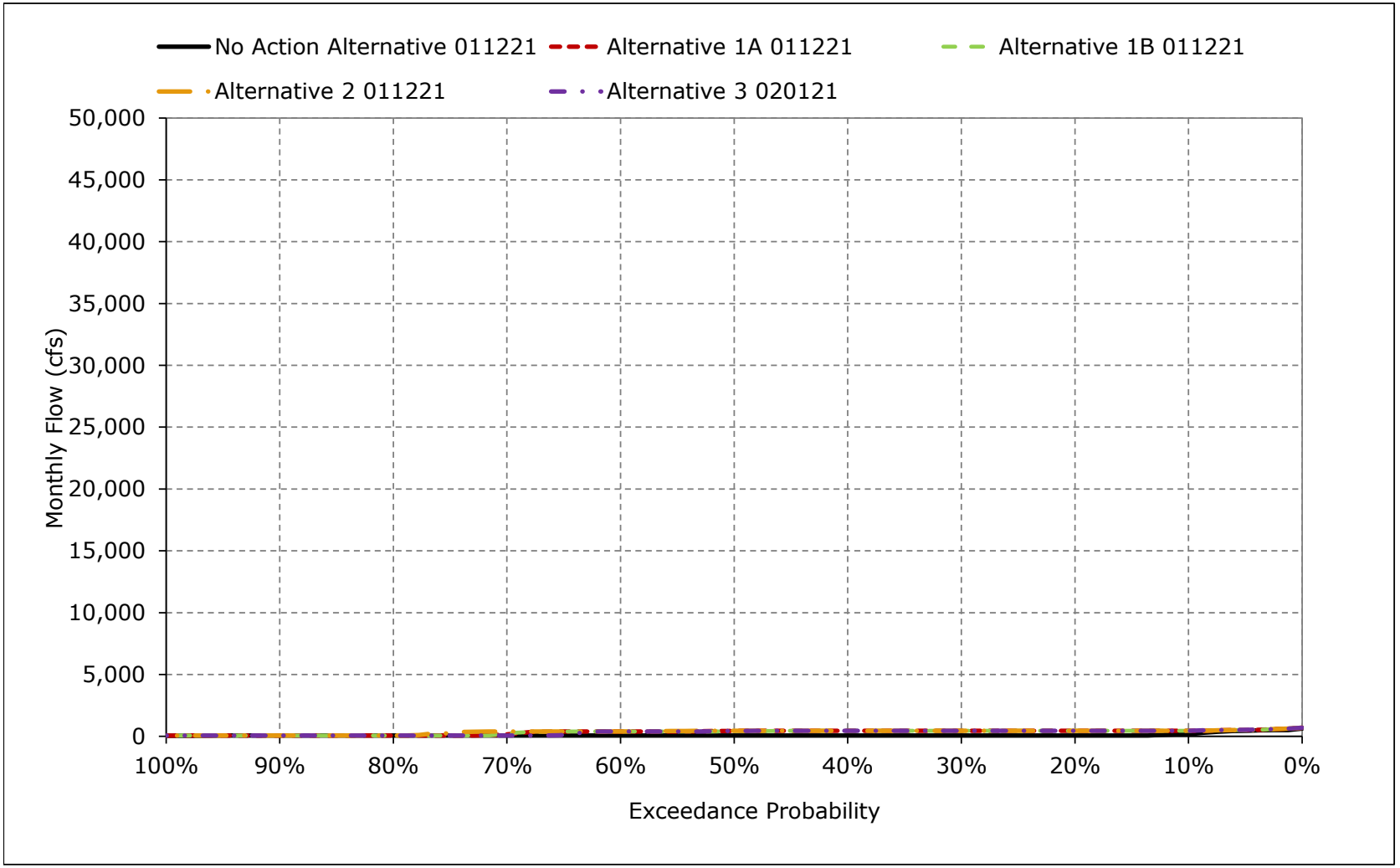


Figure 5B3-3-18. Yolo Bypass Flow, September

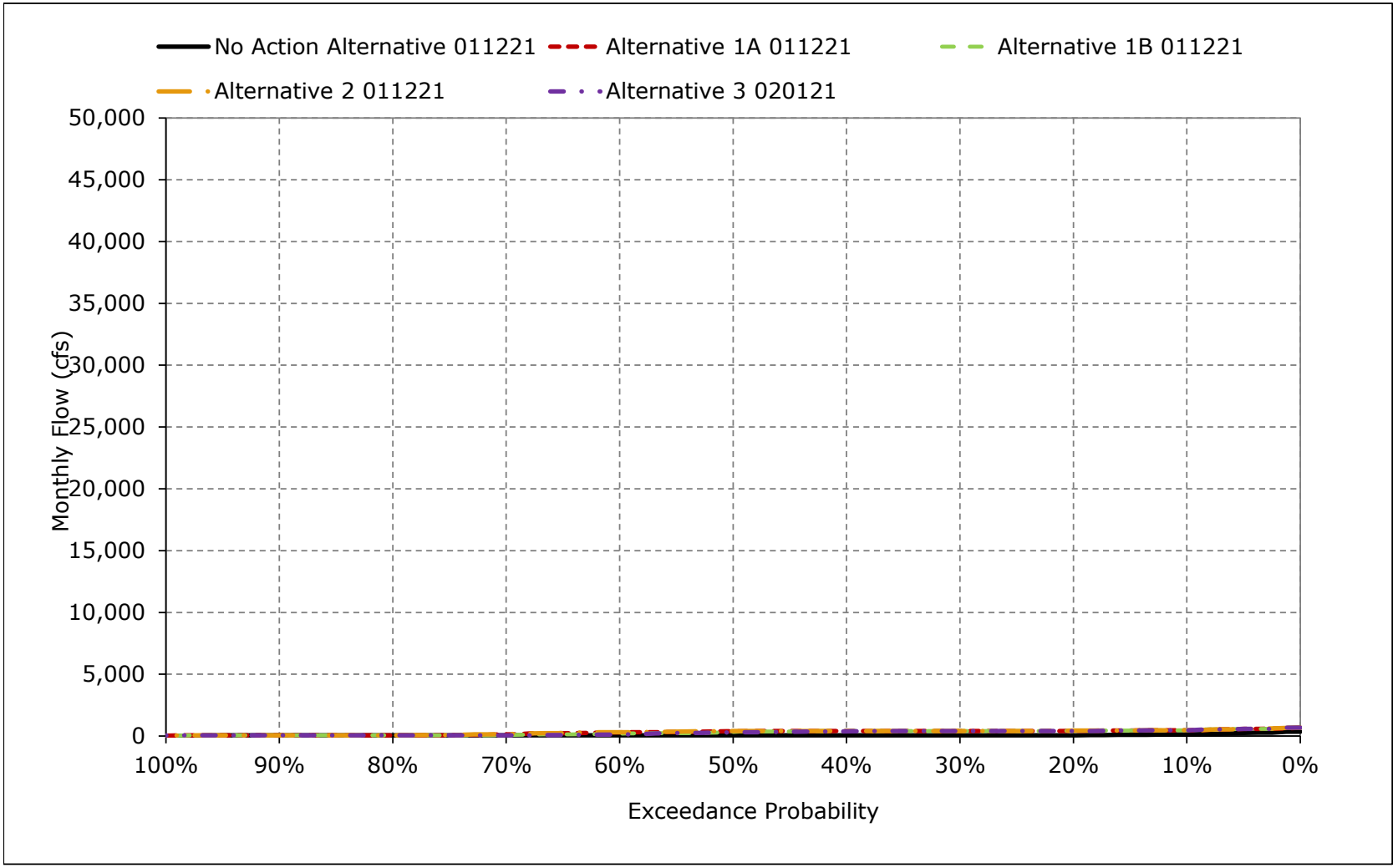


Table 5B3-4-1a. Sacramento River Flow at Rio Vista, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,079	19,997	58,275	86,943	107,488	77,055	53,732	36,423	20,683	14,132	10,315	13,485
20%	9,494	11,733	32,478	58,610	67,939	51,031	37,503	25,881	11,923	13,600	9,929	13,013
30%	7,487	9,721	19,457	41,043	56,217	37,225	21,624	16,340	8,741	12,240	9,571	12,805
40%	6,816	8,799	15,418	26,232	45,365	29,656	19,570	13,145	8,506	11,358	9,304	12,107
50%	6,181	8,476	11,939	20,149	31,081	21,568	14,497	11,463	8,071	10,755	8,586	8,192
60%	5,336	7,921	11,019	15,921	23,266	19,223	11,702	9,901	7,696	9,396	7,319	6,098
70%	4,695	6,328	10,006	12,152	17,598	14,883	9,473	8,482	7,085	8,390	5,726	5,237
80%	4,198	5,558	8,478	10,211	14,582	11,654	8,746	7,372	6,370	7,187	4,745	4,598
90%	3,722	4,108	6,375	9,155	11,471	9,087	8,035	6,763	5,454	4,751	4,212	3,849
Long Term												
Full Simulation Period[a]	7,025	10,743	22,231	36,592	46,729	35,367	22,883	16,450	10,621	10,074	7,645	8,801
Water Year Types[b,c]												
Wet (32%)	9,696	13,851	25,847	70,937	83,943	63,299	40,717	27,888	16,646	11,232	9,409	13,023
Above Normal (15%)	7,445	12,570	20,562	40,616	53,162	44,974	24,237	18,800	10,416	12,493	9,762	12,683
Below Normal (17%)	7,930	11,683	25,527	20,045	32,749	19,114	15,826	12,259	8,018	12,113	8,835	7,060
Dry (22%)	4,465	8,389	23,939	13,903	21,286	17,409	11,445	8,735	7,733	8,930	4,994	4,862
Critical (15%)	3,606	4,615	9,659	11,489	14,141	11,142	8,280	5,783	5,142	4,485	4,291	3,710

Table 5B3-4-1b. Sacramento River Flow at Rio Vista, Alternative 1A 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,081	19,305	56,502	83,503	104,639	74,843	50,241	36,340	15,392	14,204	10,521	13,857
20%	9,864	11,067	32,579	56,279	67,625	50,418	36,342	25,857	11,309	13,540	10,240	13,366
30%	7,616	9,783	19,453	39,612	54,783	36,028	21,637	16,090	8,702	12,240	9,872	13,041
40%	7,095	8,775	15,431	25,608	44,225	29,625	19,596	13,031	8,495	11,494	9,727	12,436
50%	6,722	8,585	11,591	19,802	30,037	20,385	14,530	11,321	8,043	10,927	8,974	8,300
60%	6,077	8,059	10,804	15,457	22,695	17,444	11,977	9,853	7,714	9,667	8,202	6,675
70%	5,780	6,993	9,571	11,612	17,213	14,382	9,709	8,504	7,101	8,976	6,544	6,050
80%	5,356	6,332	8,553	10,078	14,352	11,416	8,767	7,420	6,356	7,603	5,760	5,624
90%	4,372	4,455	6,495	9,223	11,327	9,105	8,065	6,826	5,459	5,117	4,794	4,577
Long Term												
Full Simulation Period[a]	7,538	10,840	22,076	35,811	45,805	34,305	22,578	16,320	10,441	10,303	8,217	9,306
Water Year Types[b,c]												
Wet (32%)	9,817	13,508	25,838	69,703	82,661	62,244	39,914	27,654	16,427	11,004	9,663	13,338
Above Normal (15%)	7,734	12,431	20,384	39,154	51,959	43,084	23,994	18,656	9,820	12,538	10,030	13,040
Below Normal (17%)	8,418	12,095	25,165	19,523	31,681	17,965	15,632	12,126	7,872	12,280	9,421	7,441
Dry (22%)	5,442	9,053	23,889	13,595	20,748	16,366	11,509	8,708	7,716	9,700	6,131	5,725
Critical (15%)	4,520	4,683	9,298	11,360	13,859	10,961	8,310	5,738	5,178	5,149	4,996	4,386

Table 5B3-4-1c. Sacramento River Flow at Rio Vista, Alternative 1A 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2	-692	-1,773	-3,440	-2,850	-2,212	-3,491	-82	-5,291	73	205	372
20%	370	-666	101	-2,331	-314	-613	-1,161	-25	-614	-59	311	352
30%	129	62	-3	-1,431	-1,434	-1,197	13	-250	-39	0	300	235
40%	280	-24	13	-624	-1,140	-31	26	-114	-11	136	423	329
50%	541	109	-348	-347	-1,044	-1,183	33	-143	-28	173	388	108
60%	741	138	-215	-464	-571	-1,779	275	-49	18	271	883	577
70%	1,086	665	-435	-540	-385	-501	236	22	16	587	817	813
80%	1,158	774	75	-133	-230	-238	21	48	-14	416	1,015	1,027
90%	650	347	120	68	-144	18	30	63	5	366	582	727
Long Term												
Full Simulation Period[a]	513	97	-155	-781	-925	-1,063	-305	-130	-180	229	573	505
Water Year Types[b,c]												
Wet (32%)	122	-342	-9	-1,234	-1,283	-1,055	-803	-233	-219	-228	253	315
Above Normal (15%)	289	-139	-179	-1,462	-1,203	-1,891	-243	-144	-596	46	268	357
Below Normal (17%)	489	412	-362	-522	-1,068	-1,149	-195	-134	-145	167	587	381
Dry (22%)	978	664	-51	-308	-538	-1,043	63	-27	-17	770	1,138	863
Critical (15%)	914	69	-361	-128	-283	-181	30	-45	36	664	705	676

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-4-2a. Sacramento River Flow at Rio Vista, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,079	19,997	58,275	86,943	107,488	77,055	53,732	36,423	20,683	14,132	10,315	13,485
20%	9,494	11,733	32,478	58,610	67,939	51,031	37,503	25,881	11,923	13,600	9,929	13,013
30%	7,487	9,721	19,457	41,043	56,217	37,225	21,624	16,340	8,741	12,240	9,571	12,805
40%	6,816	8,799	15,418	26,232	45,365	29,656	19,570	13,145	8,506	11,358	9,304	12,107
50%	6,181	8,476	11,939	20,149	31,081	21,568	14,497	11,463	8,071	10,755	8,586	8,192
60%	5,336	7,921	11,019	15,921	23,266	19,223	11,702	9,901	7,696	9,396	7,319	6,098
70%	4,695	6,328	10,006	12,152	17,598	14,883	9,473	8,482	7,085	8,390	5,726	5,237
80%	4,198	5,558	8,478	10,211	14,582	11,654	8,746	7,372	6,370	7,187	4,745	4,598
90%	3,722	4,108	6,375	9,155	11,471	9,087	8,035	6,763	5,454	4,751	4,212	3,849
Long Term												
Full Simulation Period[a]	7,025	10,743	22,231	36,592	46,729	35,367	22,883	16,450	10,621	10,074	7,645	8,801
Water Year Types[b,c]												
Wet (32%)	9,696	13,851	25,847	70,937	83,943	63,299	40,717	27,888	16,646	11,232	9,409	13,023
Above Normal (15%)	7,445	12,570	20,562	40,616	53,162	44,974	24,237	18,800	10,416	12,493	9,762	12,683
Below Normal (17%)	7,930	11,683	25,527	20,045	32,749	19,114	15,826	12,259	8,018	12,113	8,835	7,060
Dry (22%)	4,465	8,389	23,939	13,903	21,286	17,409	11,445	8,735	7,733	8,930	4,994	4,862
Critical (15%)	3,606	4,615	9,659	11,489	14,141	11,142	8,280	5,783	5,142	4,485	4,291	3,710

Table 5B3-4-2b. Sacramento River Flow at Rio Vista, Alternative 1B 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,082	19,299	56,431	83,494	104,885	74,918	50,243	35,429	15,394	14,204	10,521	13,874
20%	9,868	11,067	33,083	56,414	67,619	50,403	36,341	25,863	11,310	13,542	10,240	13,355
30%	7,637	9,780	19,639	39,600	55,025	36,026	21,660	16,089	8,697	12,249	9,852	13,028
40%	7,074	8,804	15,431	25,608	45,036	29,622	19,596	13,031	8,491	11,553	9,707	12,283
50%	6,614	8,635	11,587	19,838	30,496	20,385	14,530	11,323	8,015	10,920	8,981	8,348
60%	6,004	8,205	10,792	15,485	22,751	17,443	11,977	9,852	7,696	9,699	8,204	6,630
70%	5,725	6,993	9,574	11,611	17,217	14,364	9,709	8,538	7,102	9,038	6,467	6,050
80%	5,085	6,293	8,569	10,076	14,447	11,416	8,848	7,420	6,356	7,672	5,753	5,580
90%	4,204	4,507	6,503	9,184	11,449	9,102	8,063	6,826	5,459	5,097	4,695	4,560
Long Term												
Full Simulation Period[a]	7,510	10,919	22,116	35,784	45,799	34,290	22,552	16,296	10,438	10,320	8,219	9,312
Water Year Types[b,c]												
Wet (32%)	9,804	13,508	25,926	69,626	82,460	62,215	39,793	27,583	16,402	11,006	9,661	13,347
Above Normal (15%)	7,738	12,518	20,508	39,234	51,960	43,132	24,030	18,656	9,826	12,543	10,025	13,015
Below Normal (17%)	8,417	12,317	25,267	19,543	31,813	17,973	15,651	12,130	7,857	12,282	9,424	7,486
Dry (22%)	5,412	9,149	23,739	13,579	20,840	16,351	11,521	8,704	7,749	9,764	6,158	5,638
Critical (15%)	4,398	4,738	9,359	11,260	13,962	10,892	8,316	5,726	5,174	5,156	4,976	4,507

Table 5B3-4-2c. Sacramento River Flow at Rio Vista, Alternative 1B 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3	-698	-1,845	-3,449	-2,603	-2,138	-3,489	-994	-5,288	73	205	389
20%	373	-666	606	-2,196	-320	-628	-1,162	-18	-613	-58	311	341
30%	149	59	182	-1,443	-1,192	-1,199	36	-251	-44	9	281	223
40%	258	4	13	-624	-329	-33	25	-114	-15	195	403	175
50%	433	159	-352	-311	-585	-1,182	33	-140	-56	166	395	156
60%	668	284	-227	-436	-514	-1,780	275	-49	0	303	885	533
70%	1,030	666	-432	-541	-381	-519	236	56	17	649	741	813
80%	888	735	90	-134	-136	-238	102	48	-14	485	1,008	982
90%	481	399	128	29	-22	15	28	63	5	346	483	711
Long Term												
Full Simulation Period[a]	485	177	-115	-808	-930	-1,077	-331	-155	-183	245	575	511
Water Year Types[b,c]												
Wet (32%)	108	-343	79	-1,311	-1,484	-1,084	-924	-304	-244	-226	251	324
Above Normal (15%)	293	-52	-54	-1,382	-1,202	-1,843	-207	-144	-590	50	263	332
Below Normal (17%)	487	634	-260	-502	-936	-1,142	-176	-129	-160	169	589	426
Dry (22%)	948	760	-200	-324	-446	-1,058	76	-31	16	833	1,164	776
Critical (15%)	793	123	-300	-228	-179	-250	36	-56	32	671	685	797

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-4-3a. Sacramento River Flow at Rio Vista, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,079	19,997	58,275	86,943	107,488	77,055	53,732	36,423	20,683	14,132	10,315	13,485
20%	9,494	11,733	32,478	58,610	67,939	51,031	37,503	25,881	11,923	13,600	9,929	13,013
30%	7,487	9,721	19,457	41,043	56,217	37,225	21,624	16,340	8,741	12,240	9,571	12,805
40%	6,816	8,799	15,418	26,232	45,365	29,656	19,570	13,145	8,506	11,358	9,304	12,107
50%	6,181	8,476	11,939	20,149	31,081	21,568	14,497	11,463	8,071	10,755	8,586	8,192
60%	5,336	7,921	11,019	15,921	23,266	19,223	11,702	9,901	7,696	9,396	7,319	6,098
70%	4,695	6,328	10,006	12,152	17,598	14,883	9,473	8,482	7,085	8,390	5,726	5,237
80%	4,198	5,558	8,478	10,211	14,582	11,654	8,746	7,372	6,370	7,187	4,745	4,598
90%	3,722	4,108	6,375	9,155	11,471	9,087	8,035	6,763	5,454	4,751	4,212	3,849
Long Term												
Full Simulation Period[a]	7,025	10,743	22,231	36,592	46,729	35,367	22,883	16,450	10,621	10,074	7,645	8,801
Water Year Types[b,c]												
Wet (32%)	9,696	13,851	25,847	70,937	83,943	63,299	40,717	27,888	16,646	11,232	9,409	13,023
Above Normal (15%)	7,445	12,570	20,562	40,616	53,162	44,974	24,237	18,800	10,416	12,493	9,762	12,683
Below Normal (17%)	7,930	11,683	25,527	20,045	32,749	19,114	15,826	12,259	8,018	12,113	8,835	7,060
Dry (22%)	4,465	8,389	23,939	13,903	21,286	17,409	11,445	8,735	7,733	8,930	4,994	4,862
Critical (15%)	3,606	4,615	9,659	11,489	14,141	11,142	8,280	5,783	5,142	4,485	4,291	3,710

Table 5B3-4-3b. Sacramento River Flow at Rio Vista, Alternative 2 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,081	19,289	56,503	83,505	104,712	76,224	50,241	36,328	15,393	14,204	10,521	13,888
20%	9,851	11,067	32,722	56,280	67,623	50,425	36,788	25,857	11,309	13,542	10,240	13,378
30%	7,742	9,779	19,459	39,731	54,893	36,029	21,641	16,089	8,702	12,261	9,903	13,031
40%	7,111	8,778	15,429	25,607	44,313	29,627	19,597	13,030	8,495	11,494	9,727	12,464
50%	6,587	8,585	11,589	19,805	30,038	20,392	14,527	11,321	8,042	10,929	9,087	8,332
60%	6,023	8,059	10,827	15,472	22,752	17,444	11,977	9,853	7,711	9,601	8,202	6,706
70%	5,707	6,791	9,581	11,613	17,215	14,373	9,709	8,504	7,101	8,986	6,544	5,986
80%	5,185	5,833	8,554	10,078	14,434	11,416	8,767	7,420	6,356	7,603	5,745	5,604
90%	4,136	4,517	6,539	9,185	11,327	9,093	8,065	6,817	5,459	5,093	4,737	4,396
Long Term												
Full Simulation Period[a]	7,496	10,782	22,095	35,812	45,857	34,380	22,613	16,321	10,442	10,296	8,219	9,299
Water Year Types[b,c]												
Wet (32%)	9,813	13,510	25,847	69,736	82,755	62,447	40,022	27,656	16,431	11,006	9,688	13,383
Above Normal (15%)	7,738	12,441	20,383	39,153	52,009	43,105	23,993	18,655	9,820	12,539	10,045	13,042
Below Normal (17%)	8,493	12,050	25,198	19,543	31,643	17,973	15,639	12,130	7,872	12,282	9,447	7,477
Dry (22%)	5,291	8,787	23,905	13,595	20,772	16,424	11,507	8,708	7,714	9,687	6,131	5,665
Critical (15%)	4,381	4,722	9,341	11,277	13,970	10,922	8,310	5,737	5,178	5,112	4,910	4,284

Table 5B3-4-3c. Sacramento River Flow at Rio Vista, Alternative 2 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2	-708	-1,773	-3,438	-2,777	-832	-3,491	-94	-5,290	73	206	403
20%	356	-666	245	-2,330	-317	-606	-715	-25	-613	-58	311	365
30%	255	58	2	-1,312	-1,324	-1,196	17	-251	-39	21	332	225
40%	296	-21	11	-625	-1,052	-29	26	-115	-11	136	423	356
50%	406	109	-350	-344	-1,043	-1,176	30	-143	-28	174	501	140
60%	687	138	-192	-449	-514	-1,779	275	-48	15	205	882	608
70%	1,012	463	-425	-539	-383	-510	236	22	16	596	817	750
80%	987	275	75	-133	-148	-238	21	48	-14	416	999	1,006
90%	414	409	164	30	-144	6	30	54	5	341	525	547
Long Term												
Full Simulation Period[a]	471	39	-137	-779	-872	-987	-270	-129	-179	222	575	498
Water Year Types[b,c]												
Wet (32%)	117	-340	0	-1,201	-1,188	-852	-696	-231	-214	-226	279	360
Above Normal (15%)	293	-129	-180	-1,462	-1,153	-1,870	-244	-145	-596	46	283	360
Below Normal (17%)	563	368	-330	-503	-1,106	-1,141	-187	-129	-145	169	612	417
Dry (22%)	827	398	-35	-308	-514	-985	61	-27	-19	757	1,137	803
Critical (15%)	776	107	-317	-211	-171	-220	30	-45	36	627	619	574

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-4-4a. Sacramento River Flow at Rio Vista, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,079	19,997	58,275	86,943	107,488	77,055	53,732	36,423	20,683	14,132	10,315	13,485
20%	9,494	11,733	32,478	58,610	67,939	51,031	37,503	25,881	11,923	13,600	9,929	13,013
30%	7,487	9,721	19,457	41,043	56,217	37,225	21,624	16,340	8,741	12,240	9,571	12,805
40%	6,816	8,799	15,418	26,232	45,365	29,656	19,570	13,145	8,506	11,358	9,304	12,107
50%	6,181	8,476	11,939	20,149	31,081	21,568	14,497	11,463	8,071	10,755	8,586	8,192
60%	5,336	7,921	11,019	15,921	23,266	19,223	11,702	9,901	7,696	9,396	7,319	6,098
70%	4,695	6,328	10,006	12,152	17,598	14,883	9,473	8,482	7,085	8,390	5,726	5,237
80%	4,198	5,558	8,478	10,211	14,582	11,654	8,746	7,372	6,370	7,187	4,745	4,598
90%	3,722	4,108	6,375	9,155	11,471	9,087	8,035	6,763	5,454	4,751	4,212	3,849
Long Term												
Full Simulation Period[a]	7,025	10,743	22,231	36,592	46,729	35,367	22,883	16,450	10,621	10,074	7,645	8,801
Water Year Types[b,c]												
Wet (32%)	9,696	13,851	25,847	70,937	83,943	63,299	40,717	27,888	16,646	11,232	9,409	13,023
Above Normal (15%)	7,445	12,570	20,562	40,616	53,162	44,974	24,237	18,800	10,416	12,493	9,762	12,683
Below Normal (17%)	7,930	11,683	25,527	20,045	32,749	19,114	15,826	12,259	8,018	12,113	8,835	7,060
Dry (22%)	4,465	8,389	23,939	13,903	21,286	17,409	11,445	8,735	7,733	8,930	4,994	4,862
Critical (15%)	3,606	4,615	9,659	11,489	14,141	11,142	8,280	5,783	5,142	4,485	4,291	3,710

Table 5B3-4-4b. Sacramento River Flow at Rio Vista, Alternative 3 020121, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,381	19,326	56,253	83,643	105,102	74,921	50,242	35,360	15,397	14,314	10,490	13,864
20%	10,041	11,304	33,886	56,400	67,614	50,082	36,343	25,872	11,313	13,544	10,209	13,383
30%	8,139	9,782	20,279	39,575	54,126	36,024	21,660	16,090	8,634	12,337	9,922	13,007
40%	7,185	8,804	16,480	25,608	45,734	29,418	19,594	13,134	8,491	11,593	9,686	12,540
50%	6,670	8,595	11,570	19,816	30,278	20,381	14,532	11,326	8,053	10,994	8,932	8,339
60%	5,925	8,104	10,892	15,551	22,752	17,444	11,902	9,853	7,690	9,670	8,144	6,674
70%	5,710	6,883	9,556	11,872	17,229	14,326	9,709	8,463	7,064	9,041	6,561	5,740
80%	4,719	5,956	8,558	10,068	14,335	11,398	8,870	7,420	6,438	7,479	5,633	5,258
90%	3,942	4,582	6,455	9,213	11,169	9,114	8,136	6,662	5,438	5,186	4,597	4,524
Long Term												
Full Simulation Period[a]	7,509	10,922	22,311	35,845	45,909	34,209	22,483	16,263	10,426	10,325	8,159	9,271
Water Year Types[b,c]												
Wet (32%)	9,797	13,508	25,922	69,723	82,633	61,892	39,551	27,488	16,367	11,009	9,654	13,295
Above Normal (15%)	8,228	12,770	20,697	39,301	52,478	42,985	24,037	18,655	9,828	12,606	10,008	13,256
Below Normal (17%)	8,682	12,361	25,597	19,587	31,780	17,954	15,685	12,185	7,851	12,323	9,401	7,532
Dry (22%)	5,161	8,925	24,292	13,654	20,861	16,501	11,527	8,668	7,765	9,746	5,930	5,497
Critical (15%)	3,989	4,787	9,299	11,237	13,824	10,981	8,311	5,703	5,147	5,102	4,963	4,255

Table 5B3-4-4c. Sacramento River Flow at Rio Vista, Alternative 3 020121 minus No Action Alternative 011221, Monthly Flow (cfs)

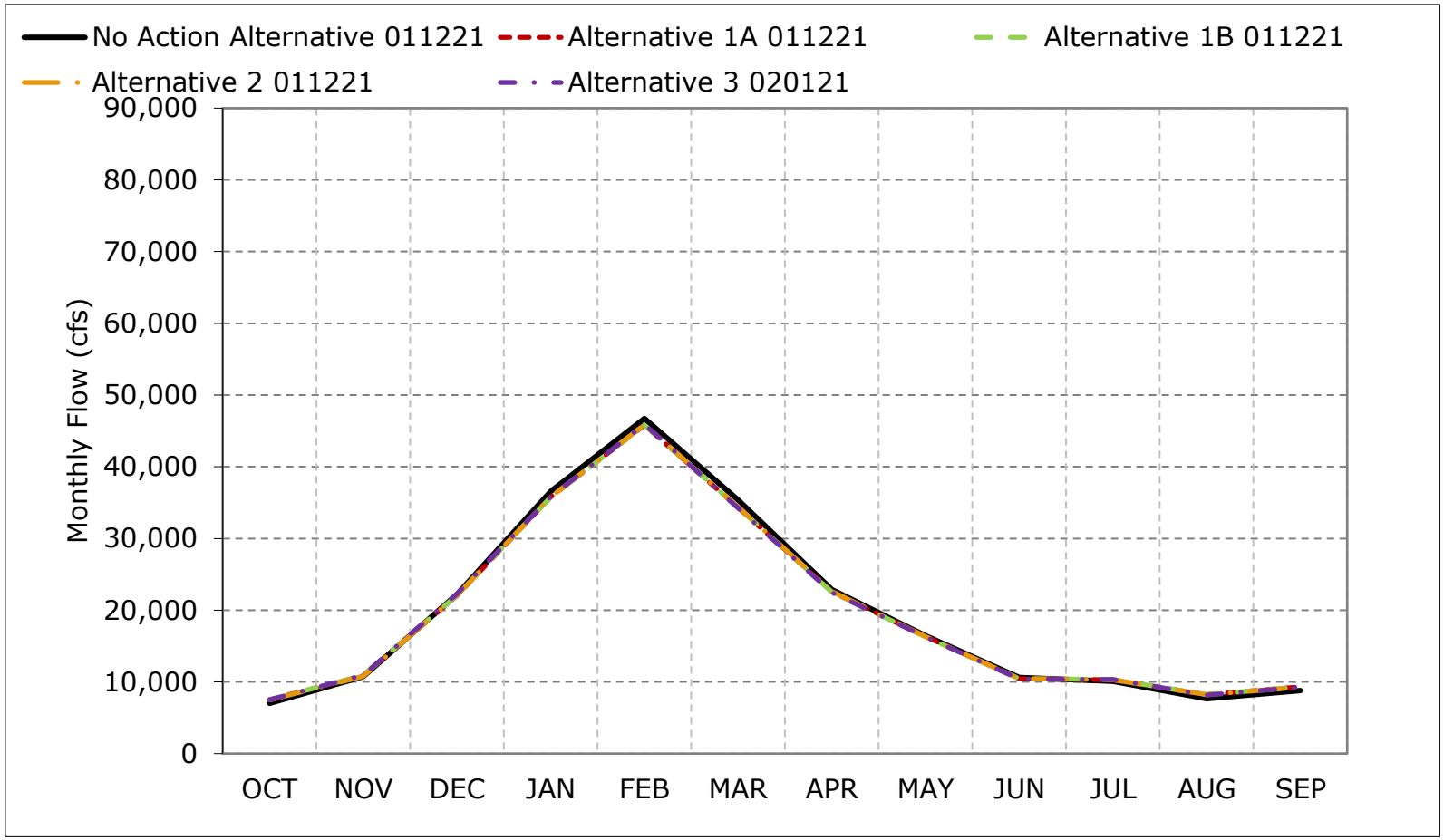
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	302	-672	-2,023	-3,300	-2,386	-2,134	-3,490	-1,062	-5,286	183	174	379
20%	547	-429	1,408	-2,210	-325	-949	-1,159	-9	-610	-55	280	370
30%	652	61	822	-1,468	-2,091	-1,201	36	-250	-107	97	350	201
40%	369	5	1,063	-624	369	-237	24	-11	-15	235	382	433
50%	489	118	-369	-333	-802	-1,187	35	-137	-17	239	346	147
60%	589	183	-127	-369	-514	-1,779	200	-49	-6	274	824	576
70%	1,015	555	-450	-280	-368	-557	236	-19	-22	651	835	503
80%	521	398	79	-143	-247	-256	125	48	68	292	888	661
90%	220	474	80	58	-302	27	101	-101	-16	435	385	675
Long Term												
Full Simulation Period[a]	484	179	80	-747	-821	-1,158	-401	-187	-195	251	514	470
Water Year Types[b,c]												
Wet (32%)	101	-342	75	-1,214	-1,311	-1,407	-1,166	-400	-279	-223	244	272
Above Normal (15%)	783	200	134	-1,315	-684	-1,989	-200	-145	-587	113	246	573
Below Normal (17%)	752	679	69	-459	-969	-1,160	-141	-74	-167	210	567	472
Dry (22%)	696	536	352	-249	-425	-908	82	-67	32	815	937	635
Critical (15%)	383	172	-360	-251	-317	-160	30	-80	5	617	672	545

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

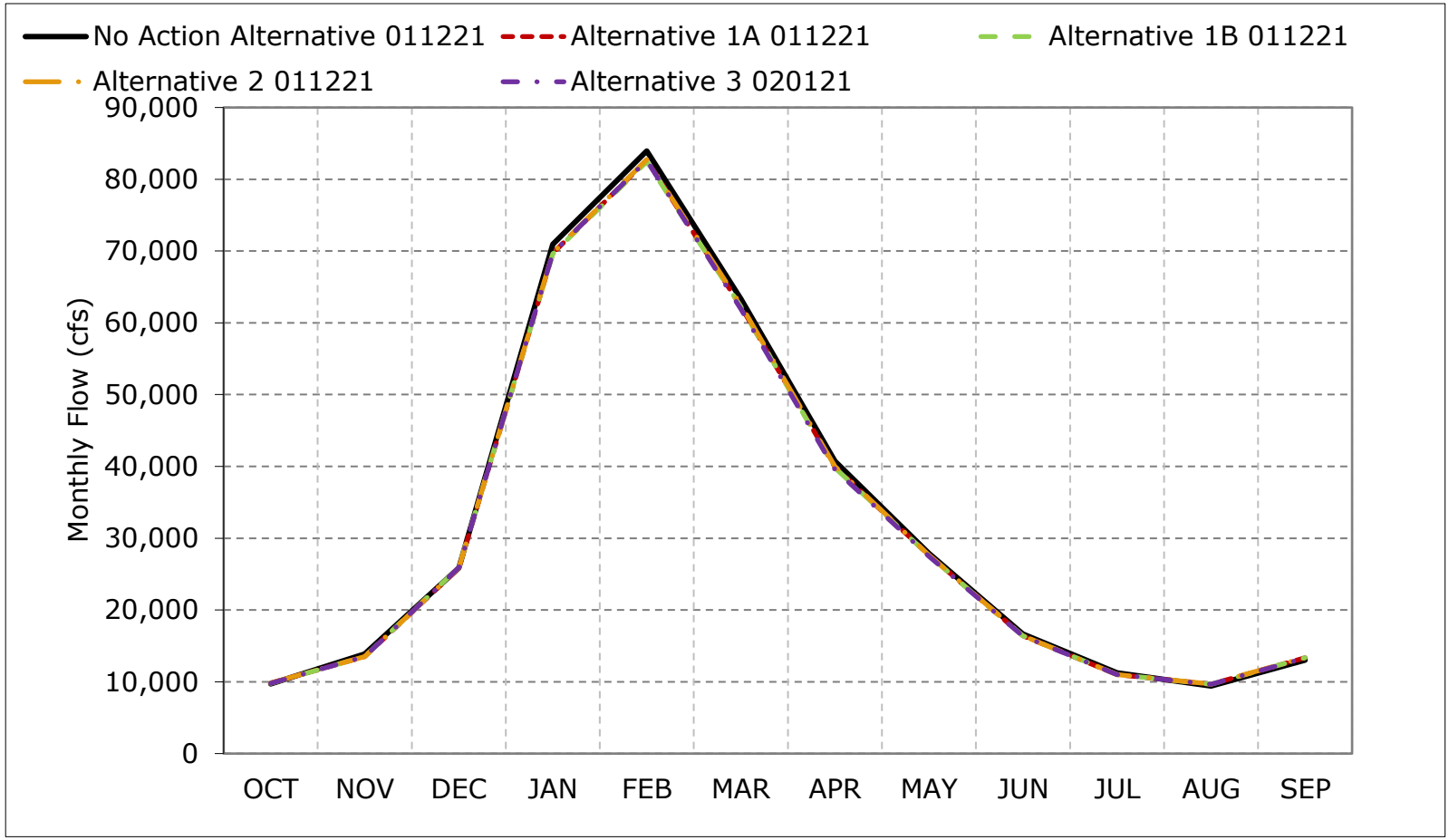
c These results are displayed with calendar year - year type sorting.

Figure 5B3-4-1. Sacramento River Flow at Rio Vista, Long-Term Average Flow



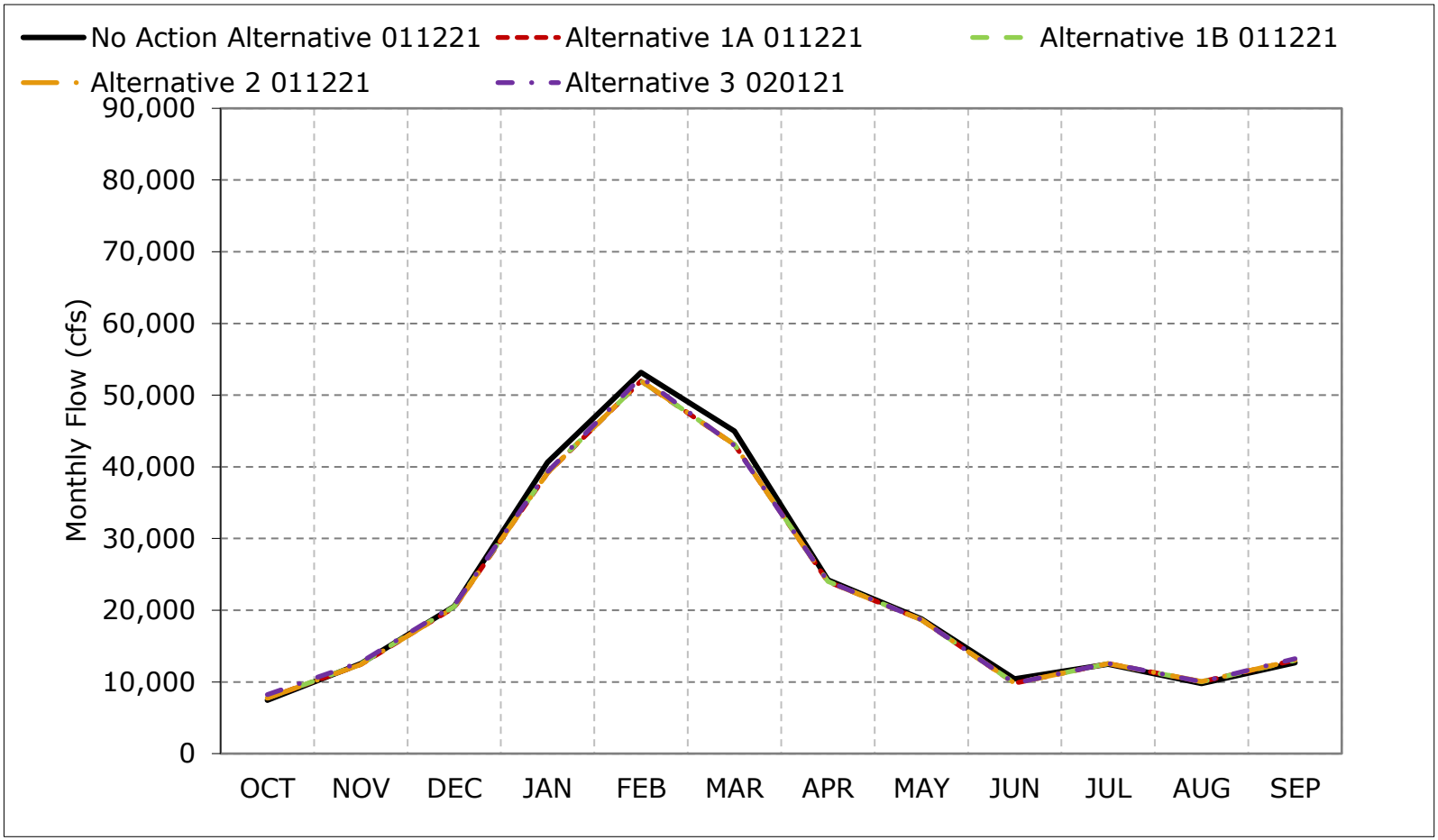
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-4-2. Sacramento River Flow at Rio Vista, Wet Year Average Flow



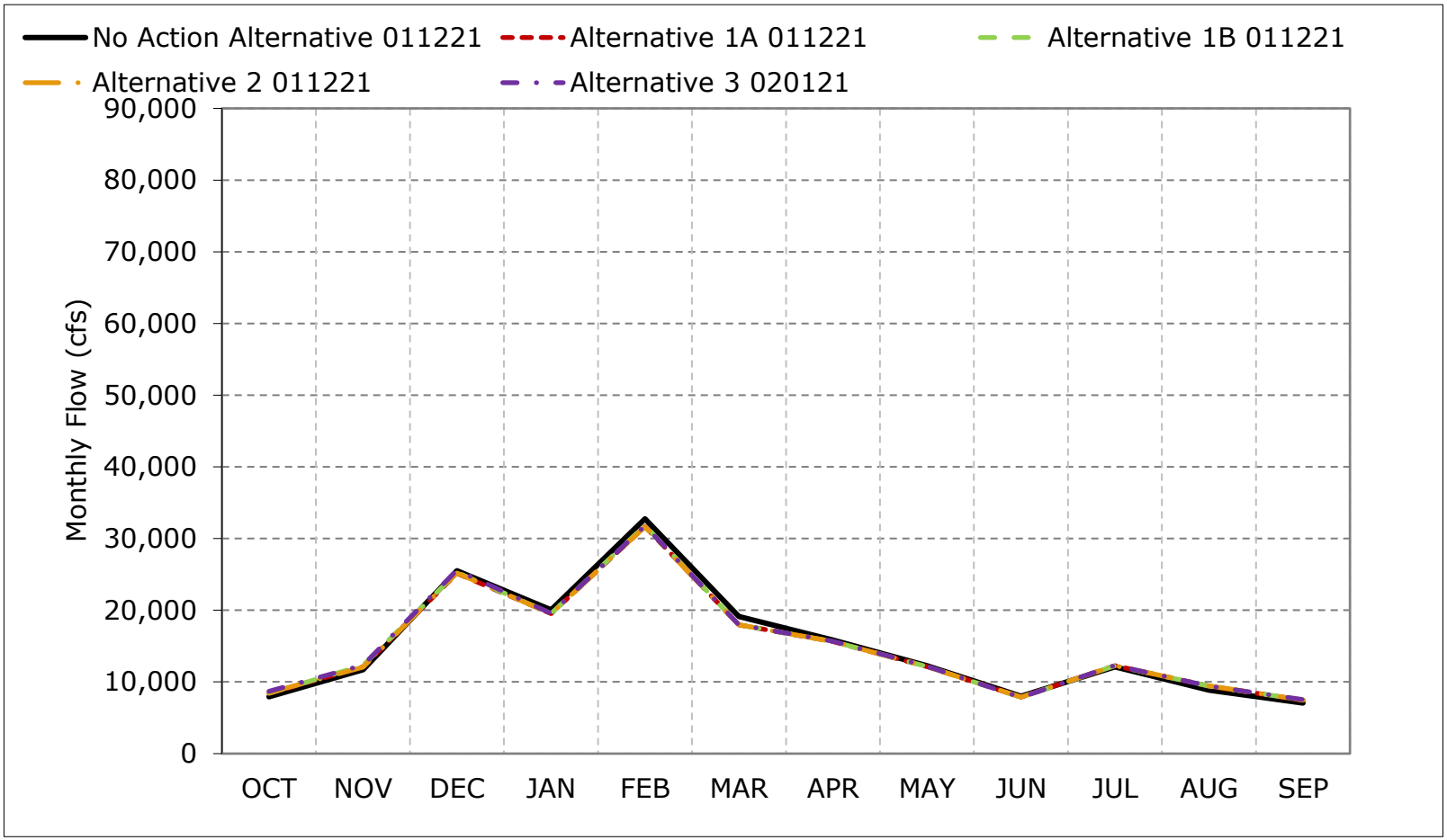
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-4-3. Sacramento River Flow at Rio Vista, Above Normal Year Average Flow



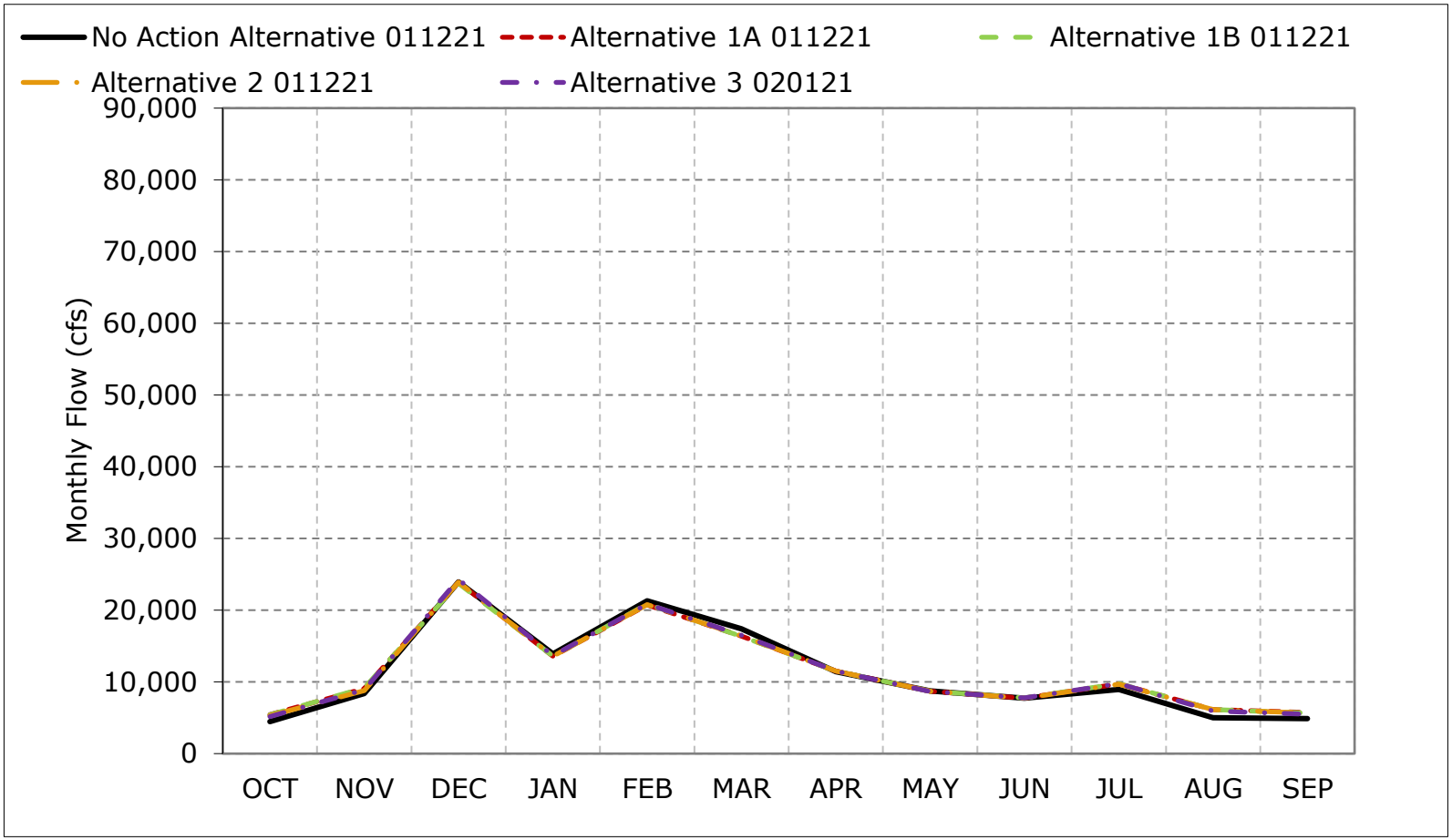
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-4-4. Sacramento River Flow at Rio Vista, Below Normal Year Average Flow



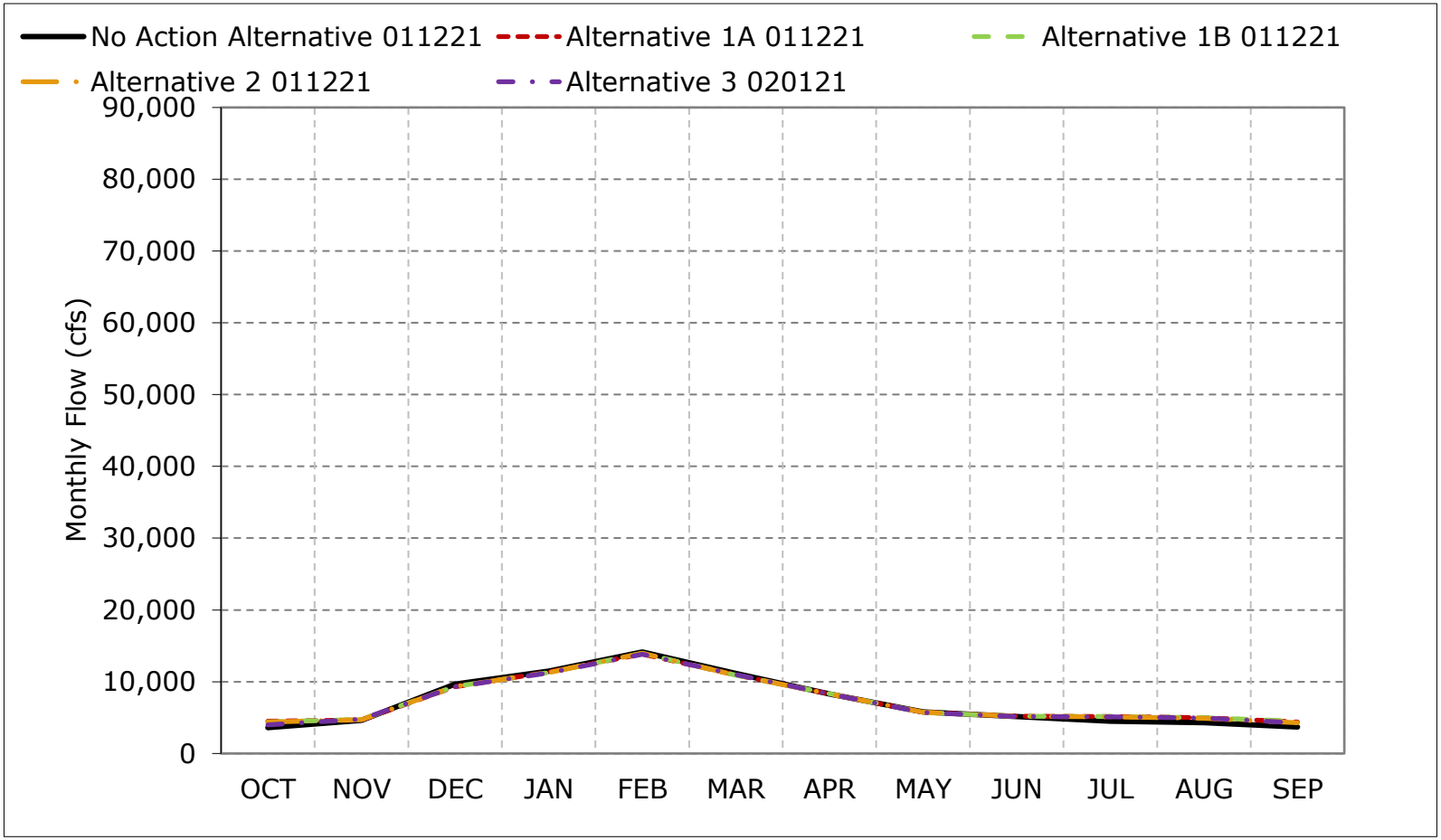
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-4-5. Sacramento River Flow at Rio Vista, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-4-6. Sacramento River Flow at Rio Vista, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-4-7. Sacramento River Flow at Rio Vista, October

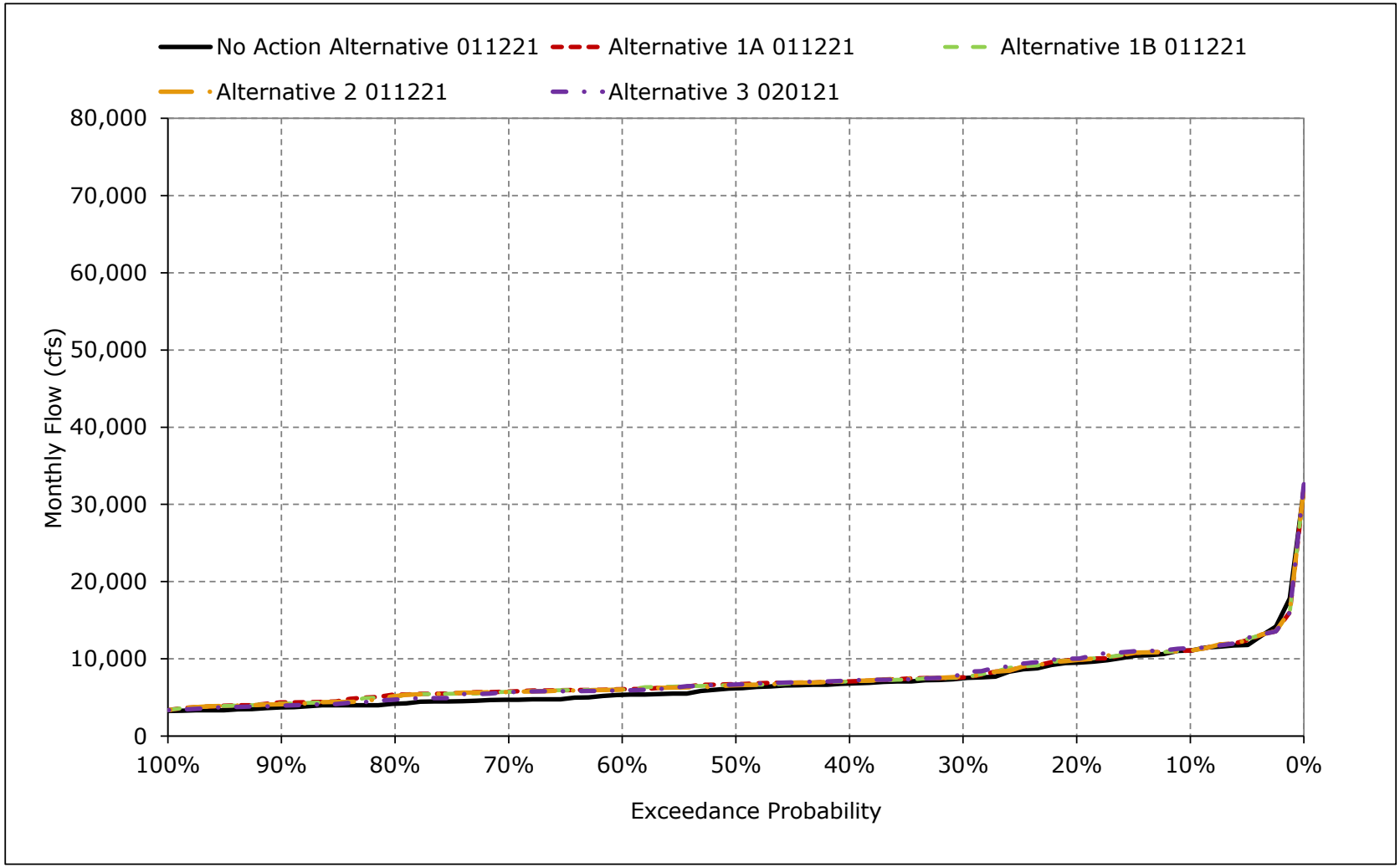


Figure 5B3-4-8. Sacramento River Flow at Rio Vista, November

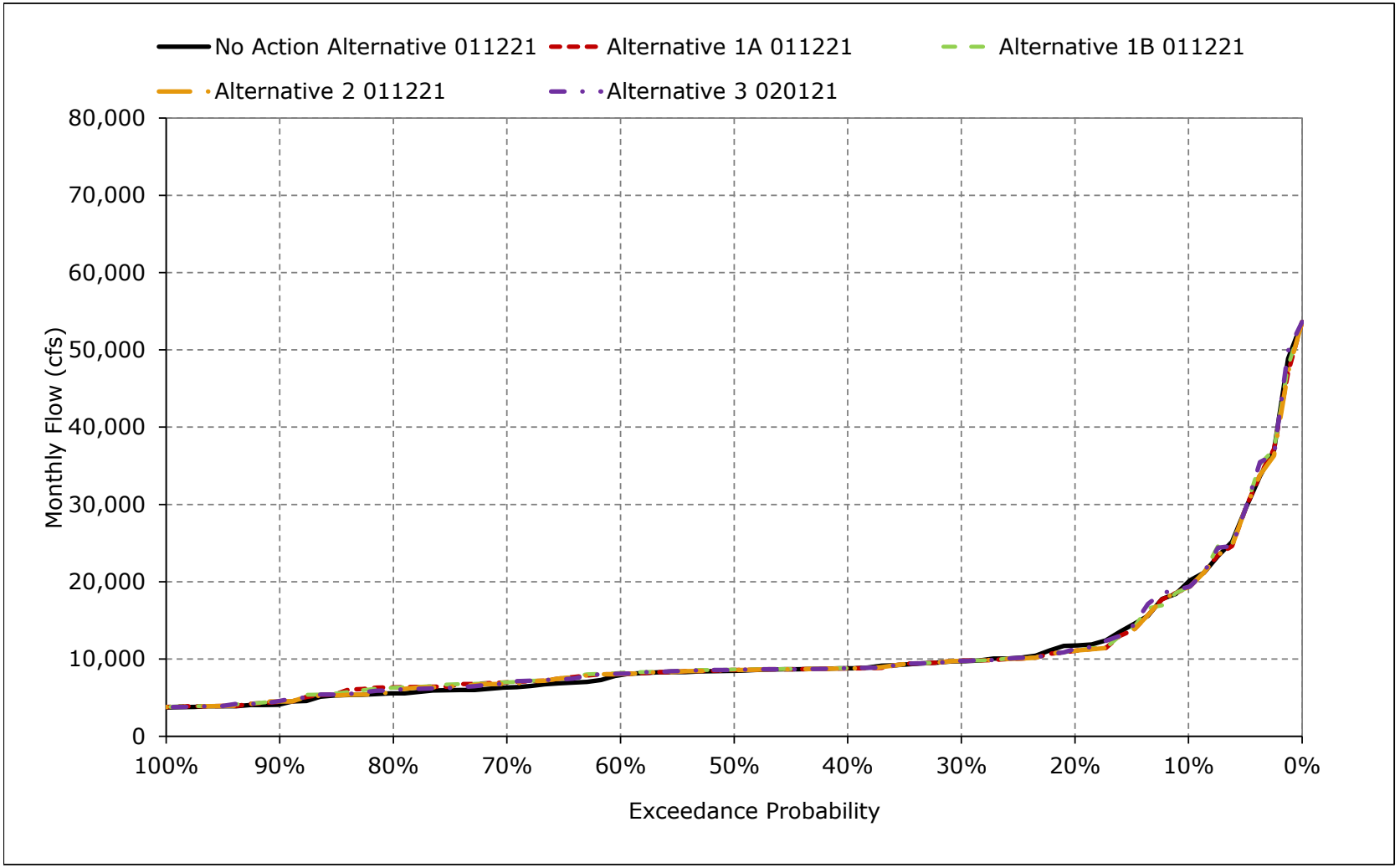


Figure 5B3-4-9. Sacramento River Flow at Rio Vista, December

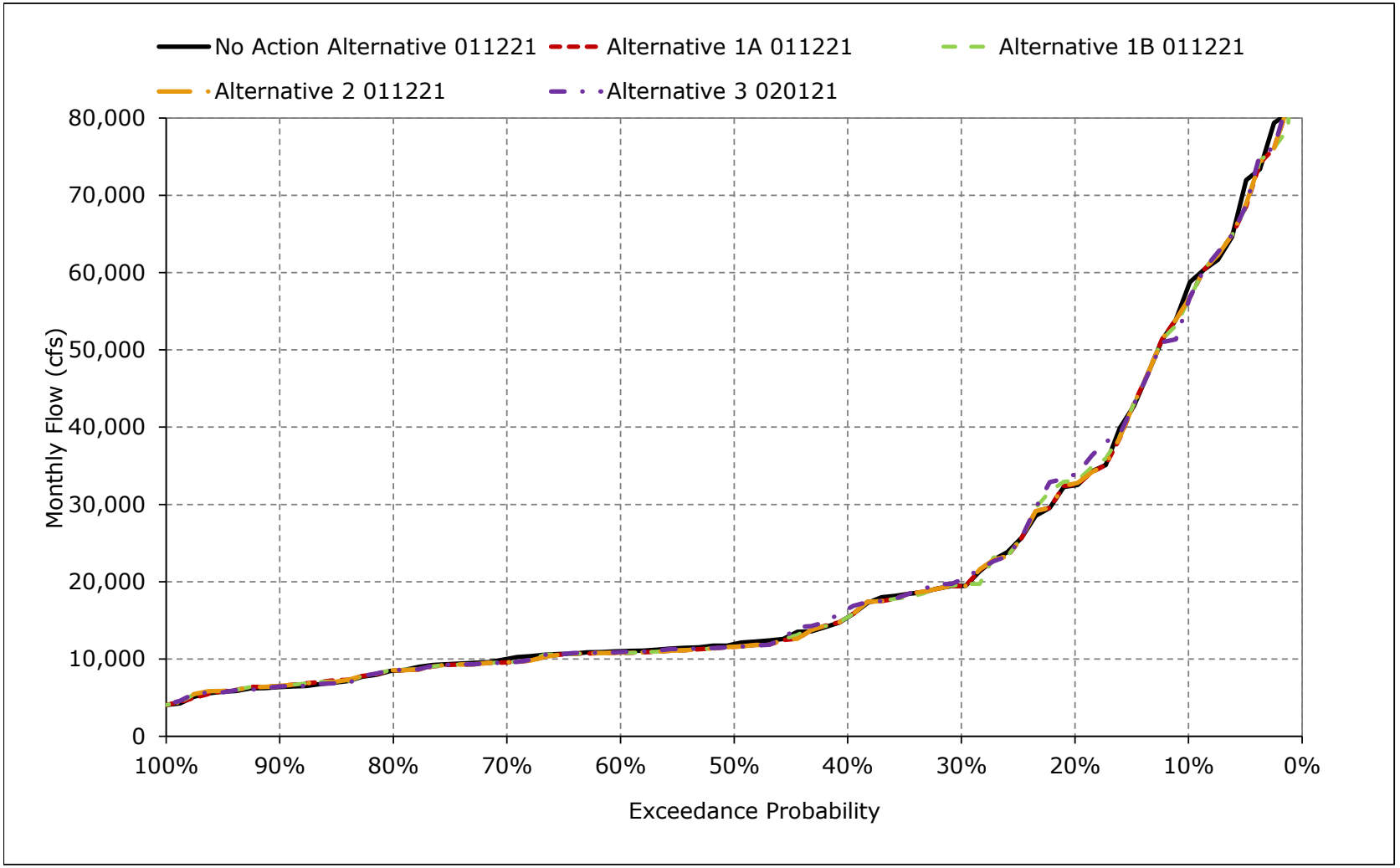


Figure 5B3-4-10. Sacramento River Flow at Rio Vista, January

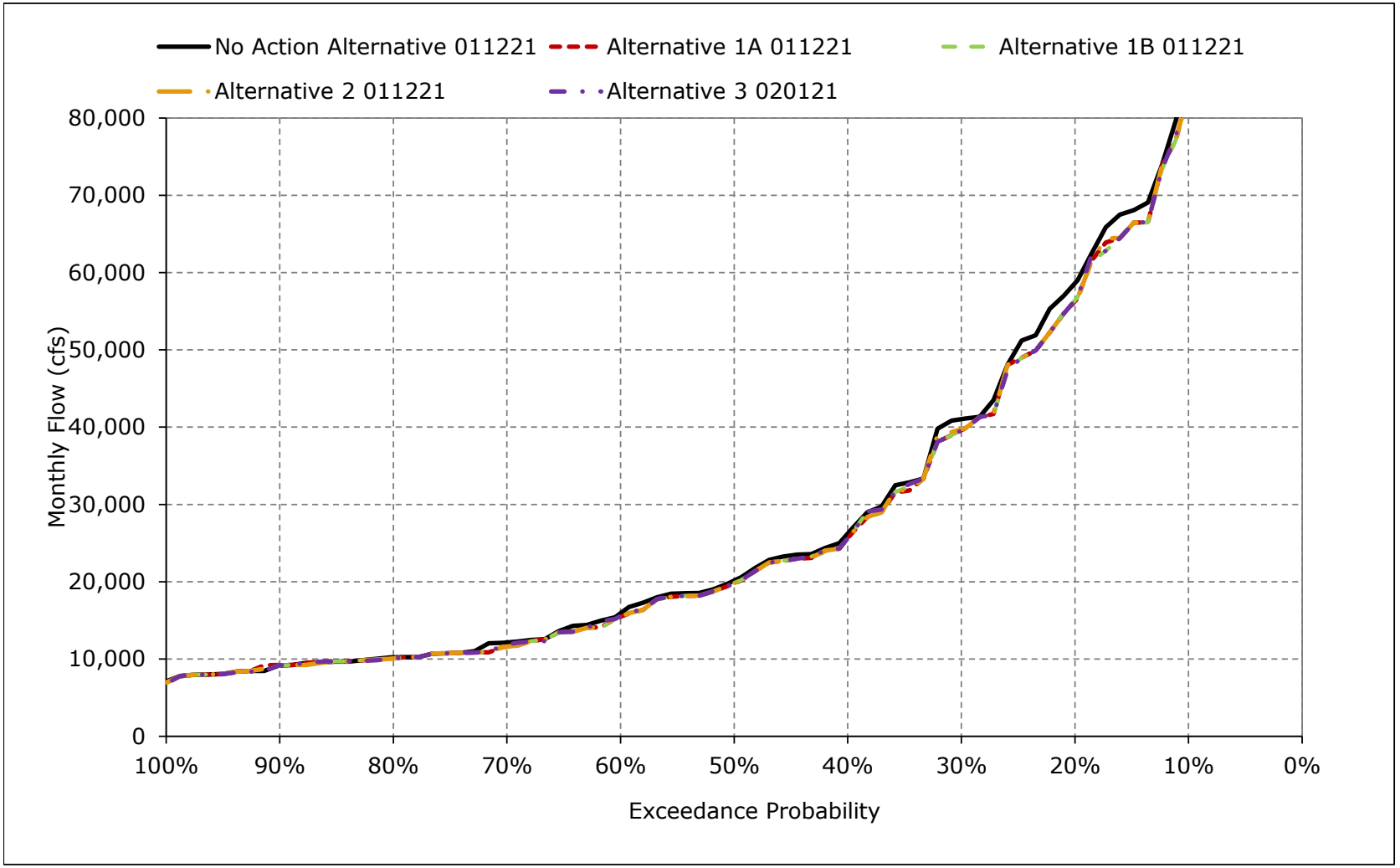


Figure 5B3-4-11. Sacramento River Flow at Rio Vista, February

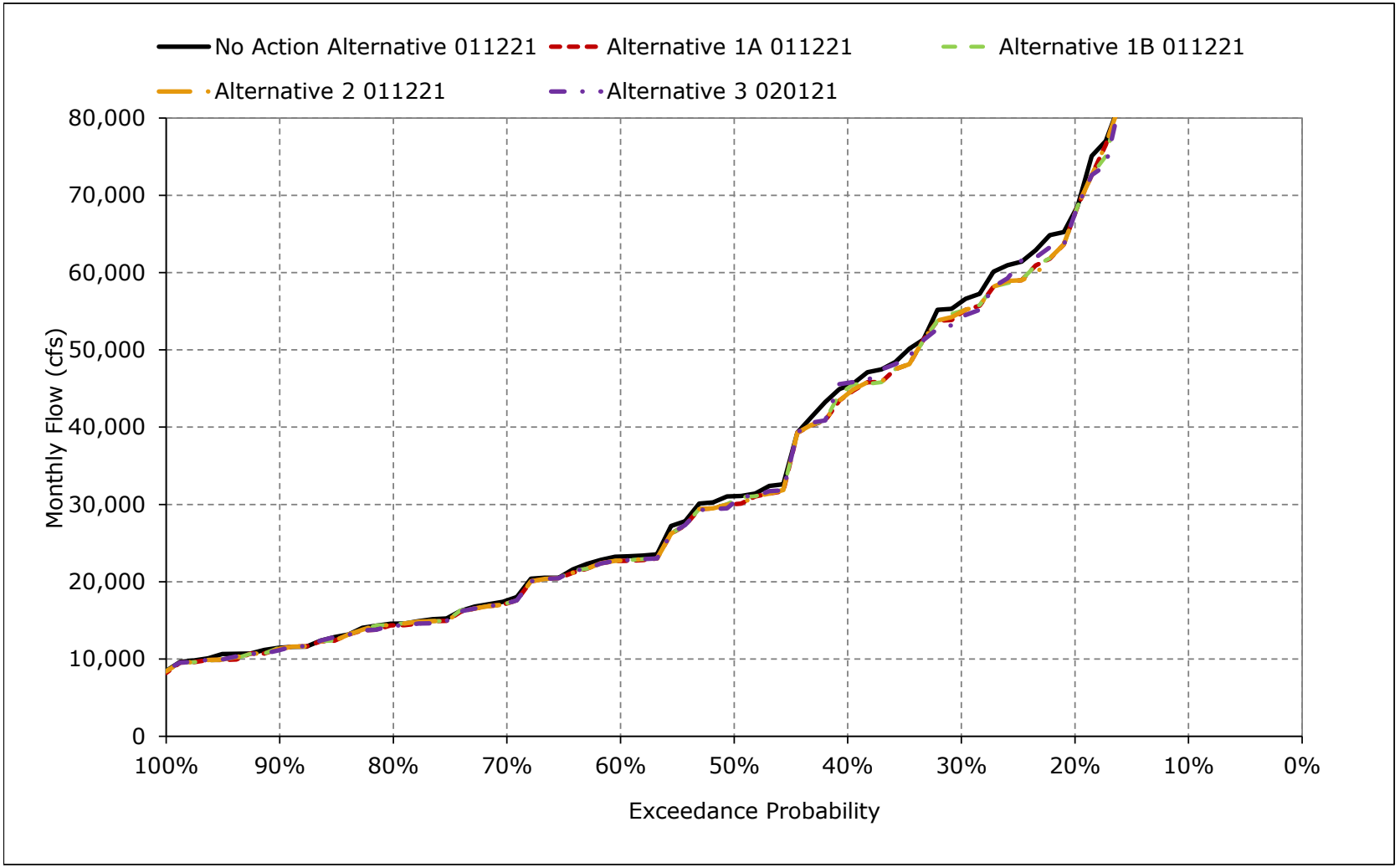


Figure 5B3-4-12. Sacramento River Flow at Rio Vista, March

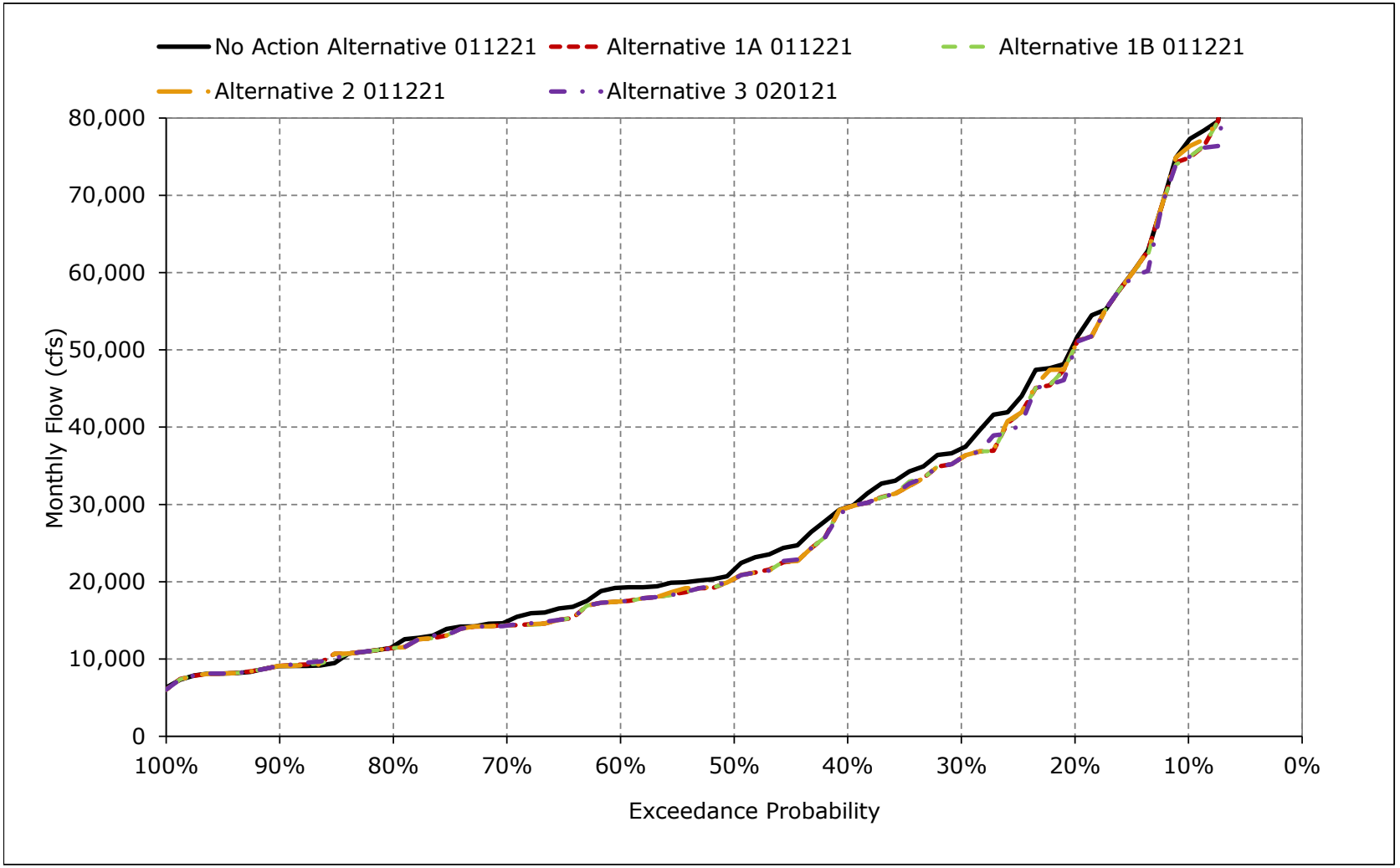


Figure 5B3-4-13. Sacramento River Flow at Rio Vista, April

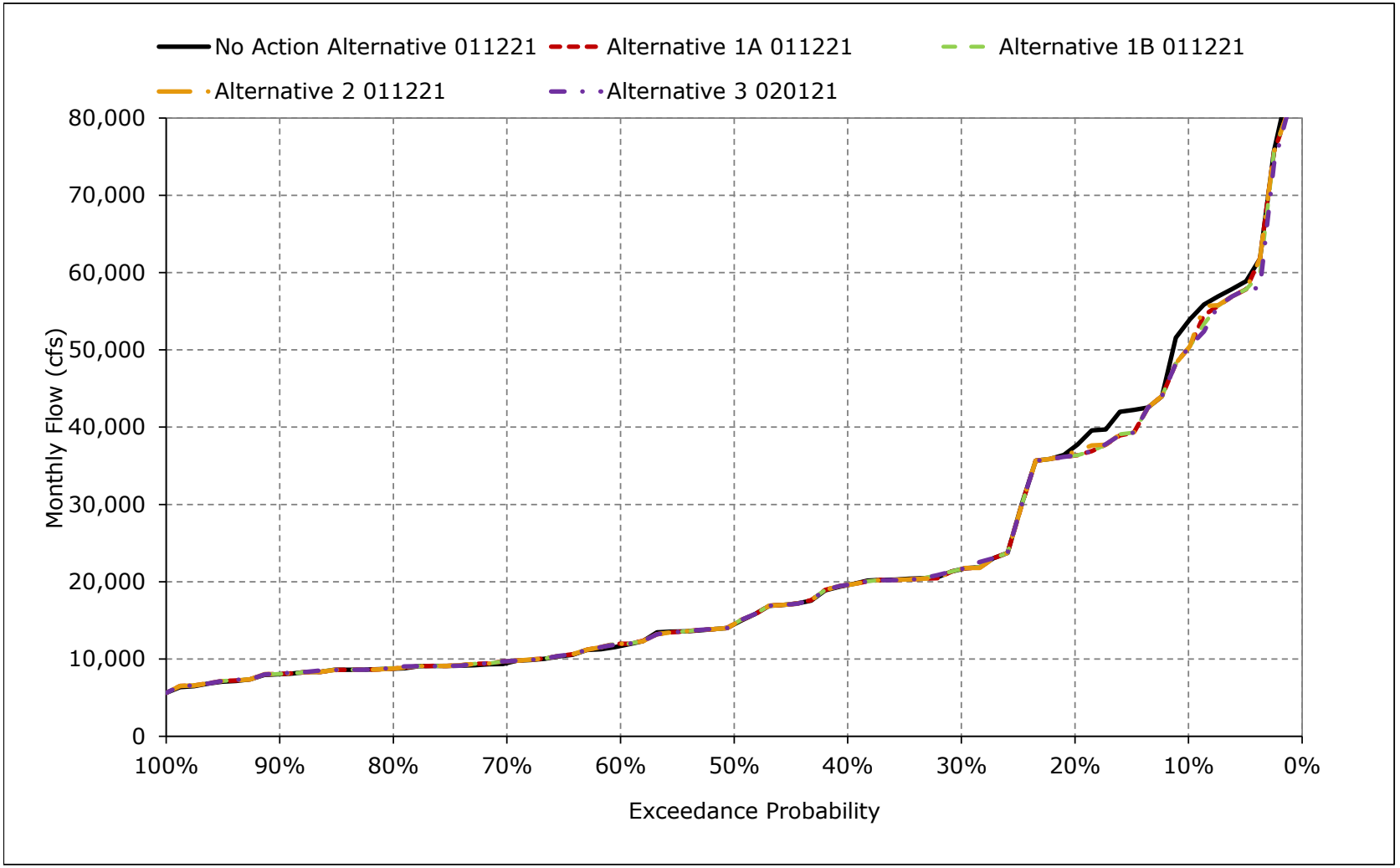


Figure 5B3-4-14. Sacramento River Flow at Rio Vista, May

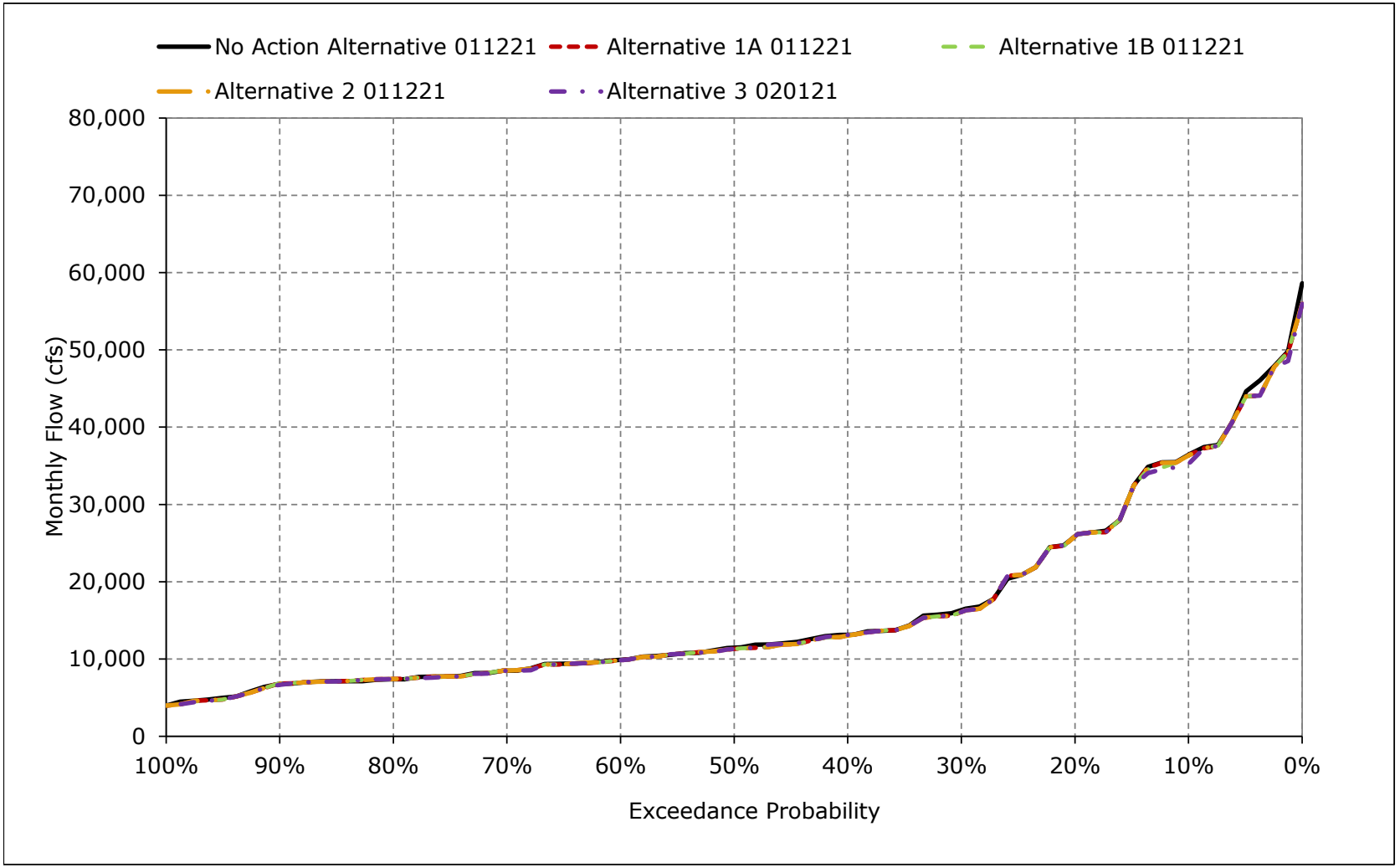


Figure 5B3-4-15. Sacramento River Flow at Rio Vista, June

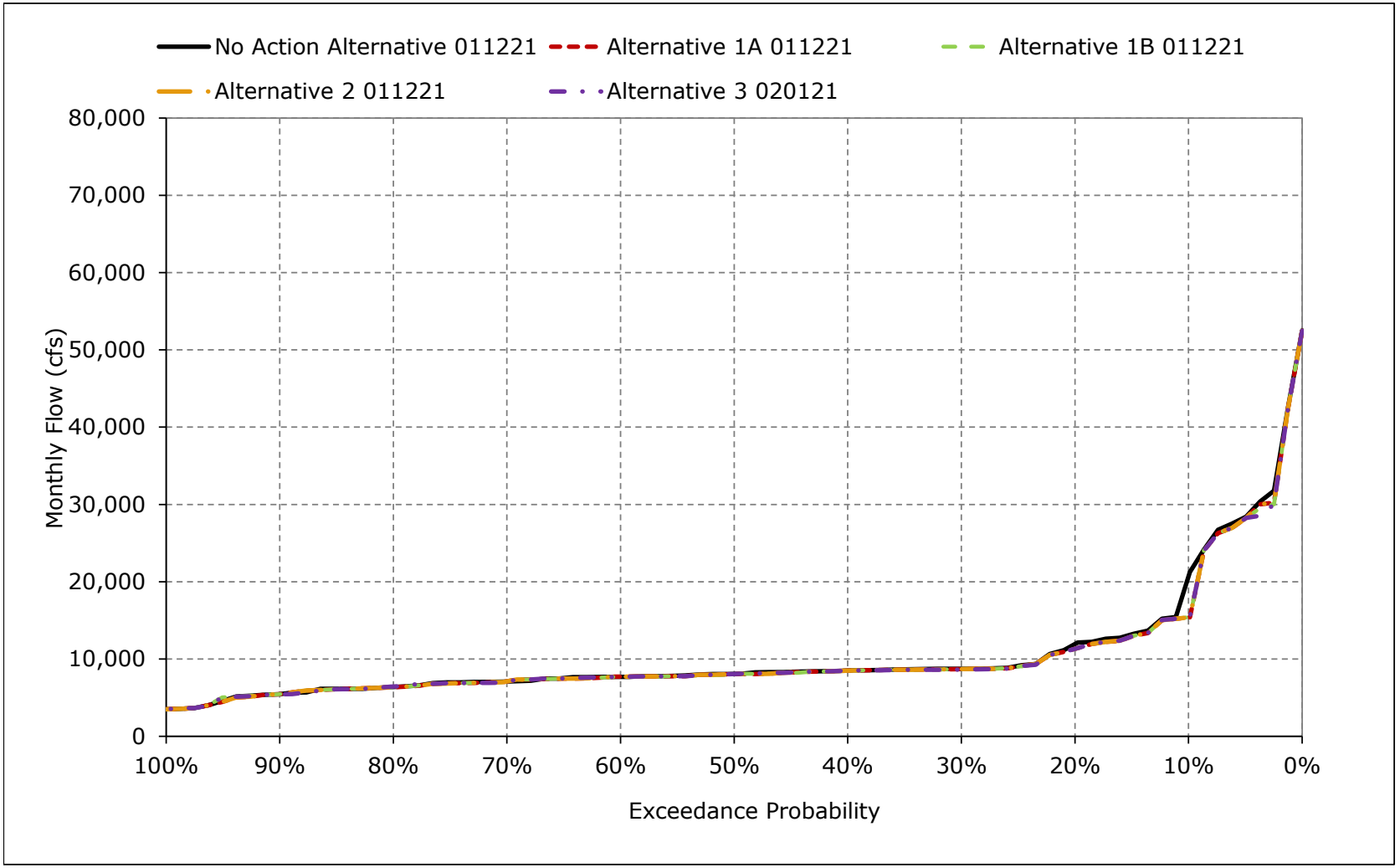


Figure 5B3-4-16. Sacramento River Flow at Rio Vista, July

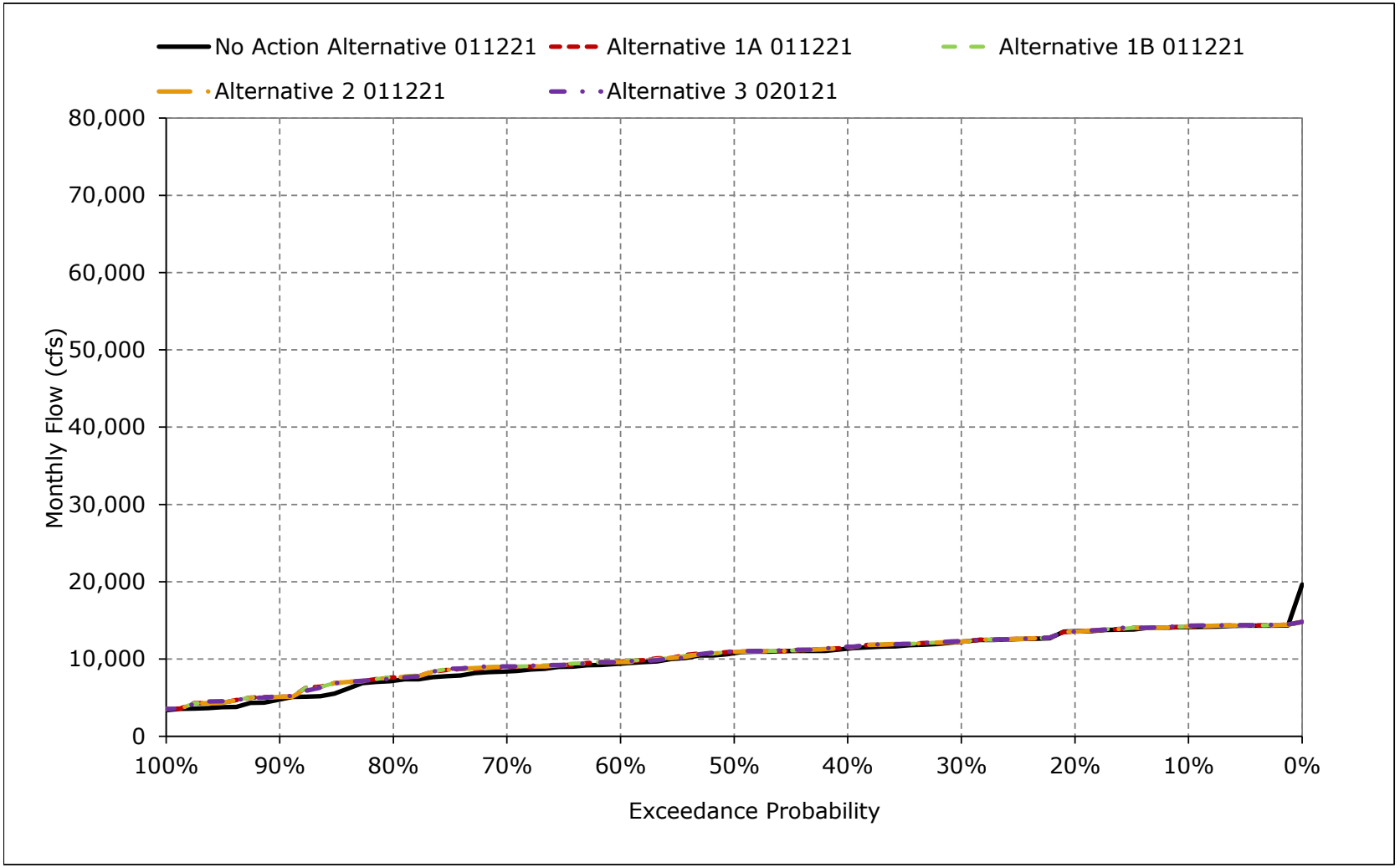


Figure 5B3-4-17. Sacramento River Flow at Rio Vista, August

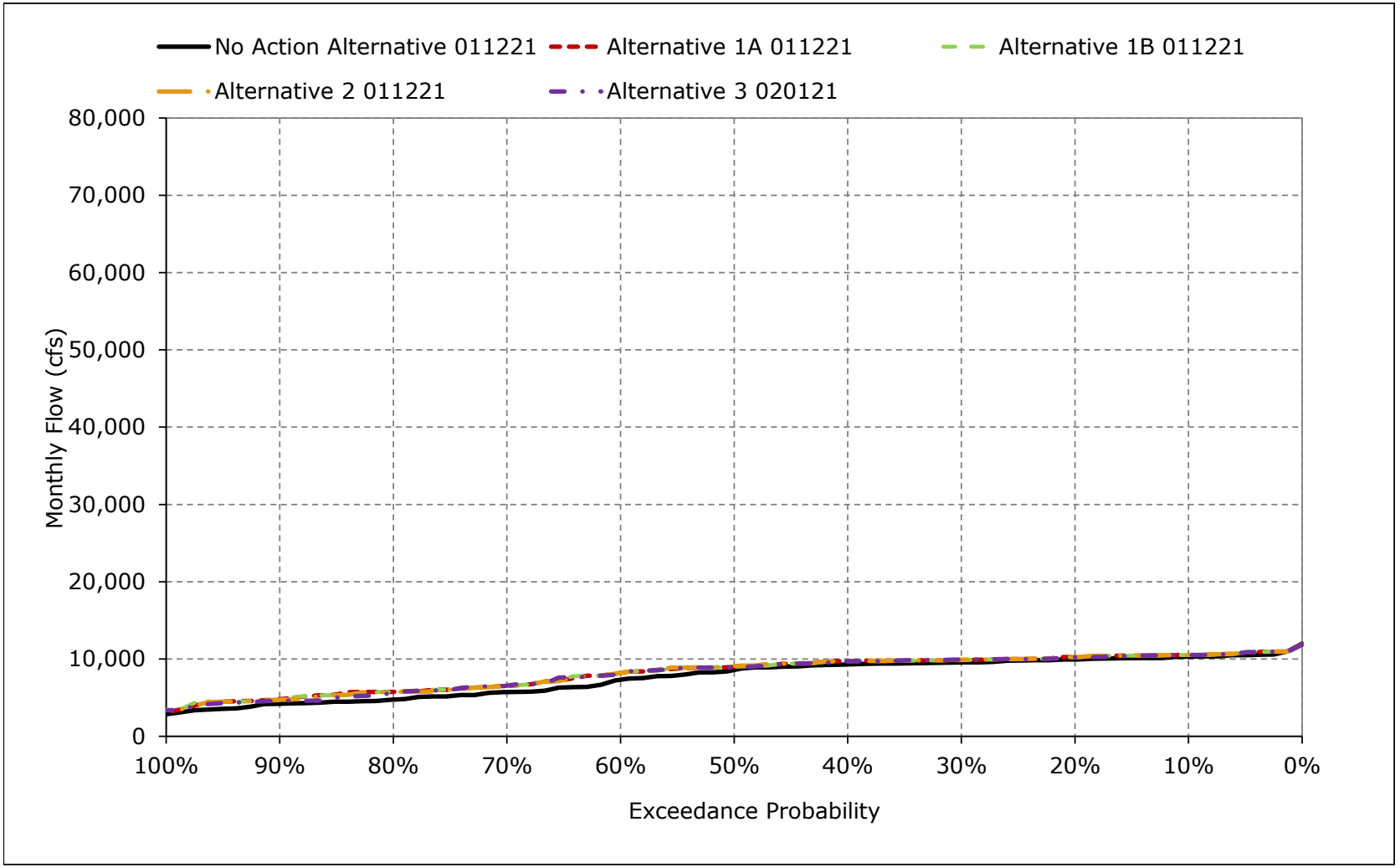


Figure 5B3-4-18. Sacramento River Flow at Rio Vista, September

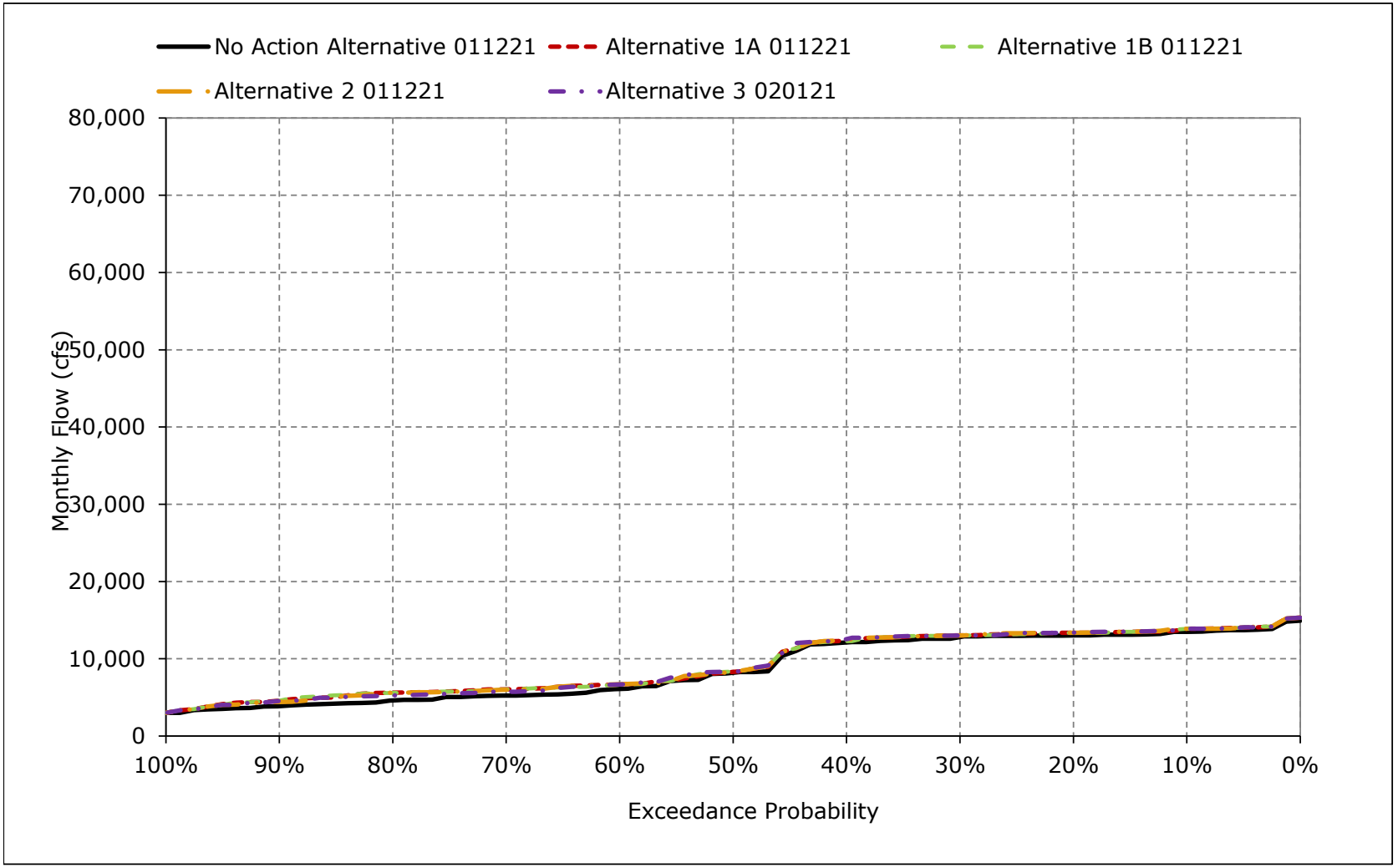


Table 5B3-5-1a. Delta Outflow, No Action Alternative 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	8,109	17,617	65,412	100,632	130,297	90,677	70,631	46,461	30,721	11,670	7,291	12,260
20%	7,500	8,758	34,338	67,689	82,418	64,805	50,018	31,452	14,666	9,565	6,732	11,734
30%	7,188	5,544	19,499	47,332	65,665	44,934	29,806	21,027	10,281	8,238	6,322	11,427
40%	6,875	5,130	12,982	28,023	53,139	35,689	26,435	17,467	8,625	8,000	5,860	11,008
50%	5,199	4,970	10,079	22,501	36,246	26,822	20,762	15,340	7,763	8,000	4,044	3,978
60%	4,257	4,646	6,342	15,799	24,758	22,232	15,403	11,049	7,416	6,500	4,000	3,235
70%	4,000	4,500	5,061	11,697	18,193	16,129	12,554	9,453	7,121	5,492	3,745	3,123
80%	4,000	4,500	4,534	8,788	14,699	12,819	11,389	7,592	6,469	5,000	3,520	3,000
90%	4,000	3,996	4,500	7,680	10,040	9,243	9,466	6,157	5,029	4,000	3,500	3,000
Long Term												
Full Simulation Period[a]	6,162	8,852	22,274	42,069	54,278	43,259	30,348	21,057	12,913	8,190	5,189	7,378
Water Year Types[b,c]												
Wet (32%)	7,958	11,658	26,283	85,174	99,942	80,070	54,824	37,979	23,391	11,761	7,207	12,538
Above Normal (15%)	7,055	8,573	18,791	46,977	62,390	54,780	32,227	23,600	12,011	9,841	6,352	11,369
Below Normal (17%)	6,548	10,240	26,544	21,744	38,228	23,170	21,821	15,309	8,233	7,533	4,029	3,542
Dry (22%)	4,058	7,203	24,672	13,319	22,472	19,468	14,247	9,642	7,046	5,225	3,610	3,094
Critical (15%)	4,083	3,905	8,495	10,608	13,663	11,103	9,539	5,682	5,371	4,019	3,375	3,110

Table 5B3-5-1b. Delta Outflow, Alternative 1A 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	8,203	16,746	63,554	99,957	126,947	88,520	67,883	46,351	30,480	11,827	7,479	12,654
20%	7,890	8,029	34,442	65,295	80,700	63,085	47,414	31,434	14,177	9,672	7,024	12,090
30%	7,604	5,515	19,521	45,523	62,650	42,306	29,920	20,796	10,201	8,322	6,584	11,773
40%	7,234	5,127	12,792	27,342	51,499	35,654	26,466	17,353	8,568	8,000	5,980	11,370
50%	5,794	4,970	9,174	22,121	35,455	25,369	20,794	15,130	7,836	8,000	4,920	4,203
60%	4,884	4,845	6,533	15,518	24,185	20,064	15,428	11,356	7,331	6,816	4,618	3,622
70%	4,484	4,506	5,018	11,284	17,734	15,960	12,773	9,383	7,101	5,501	4,164	3,410
80%	4,316	4,500	4,504	8,680	14,317	12,622	11,398	7,522	6,423	5,000	3,890	3,220
90%	4,000	3,500	4,500	7,696	10,066	9,271	9,479	5,941	4,868	4,051	3,526	3,044
Long Term												
Full Simulation Period[a]	6,497	8,696	22,053	41,212	53,318	42,076	30,018	20,915	12,744	8,242	5,529	7,648
Water Year Types[b,c]												
Wet (32%)	8,156	11,350	26,294	83,876	98,609	78,939	53,936	37,730	23,117	11,705	7,422	12,847
Above Normal (15%)	7,282	8,405	18,650	45,391	61,153	52,703	31,966	23,425	11,693	9,895	6,605	11,707
Below Normal (17%)	6,725	10,002	25,972	21,156	37,152	21,860	21,611	15,154	8,061	7,766	4,589	3,849
Dry (22%)	4,352	7,434	24,449	12,975	21,883	18,280	14,349	9,619	7,019	5,302	4,132	3,406
Critical (15%)	5,072	3,608	8,100	10,350	13,365	10,858	9,557	5,640	5,371	4,056	3,541	3,117

Table 5B3-5-1c. Delta Outflow, Alternative 1A 011221 minus No Action Alternative 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	93	-871	-1,858	-675	-3,350	-2,156	-2,748	-110	-241	158	189	394
20%	390	-729	104	-2,394	-1,718	-1,720	-2,604	-18	-489	107	292	356
30%	417	-29	23	-1,808	-3,015	-2,628	115	-231	-80	84	262	346
40%	359	-3	-190	-681	-1,640	-35	31	-114	-56	0	120	362
50%	596	0	-905	-380	-791	-1,453	32	-210	73	0	876	225
60%	626	199	191	-281	-573	-2,167	25	308	-85	316	618	387
70%	484	6	-44	-413	-459	-169	219	-69	-20	9	419	287
80%	316	0	-30	-107	-382	-197	9	-71	-46	0	371	220
90%	0	-496	0	16	26	28	13	-216	-161	51	26	44
Long Term												
Full Simulation Period[a]	335	-156	-221	-857	-960	-1,183	-331	-142	-169	52	340	269
Water Year Types[b,c]												
Wet (32%)	198	-309	11	-1,298	-1,332	-1,131	-888	-249	-273	-56	215	308
Above Normal (15%)	227	-167	-141	-1,585	-1,237	-2,076	-261	-175	-318	53	252	338
Below Normal (17%)	176	-239	-572	-588	-1,076	-1,310	-210	-155	-173	232	560	307
Dry (22%)	294	230	-222	-344	-590	-1,188	103	-23	-27	77	522	312
Critical (15%)	989	-297	-395	-258	-298	-245	18	-42	0	37	166	8

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-5-2a. Delta Outflow, No Action Alternative 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	8,109	17,617	65,412	100,632	130,297	90,677	70,631	46,461	30,721	11,670	7,291	12,260
20%	7,500	8,758	34,338	67,689	82,418	64,805	50,018	31,452	14,666	9,565	6,732	11,734
30%	7,188	5,544	19,499	47,332	65,665	44,934	29,806	21,027	10,281	8,238	6,322	11,427
40%	6,875	5,130	12,982	28,023	53,139	35,689	26,435	17,467	8,625	8,000	5,860	11,008
50%	5,199	4,970	10,079	22,501	36,246	26,822	20,762	15,340	7,763	8,000	4,044	3,978
60%	4,257	4,646	6,342	15,799	24,758	22,232	15,403	11,049	7,416	6,500	4,000	3,235
70%	4,000	4,500	5,061	11,697	18,193	16,129	12,554	9,453	7,121	5,492	3,745	3,123
80%	4,000	4,500	4,534	8,788	14,699	12,819	11,389	7,592	6,469	5,000	3,520	3,000
90%	4,000	3,996	4,500	7,680	10,040	9,243	9,466	6,157	5,029	4,000	3,500	3,000
Long Term												
Full Simulation Period[a]	6,162	8,852	22,274	42,069	54,278	43,259	30,348	21,057	12,913	8,190	5,189	7,378
Water Year Types[b,c]												
Wet (32%)	7,958	11,658	26,283	85,174	99,942	80,070	54,824	37,979	23,391	11,761	7,207	12,538
Above Normal (15%)	7,055	8,573	18,791	46,977	62,390	54,780	32,227	23,600	12,011	9,841	6,352	11,369
Below Normal (17%)	6,548	10,240	26,544	21,744	38,228	23,170	21,821	15,309	8,233	7,533	4,029	3,542
Dry (22%)	4,058	7,203	24,672	13,319	22,472	19,468	14,247	9,642	7,046	5,225	3,610	3,094
Critical (15%)	4,083	3,905	8,495	10,608	13,663	11,103	9,539	5,682	5,371	4,019	3,375	3,110

Table 5B3-5-2b. Delta Outflow, Alternative 1B 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	8,203	16,739	63,479	98,695	126,404	88,598	67,887	46,357	30,490	11,827	7,479	12,663
20%	7,875	7,951	35,424	65,180	80,702	63,065	47,414	31,436	14,176	9,676	7,038	12,025
30%	7,578	5,461	18,747	45,486	63,255	42,216	30,054	20,796	10,201	8,310	6,574	11,715
40%	7,125	5,130	13,043	27,343	51,354	35,651	26,466	17,354	8,554	8,000	5,980	11,319
50%	5,582	4,991	9,252	22,136	35,486	25,293	20,791	15,199	7,779	8,000	4,949	4,185
60%	4,902	4,845	6,437	15,411	24,185	20,062	15,411	11,335	7,375	6,853	4,637	3,664
70%	4,483	4,607	5,044	11,273	17,735	16,006	12,851	9,351	7,100	5,510	4,201	3,429
80%	4,273	4,500	4,505	8,677	14,491	12,622	11,398	7,568	6,423	5,000	3,900	3,236
90%	4,000	3,500	4,500	7,702	10,082	9,270	9,479	5,937	4,868	4,051	3,509	3,044
Long Term												
Full Simulation Period[a]	6,464	8,752	22,209	41,201	53,309	42,062	29,981	20,881	12,728	8,251	5,531	7,637
Water Year Types[b,c]												
Wet (32%)	8,134	11,349	26,330	83,796	98,400	78,924	53,806	37,649	23,088	11,706	7,419	12,863
Above Normal (15%)	7,222	8,490	18,787	45,483	61,145	52,758	31,965	23,403	11,702	9,896	6,597	11,642
Below Normal (17%)	6,766	10,242	26,087	21,179	37,297	21,868	21,631	15,164	8,048	7,795	4,616	3,857
Dry (22%)	4,300	7,411	24,937	12,964	21,972	18,263	14,351	9,594	6,993	5,315	4,128	3,357
Critical (15%)	4,980	3,661	8,084	10,345	13,463	10,755	9,563	5,630	5,370	4,058	3,549	3,141

Table 5B3-5-2c. Delta Outflow, Alternative 1B 011221 minus No Action Alternative 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	93	-878	-1,933	-1,937	-3,893	-2,078	-2,744	-105	-230	158	189	403
20%	375	-807	1,086	-2,509	-1,716	-1,741	-2,604	-16	-490	112	306	291
30%	390	-83	-752	-1,845	-2,410	-2,718	248	-231	-80	73	252	287
40%	250	0	62	-681	-1,784	-38	31	-113	-71	0	120	311
50%	383	20	-827	-365	-760	-1,529	30	-140	15	0	905	207
60%	644	198	95	-388	-573	-2,170	8	286	-40	353	637	428
70%	483	107	-18	-425	-458	-123	297	-102	-21	18	456	305
80%	273	0	-29	-111	-208	-197	9	-25	-46	0	380	236
90%	0	-496	0	22	42	27	13	-220	-161	51	9	44
Long Term												
Full Simulation Period[a]	302	-100	-66	-868	-969	-1,197	-367	-176	-184	61	342	259
Water Year Types[b,c]												
Wet (32%)	176	-309	47	-1,378	-1,542	-1,146	-1,018	-330	-302	-55	211	325
Above Normal (15%)	167	-83	-3	-1,493	-1,245	-2,022	-262	-197	-309	55	245	273
Below Normal (17%)	217	2	-457	-565	-931	-1,302	-190	-146	-185	262	587	314
Dry (22%)	242	208	265	-355	-500	-1,205	105	-48	-53	90	518	263
Critical (15%)	897	-244	-411	-262	-200	-349	24	-52	0	38	174	31

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-5-3a. Delta Outflow, No Action Alternative 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	8,109	17,617	65,412	100,632	130,297	90,677	70,631	46,461	30,721	11,670	7,291	12,260
20%	7,500	8,758	34,338	67,689	82,418	64,805	50,018	31,452	14,666	9,565	6,732	11,734
30%	7,188	5,544	19,499	47,332	65,665	44,934	29,806	21,027	10,281	8,238	6,322	11,427
40%	6,875	5,130	12,982	28,023	53,139	35,689	26,435	17,467	8,625	8,000	5,860	11,008
50%	5,199	4,970	10,079	22,501	36,246	26,822	20,762	15,340	7,763	8,000	4,044	3,978
60%	4,257	4,646	6,342	15,799	24,758	22,232	15,403	11,049	7,416	6,500	4,000	3,235
70%	4,000	4,500	5,061	11,697	18,193	16,129	12,554	9,453	7,121	5,492	3,745	3,123
80%	4,000	4,500	4,534	8,788	14,699	12,819	11,389	7,592	6,469	5,000	3,520	3,000
90%	4,000	3,996	4,500	7,680	10,040	9,243	9,466	6,157	5,029	4,000	3,500	3,000
Long Term												
Full Simulation Period[a]	6,162	8,852	22,274	42,069	54,278	43,259	30,348	21,057	12,913	8,190	5,189	7,378
Water Year Types[b,c]												
Wet (32%)	7,958	11,658	26,283	85,174	99,942	80,070	54,824	37,979	23,391	11,761	7,207	12,538
Above Normal (15%)	7,055	8,573	18,791	46,977	62,390	54,780	32,227	23,600	12,011	9,841	6,352	11,369
Below Normal (17%)	6,548	10,240	26,544	21,744	38,228	23,170	21,821	15,309	8,233	7,533	4,029	3,542
Dry (22%)	4,058	7,203	24,672	13,319	22,472	19,468	14,247	9,642	7,046	5,225	3,610	3,094
Critical (15%)	4,083	3,905	8,495	10,608	13,663	11,103	9,539	5,682	5,371	4,019	3,375	3,110

Table 5B3-5-3b. Delta Outflow, Alternative 2 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	8,203	16,728	63,555	98,993	129,090	89,832	67,883	46,364	30,490	11,827	7,479	12,663
20%	7,890	8,060	34,439	65,294	80,187	63,385	47,417	31,434	14,195	9,675	7,037	12,095
30%	7,554	5,326	19,526	45,523	62,936	42,355	29,922	20,796	10,201	8,322	6,603	11,773
40%	7,143	5,041	12,792	27,342	51,517	35,656	26,466	17,354	8,568	8,000	6,207	11,370
50%	5,658	4,949	9,197	22,121	35,455	25,303	20,794	15,130	7,836	8,000	4,920	4,372
60%	4,825	4,762	6,600	15,518	24,185	20,064	15,410	11,356	7,331	6,816	4,715	3,621
70%	4,480	4,507	5,015	11,285	17,735	15,960	12,773	9,383	7,100	5,500	4,224	3,367
80%	4,361	4,500	4,505	8,680	14,491	12,622	11,398	7,522	6,422	5,000	3,890	3,189
90%	4,000	3,500	4,500	7,696	10,067	9,269	9,479	5,941	4,868	4,051	3,616	3,084
Long Term												
Full Simulation Period[a]	6,486	8,654	22,067	41,231	53,366	42,152	30,057	20,915	12,745	8,243	5,547	7,663
Water Year Types[b,c]												
Wet (32%)	8,124	11,352	26,304	83,916	98,706	79,163	54,055	37,733	23,123	11,707	7,461	12,901
Above Normal (15%)	7,286	8,413	18,649	45,391	61,203	52,727	31,968	23,412	11,693	9,895	6,619	11,710
Below Normal (17%)	6,807	9,939	26,003	21,178	37,109	21,868	21,620	15,159	8,061	7,768	4,605	3,898
Dry (22%)	4,344	7,253	24,464	12,975	21,887	18,346	14,347	9,619	7,015	5,301	4,128	3,370
Critical (15%)	4,977	3,651	8,116	10,369	13,475	10,763	9,557	5,639	5,370	4,056	3,557	3,098

Table 5B3-5-3c. Delta Outflow, Alternative 2 011221 minus No Action Alternative 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	93	-889	-1,857	-1,639	-1,207	-845	-2,748	-97	-231	158	189	403
20%	390	-698	101	-2,395	-2,231	-1,420	-2,601	-18	-471	110	305	361
30%	367	-218	27	-1,808	-2,728	-2,579	116	-231	-80	84	281	346
40%	268	-89	-190	-682	-1,622	-33	31	-113	-56	0	347	362
50%	459	-22	-882	-380	-791	-1,519	32	-210	73	0	876	395
60%	567	115	258	-281	-573	-2,168	7	308	-85	316	715	386
70%	480	7	-47	-413	-458	-169	219	-69	-21	8	479	243
80%	361	0	-29	-107	-209	-197	9	-71	-47	0	371	189
90%	0	-496	0	16	27	26	13	-216	-161	51	116	84
Long Term												
Full Simulation Period[a]	324	-198	-208	-838	-912	-1,106	-291	-142	-168	53	358	285
Water Year Types[b,c]												
Wet (32%)	166	-306	21	-1,258	-1,236	-907	-769	-246	-268	-54	254	363
Above Normal (15%)	232	-160	-142	-1,586	-1,187	-2,053	-259	-187	-318	54	267	341
Below Normal (17%)	258	-301	-541	-566	-1,119	-1,301	-201	-150	-173	234	576	356
Dry (22%)	286	50	-208	-343	-585	-1,122	100	-23	-31	76	518	277
Critical (15%)	894	-254	-379	-239	-188	-341	18	-43	-1	36	182	-12

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-5-4a. Delta Outflow, No Action Alternative 011221, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	8,109	17,617	65,412	100,632	130,297	90,677	70,631	46,461	30,721	11,670	7,291	12,260
20%	7,500	8,758	34,338	67,689	82,418	64,805	50,018	31,452	14,666	9,565	6,732	11,734
30%	7,188	5,544	19,499	47,332	65,665	44,934	29,806	21,027	10,281	8,238	6,322	11,427
40%	6,875	5,130	12,982	28,023	53,139	35,689	26,435	17,467	8,625	8,000	5,860	11,008
50%	5,199	4,970	10,079	22,501	36,246	26,822	20,762	15,340	7,763	8,000	4,044	3,978
60%	4,257	4,646	6,342	15,799	24,758	22,232	15,403	11,049	7,416	6,500	4,000	3,235
70%	4,000	4,500	5,061	11,697	18,193	16,129	12,554	9,453	7,121	5,492	3,745	3,123
80%	4,000	4,500	4,534	8,788	14,699	12,819	11,389	7,592	6,469	5,000	3,520	3,000
90%	4,000	3,996	4,500	7,680	10,040	9,243	9,466	6,157	5,029	4,000	3,500	3,000
Long Term												
Full Simulation Period[a]	6,162	8,852	22,274	42,069	54,278	43,259	30,348	21,057	12,913	8,190	5,189	7,378
Water Year Types[b,c]												
Wet (32%)	7,958	11,658	26,283	85,174	99,942	80,070	54,824	37,979	23,391	11,761	7,207	12,538
Above Normal (15%)	7,055	8,573	18,791	46,977	62,390	54,780	32,227	23,600	12,011	9,841	6,352	11,369
Below Normal (17%)	6,548	10,240	26,544	21,744	38,228	23,170	21,821	15,309	8,233	7,533	4,029	3,542
Dry (22%)	4,058	7,203	24,672	13,319	22,472	19,468	14,247	9,642	7,046	5,225	3,610	3,094
Critical (15%)	4,083	3,905	8,495	10,608	13,663	11,103	9,539	5,682	5,371	4,019	3,375	3,110

Table 5B3-5-4b. Delta Outflow, Alternative 3 020121, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	8,195	16,727	63,303	99,751	126,603	88,602	67,900	46,366	30,476	11,846	7,479	12,631
20%	7,885	7,958	36,784	65,138	81,322	62,120	47,415	31,447	14,212	9,673	7,038	12,054
30%	7,500	5,642	19,110	45,494	61,756	42,367	30,023	20,798	10,108	8,355	6,608	11,760
40%	7,125	5,092	12,946	27,343	51,341	35,419	26,466	17,371	8,550	8,000	5,980	11,330
50%	5,483	4,936	9,227	22,130	35,490	25,366	20,802	15,234	7,722	8,000	4,920	4,260
60%	4,771	4,647	6,521	16,035	24,186	20,065	15,389	11,335	7,338	6,860	4,521	3,631
70%	4,438	4,500	5,128	11,230	17,743	16,138	12,882	8,995	7,100	5,512	4,019	3,254
80%	4,239	4,500	4,533	8,624	14,317	12,623	11,381	7,577	6,423	5,000	3,892	3,122
90%	4,000	3,516	4,500	7,789	9,968	9,276	9,610	5,931	5,087	4,052	3,500	3,000
Long Term												
Full Simulation Period[a]	6,445	8,796	22,231	41,285	53,410	41,983	29,909	20,860	12,715	8,274	5,481	7,609
Water Year Types[b,c]												
Wet (32%)	8,126	11,349	26,318	83,903	98,579	78,582	53,555	37,634	23,049	11,708	7,427	12,814
Above Normal (15%)	7,153	8,772	18,959	45,554	61,654	52,582	31,990	23,401	11,706	9,948	6,566	11,745
Below Normal (17%)	6,896	10,321	26,559	21,229	37,254	21,846	21,671	15,227	8,023	7,826	4,583	3,890
Dry (22%)	4,293	7,308	24,585	13,078	21,982	18,434	14,347	9,497	7,006	5,364	4,004	3,239
Critical (15%)	4,796	3,741	8,068	10,385	13,288	10,902	9,551	5,594	5,368	4,046	3,445	3,088

Table 5B3-5-4c. Delta Outflow, Alternative 3 020121 minus No Action Alternative 011221, Monthly Outflow (cfs)

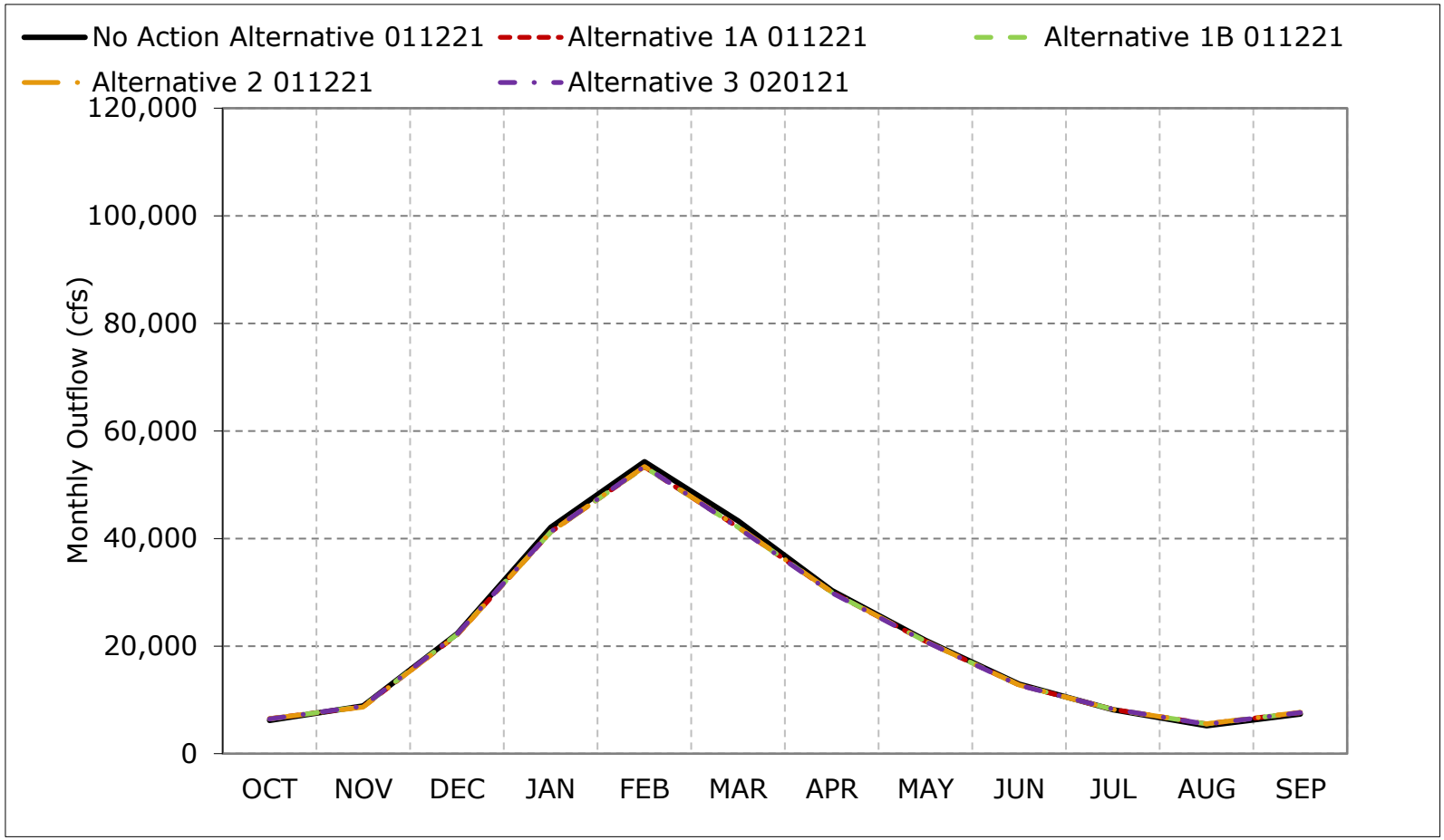
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	86	-890	-2,109	-881	-3,694	-2,075	-2,731	-95	-244	177	189	371
20%	385	-801	2,446	-2,551	-1,095	-2,686	-2,603	-5	-454	108	306	319
30%	312	98	-389	-1,838	-3,909	-2,567	218	-230	-173	117	286	332
40%	250	-38	-36	-680	-1,798	-270	32	-96	-75	0	120	322
50%	285	-34	-852	-370	-757	-1,456	40	-106	-41	0	876	282
60%	514	0	179	236	-572	-2,167	-14	286	-77	360	521	395
70%	438	0	67	-467	-450	9	328	-458	-21	20	274	130
80%	239	0	-1	-164	-383	-196	-8	-15	-46	0	373	122
90%	0	-481	0	109	-72	33	144	-226	58	52	0	0
Long Term												
Full Simulation Period[a]	283	-56	-43	-785	-869	-1,276	-439	-197	-198	83	292	231
Water Year Types[b,c]												
Wet (32%)	168	-309	34	-1,271	-1,363	-1,488	-1,270	-345	-341	-53	220	276
Above Normal (15%)	99	200	168	-1,422	-736	-2,198	-237	-199	-306	107	213	376
Below Normal (17%)	347	80	15	-515	-974	-1,324	-150	-82	-211	293	554	347
Dry (22%)	235	105	-86	-241	-491	-1,034	101	-145	-40	139	394	146
Critical (15%)	713	-164	-427	-223	-375	-201	11	-89	-3	27	70	-22

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

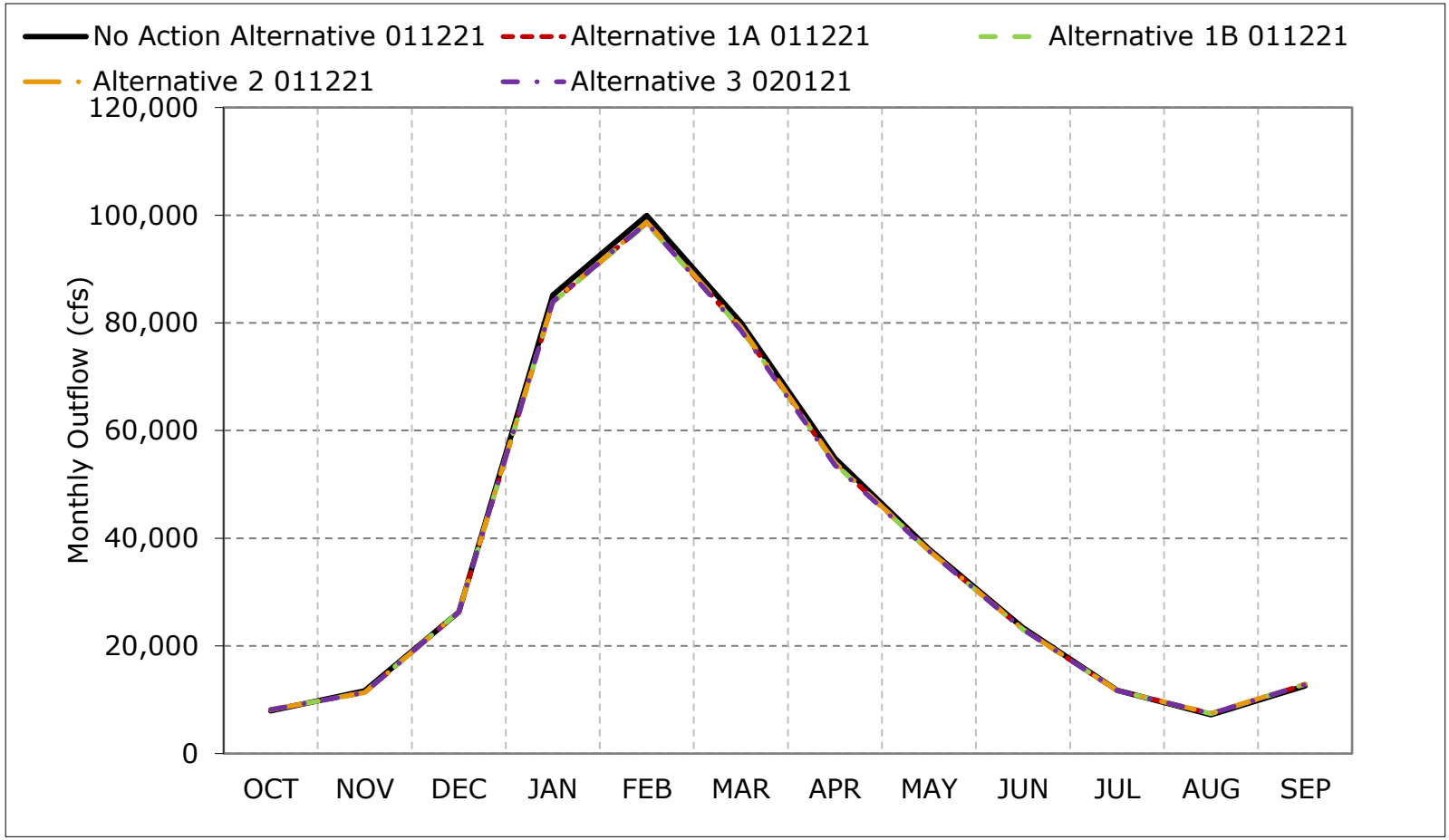
c These results are displayed with calendar year - year type sorting.

Figure 5B3-5-1. Delta Outflow, Long-Term Average Outflow



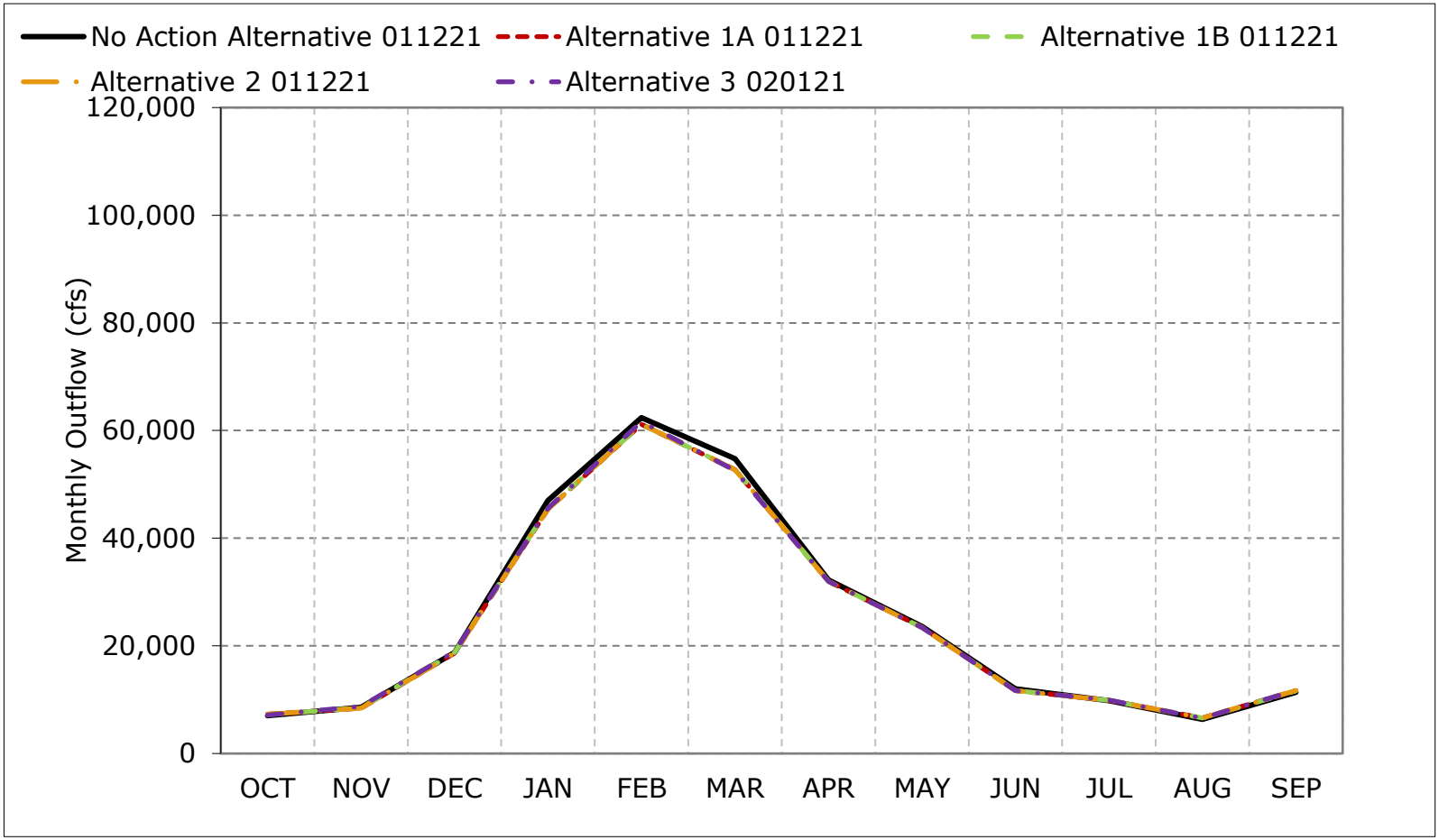
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-5-2. Delta Outflow, Wet Year Average Outflow



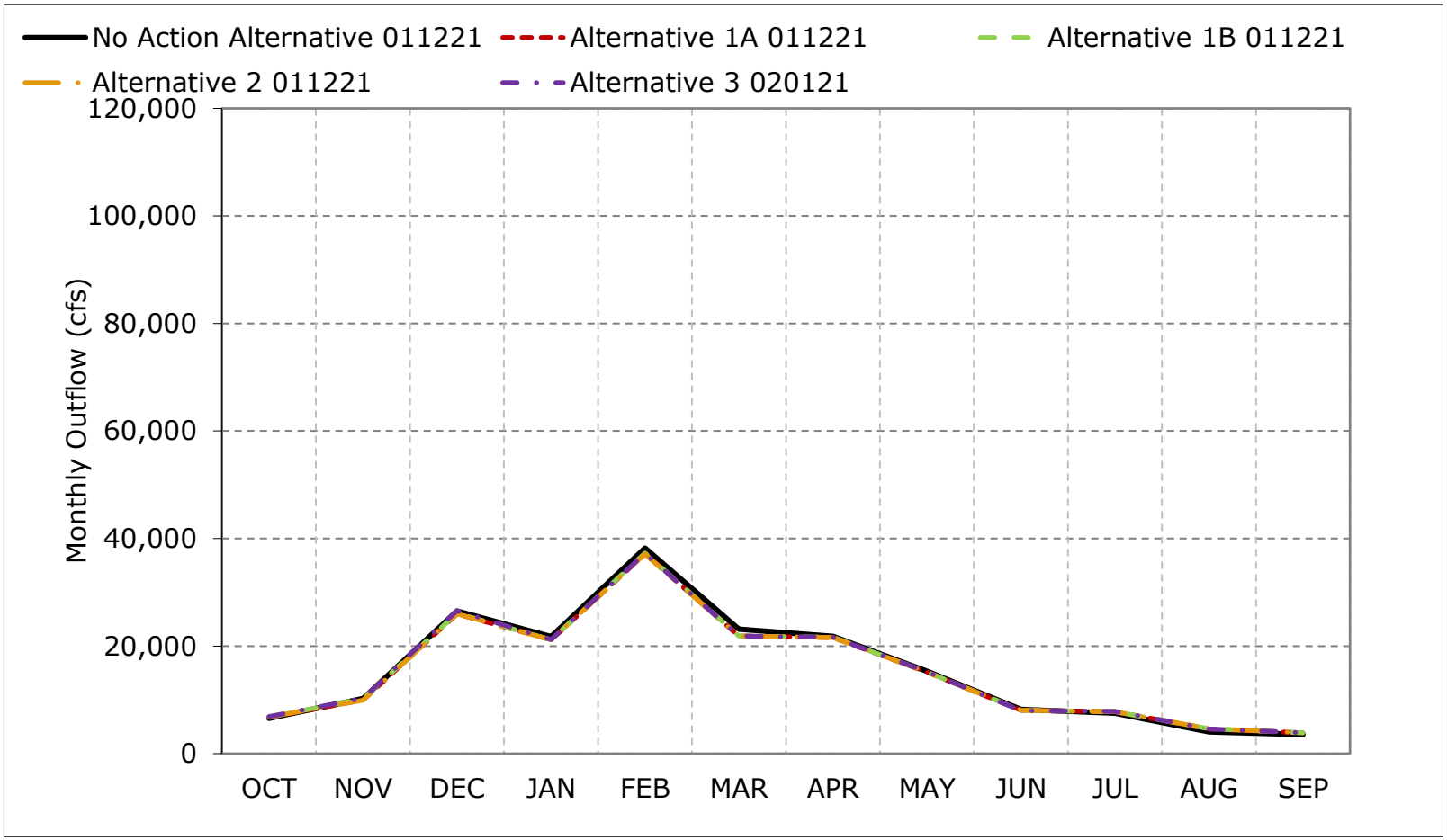
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-5-3. Delta Outflow, Above Normal Year Average Outflow



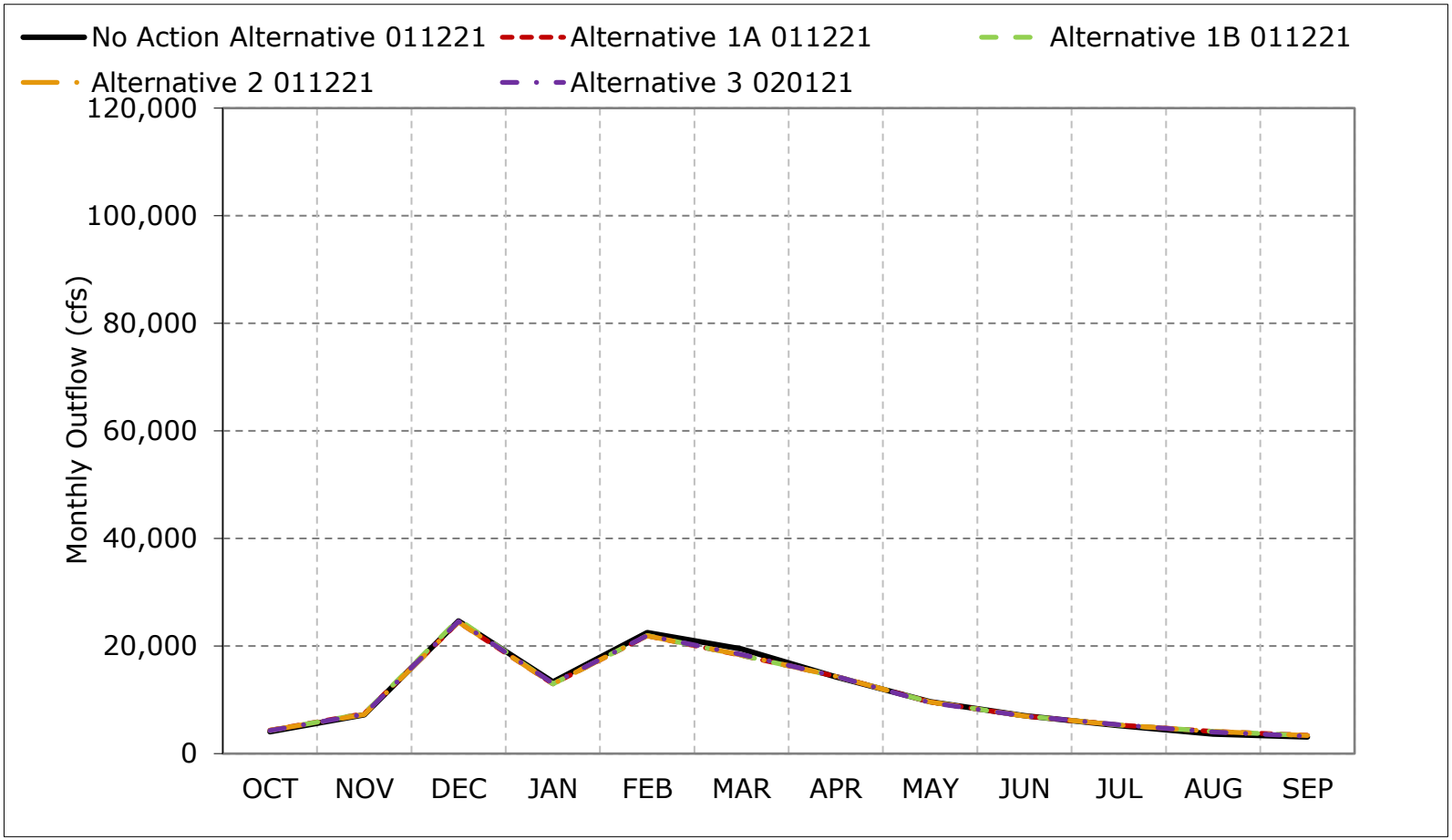
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-5-4. Delta Outflow, Below Normal Year Average Outflow



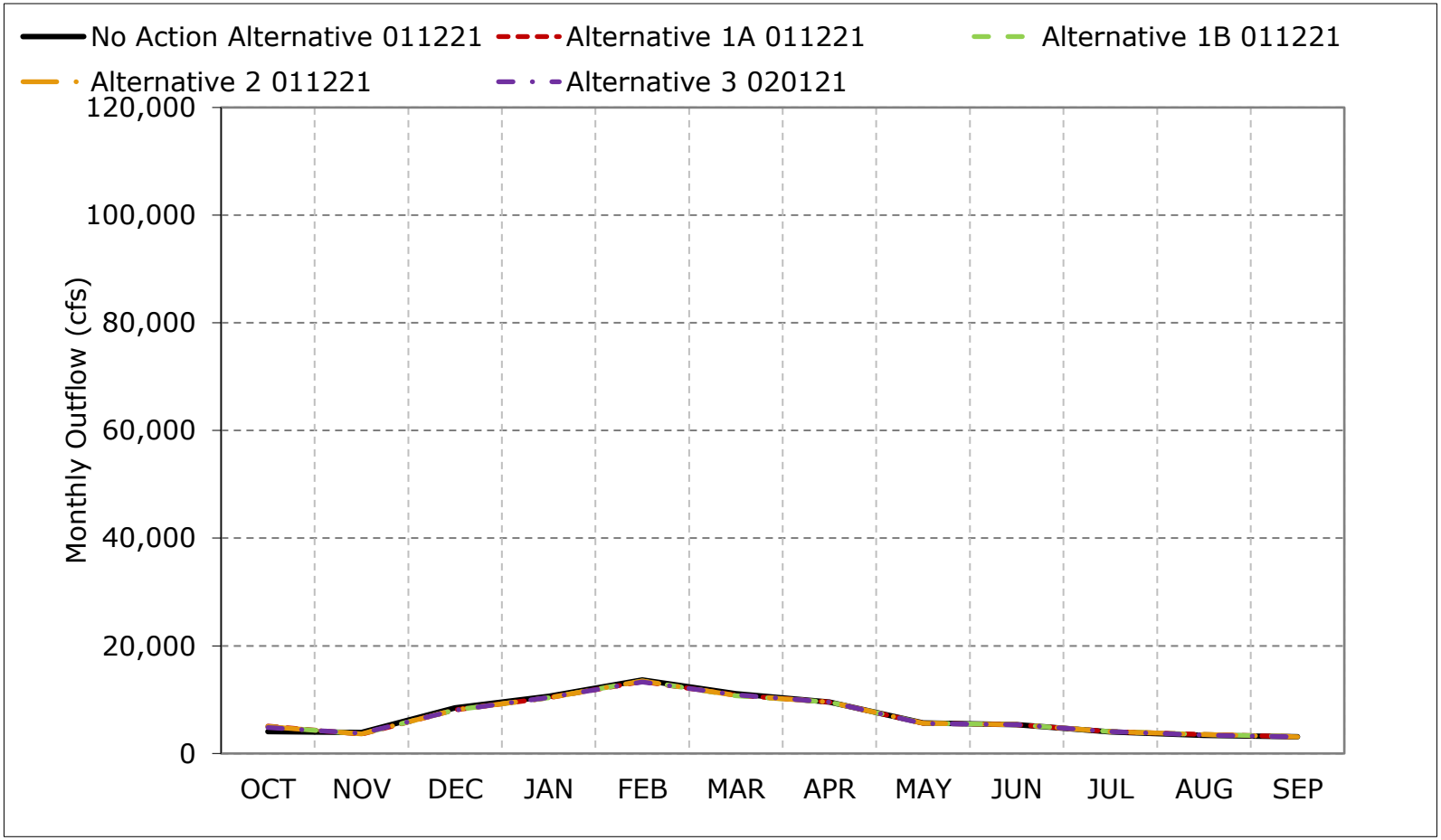
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-5-5. Delta Outflow, Dry Year Average Outflow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-5-6. Delta Outflow, Critical Year Average Outflow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-5-7. Delta Outflow, October

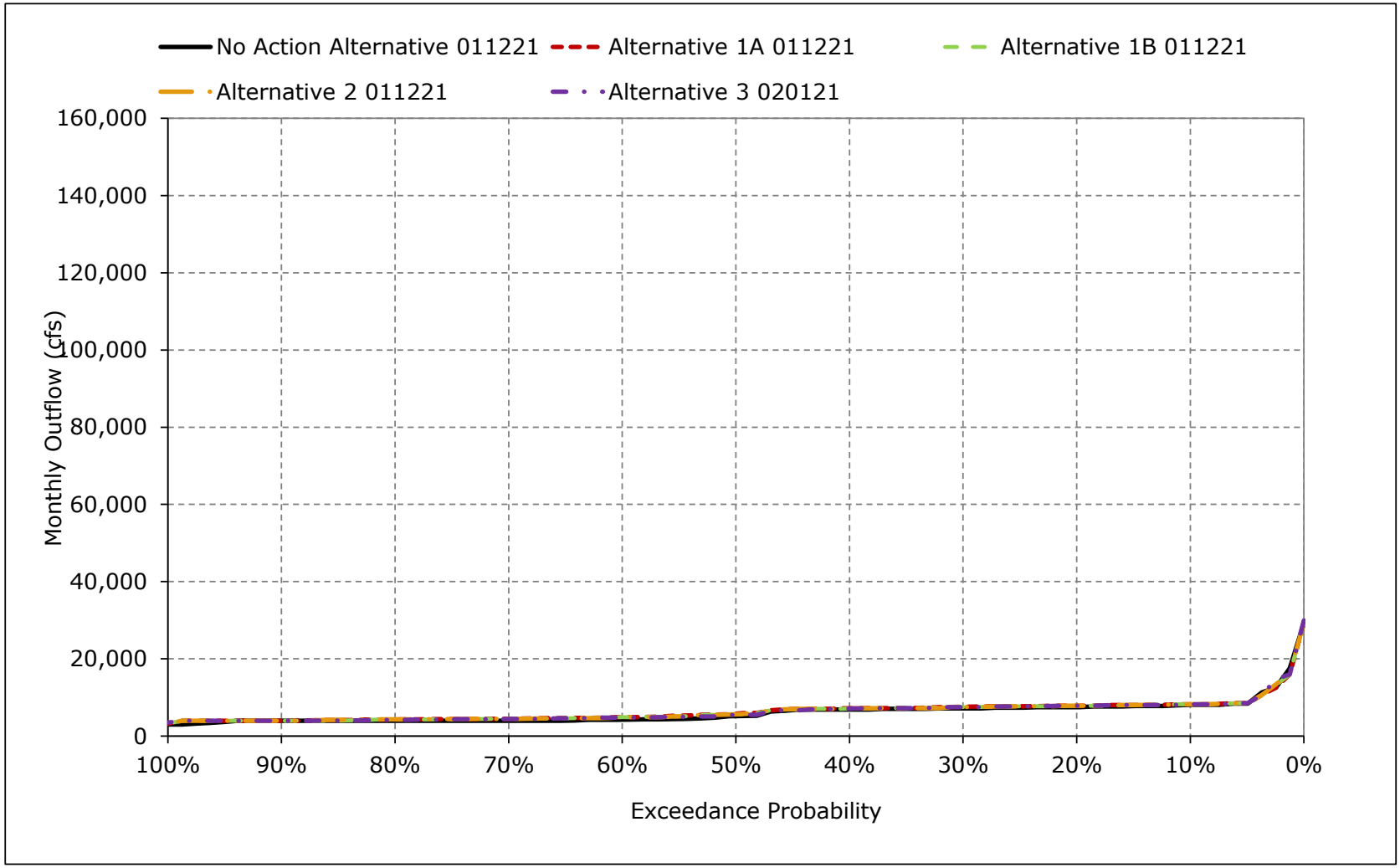


Figure 5B3-5-8. Delta Outflow, November

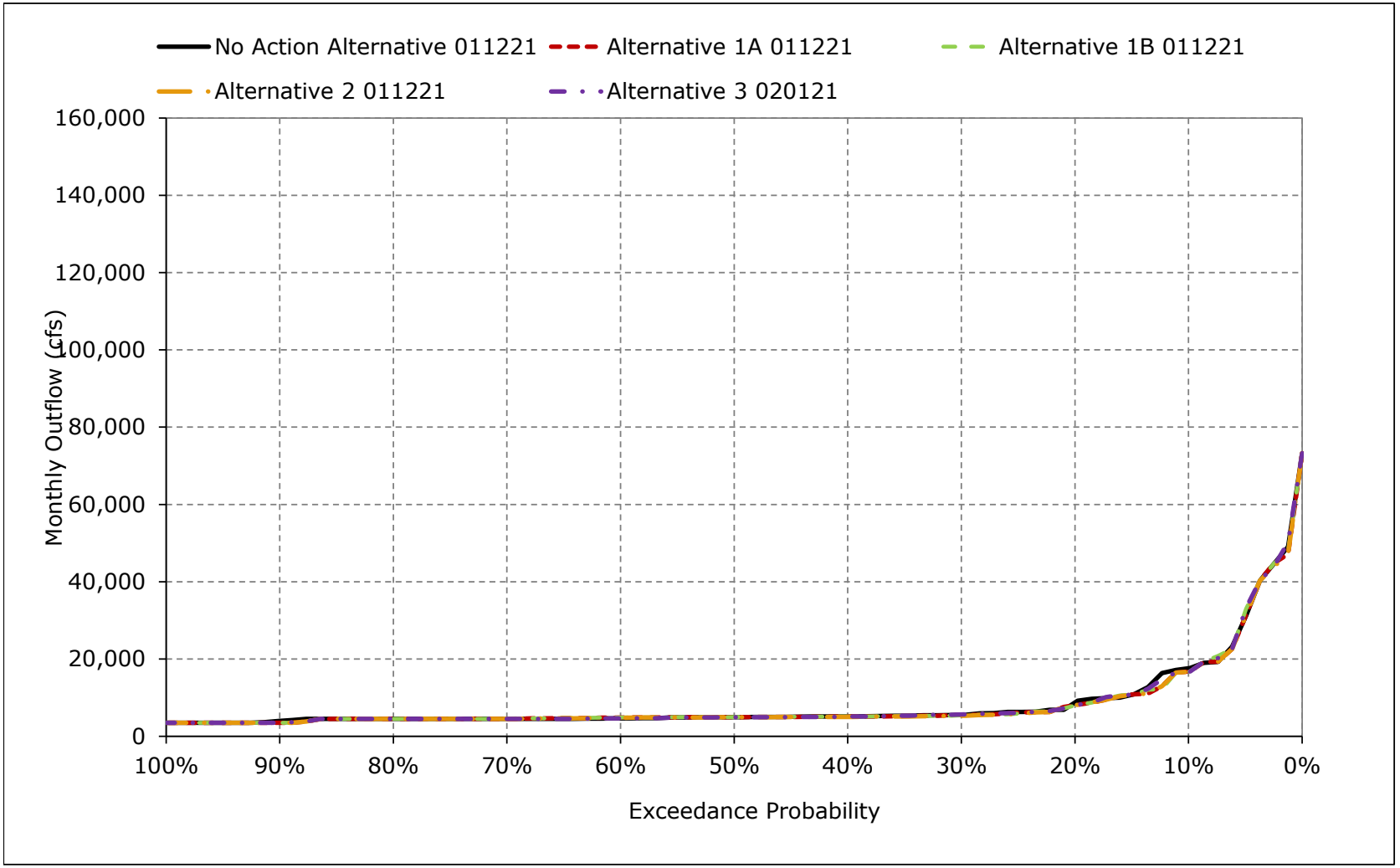


Figure 5B3-5-9. Delta Outflow, December

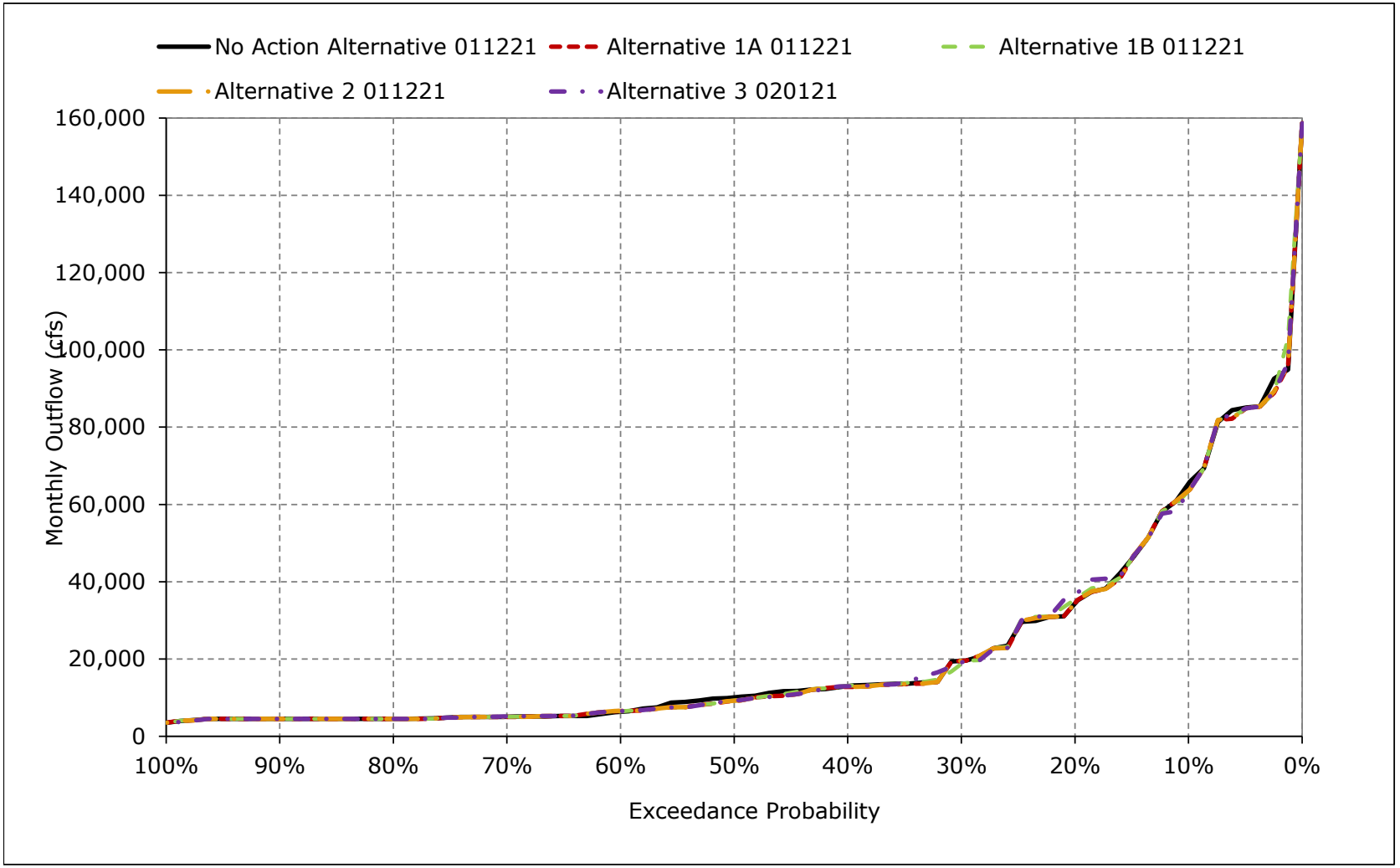


Figure 5B3-5-10. Delta Outflow, January

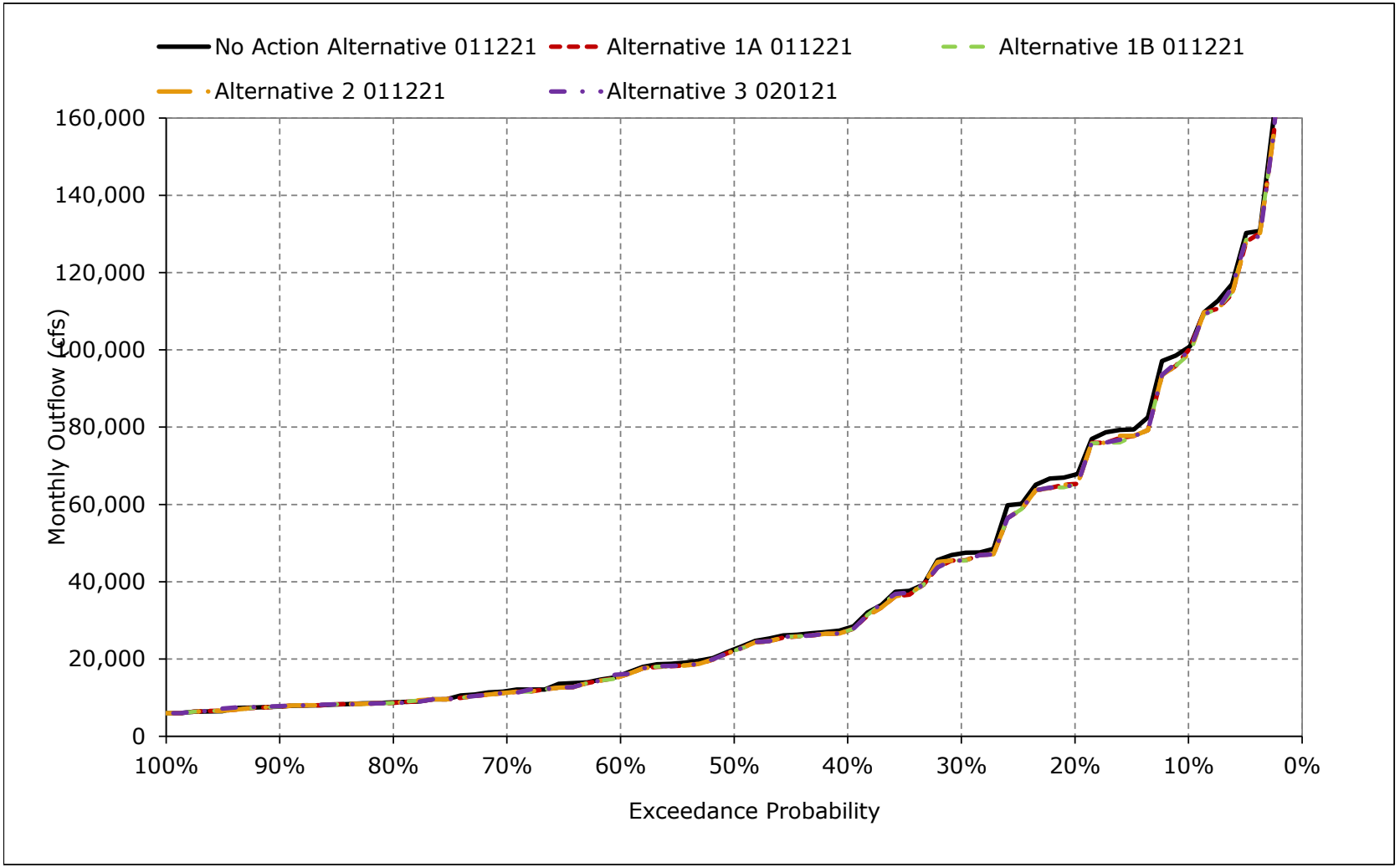


Figure 5B3-5-11. Delta Outflow, February

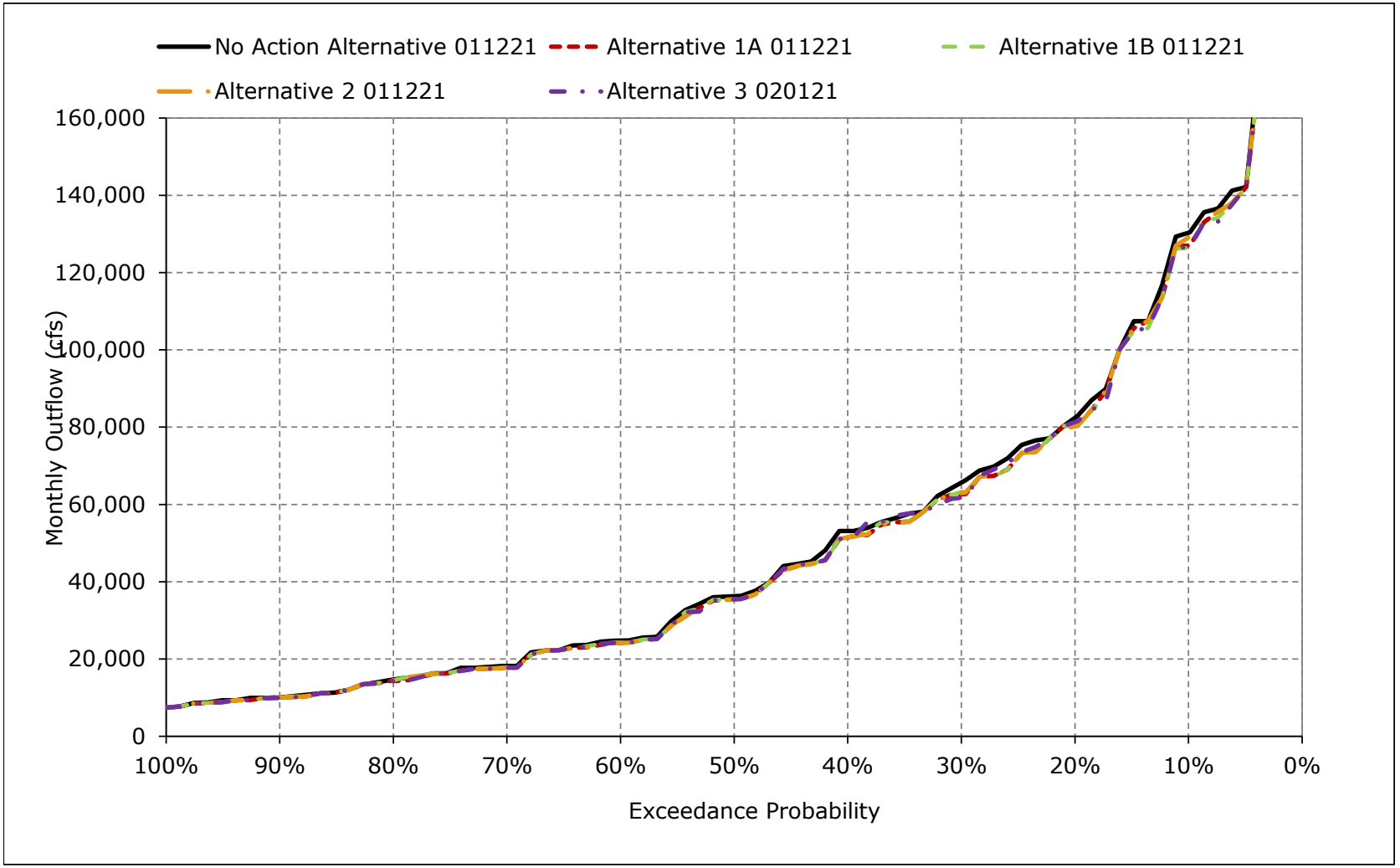


Figure 5B3-5-12. Delta Outflow, March

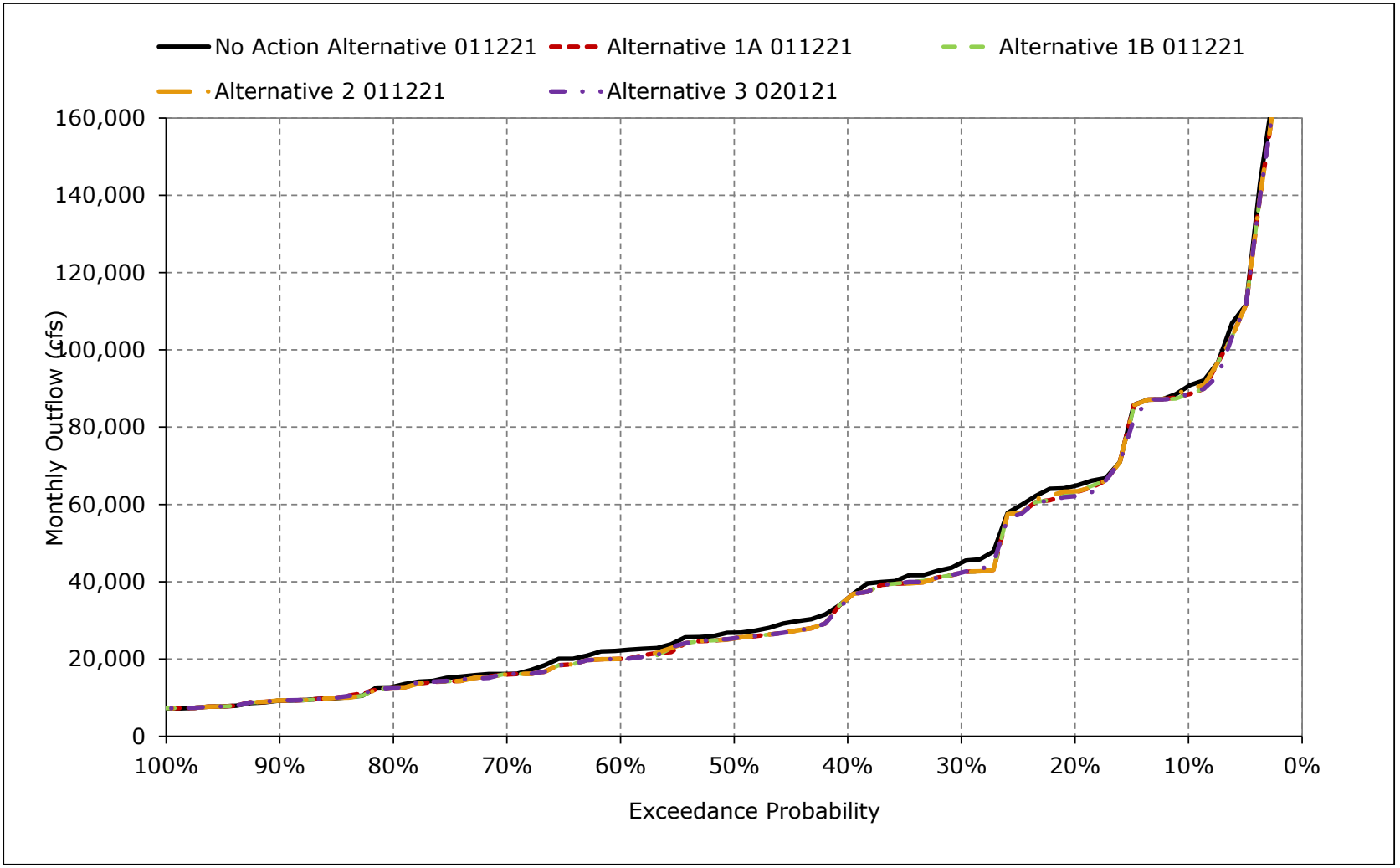


Figure 5B3-5-13. Delta Outflow, April

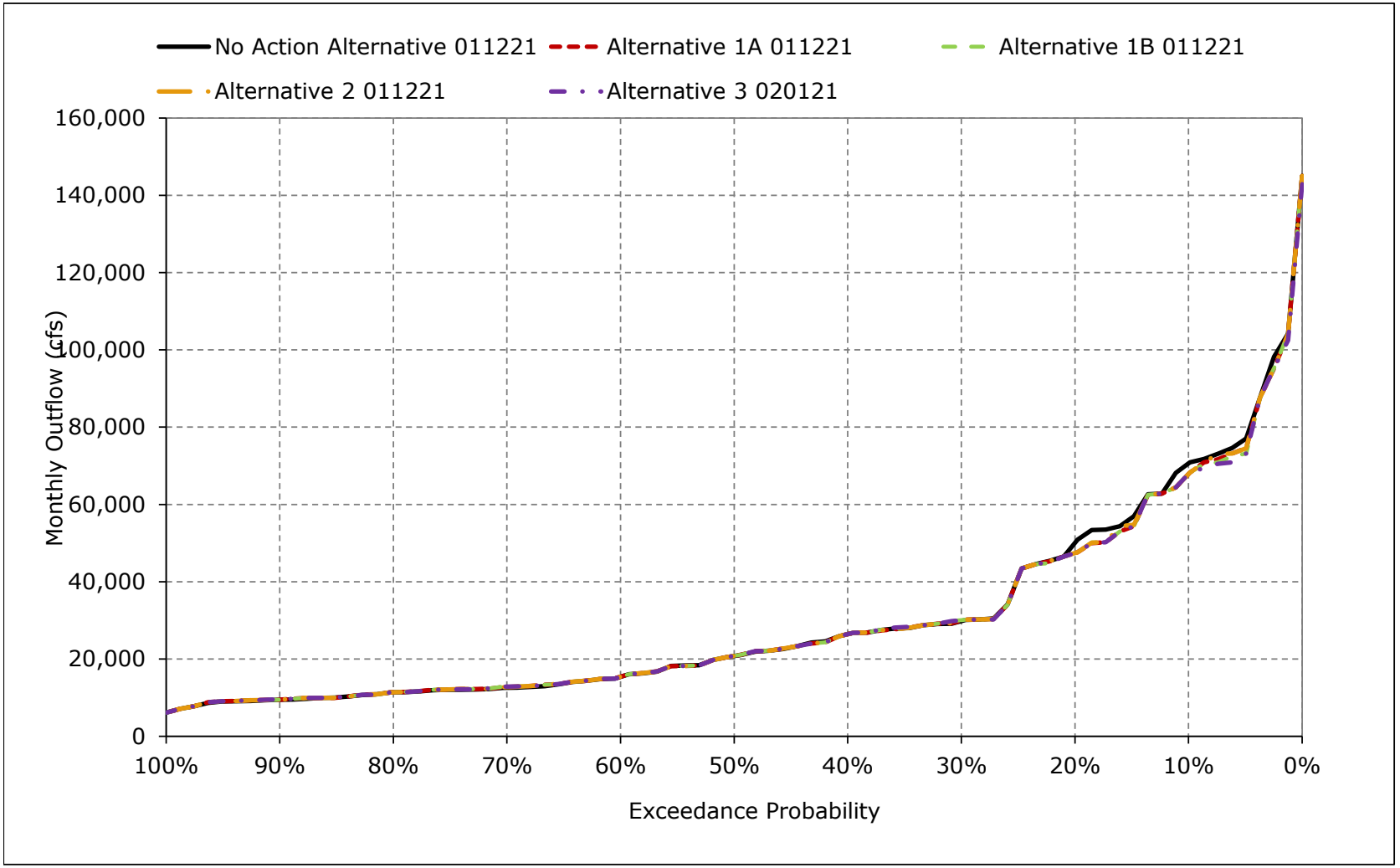


Figure 5B3-5-14. Delta Outflow, May

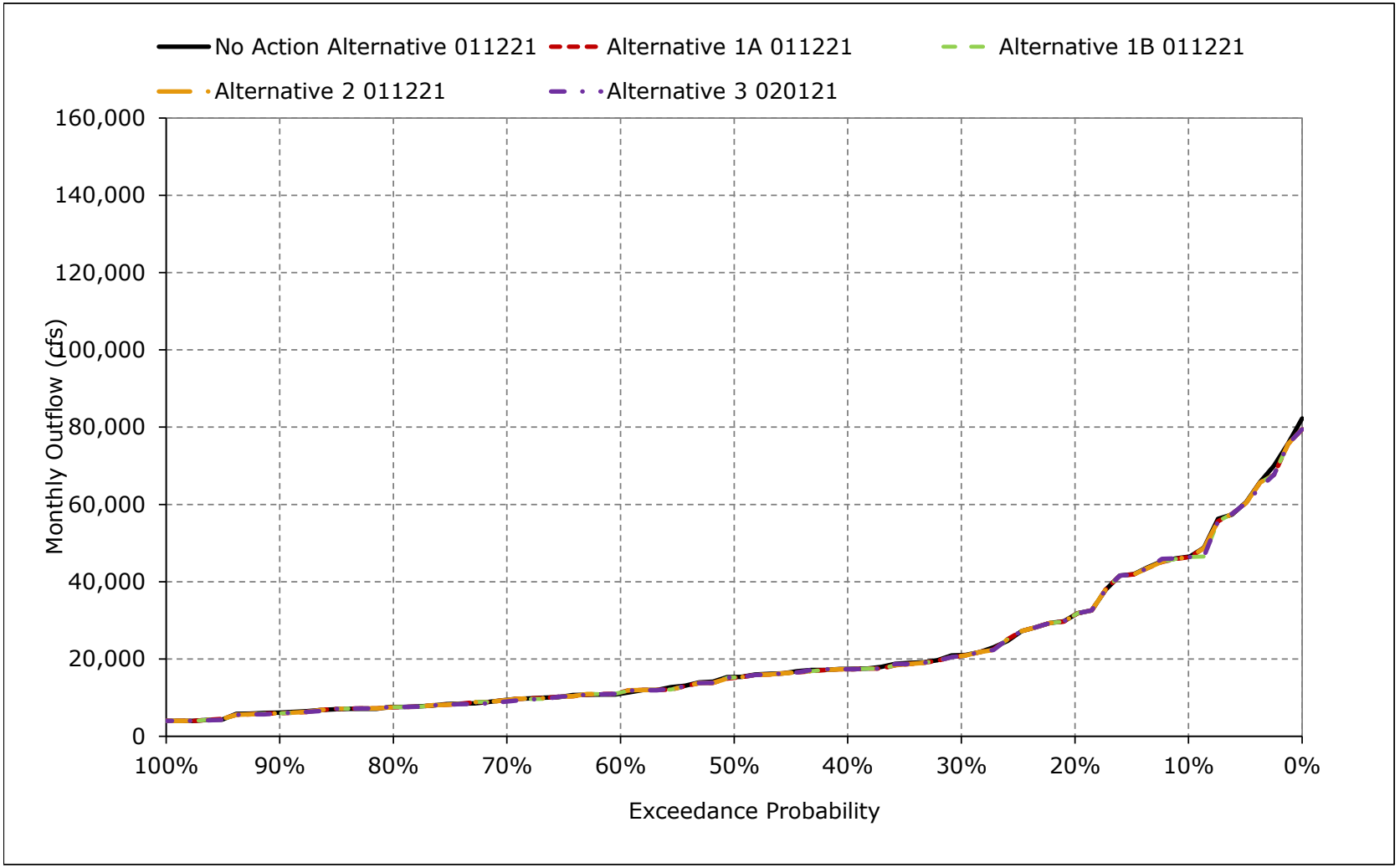


Figure 5B3-5-15. Delta Outflow, June

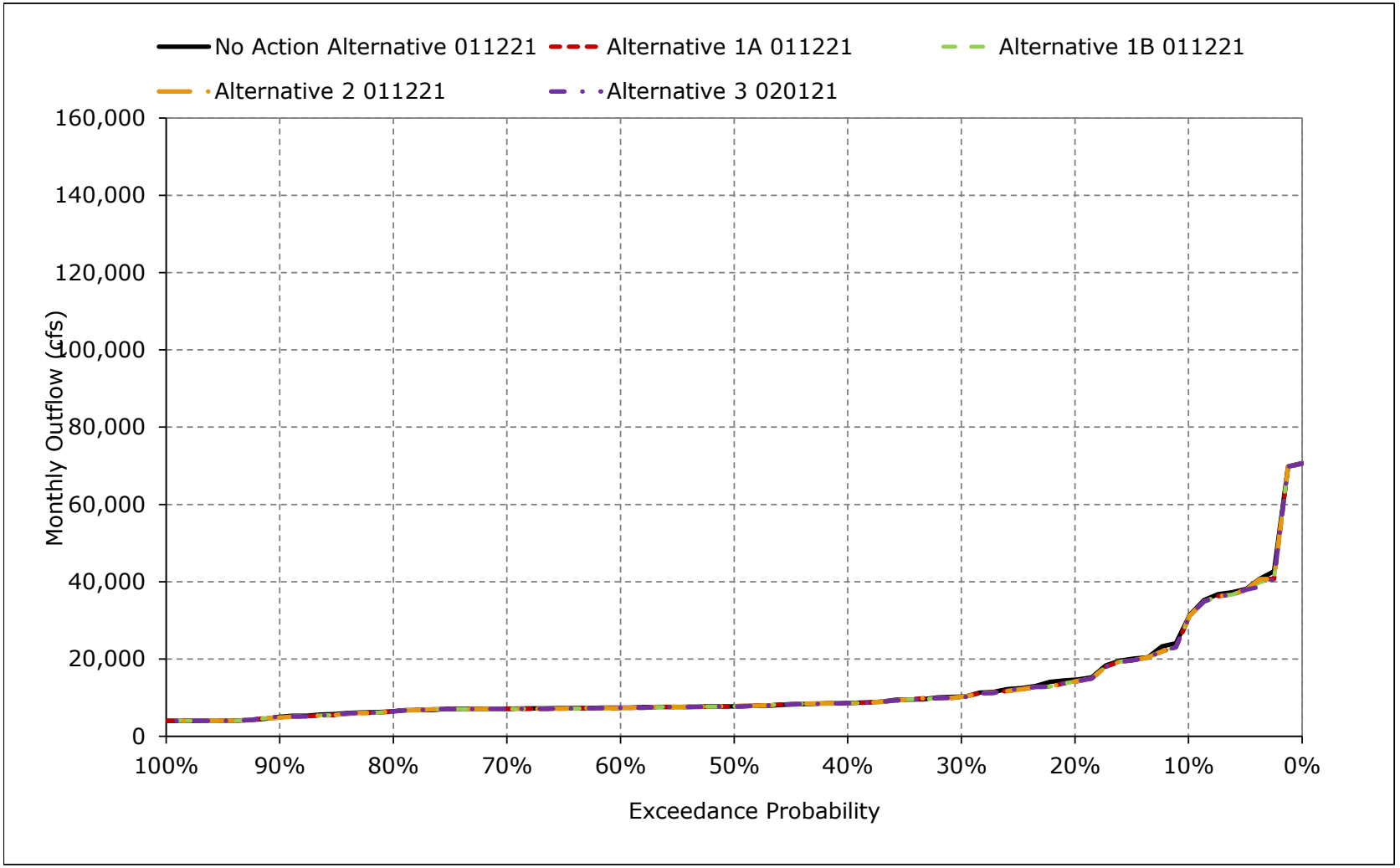


Figure 5B3-5-16. Delta Outflow, July

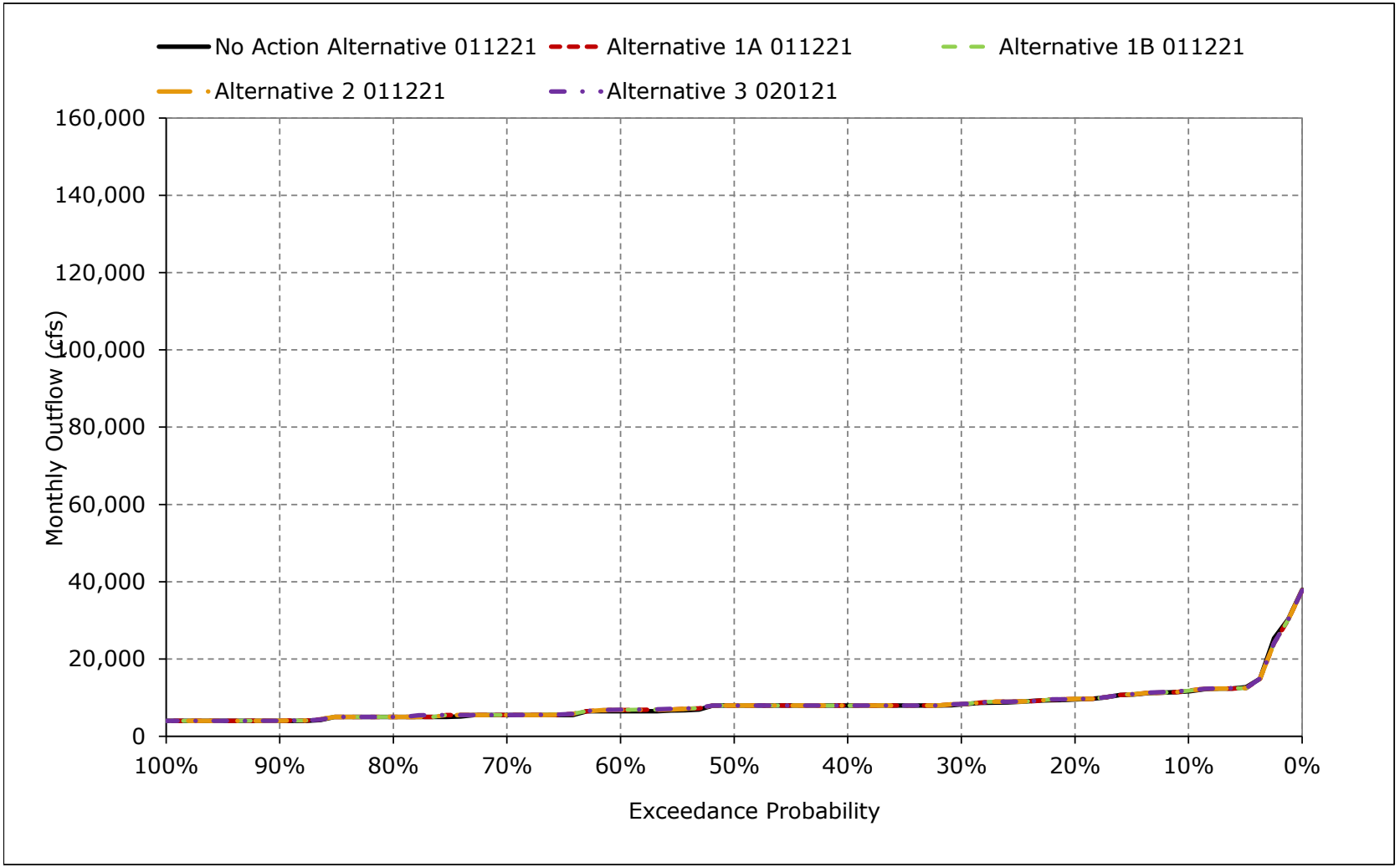


Figure 5B3-5-17. Delta Outflow, August

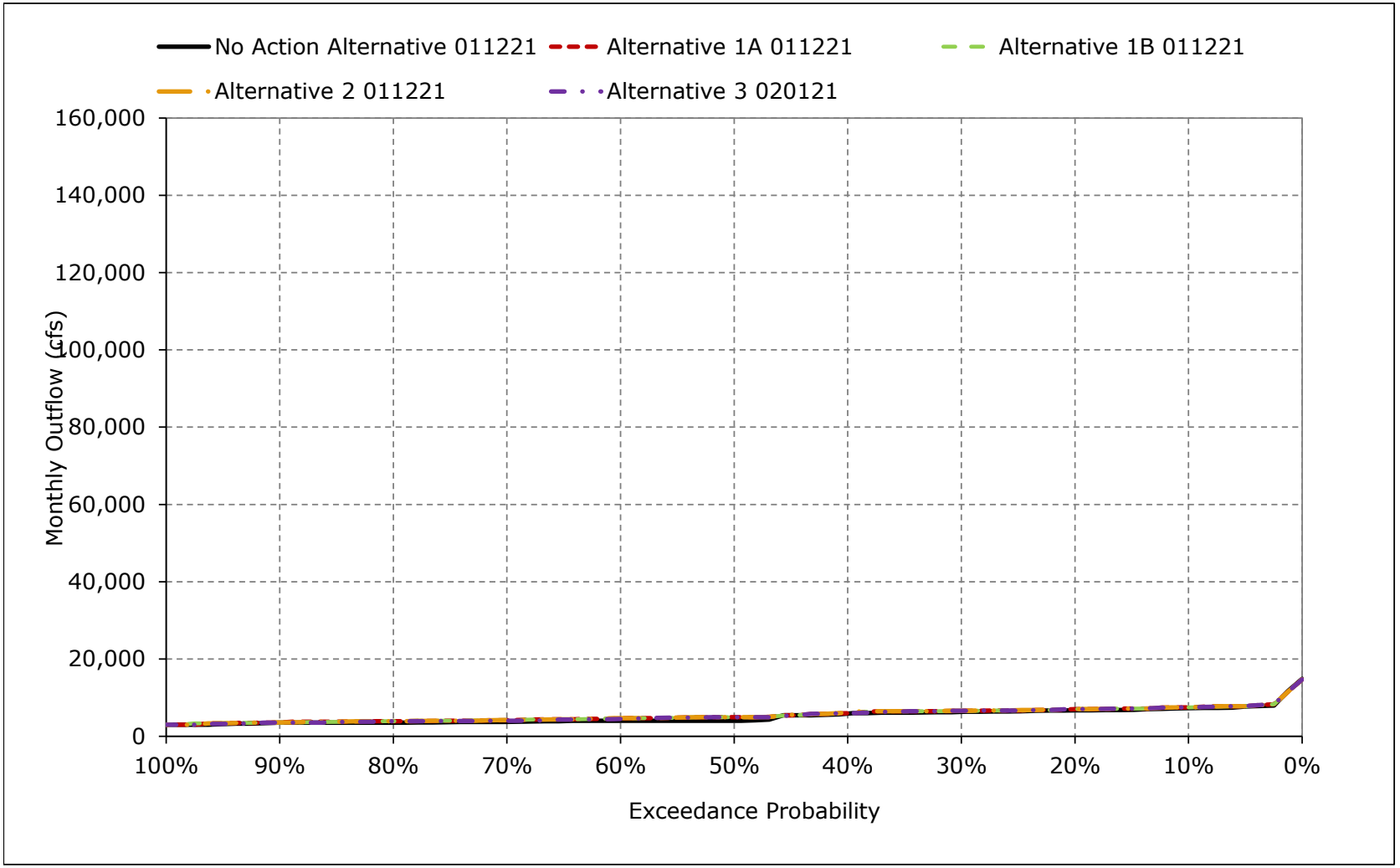


Figure 5B3-5-18. Delta Outflow, September

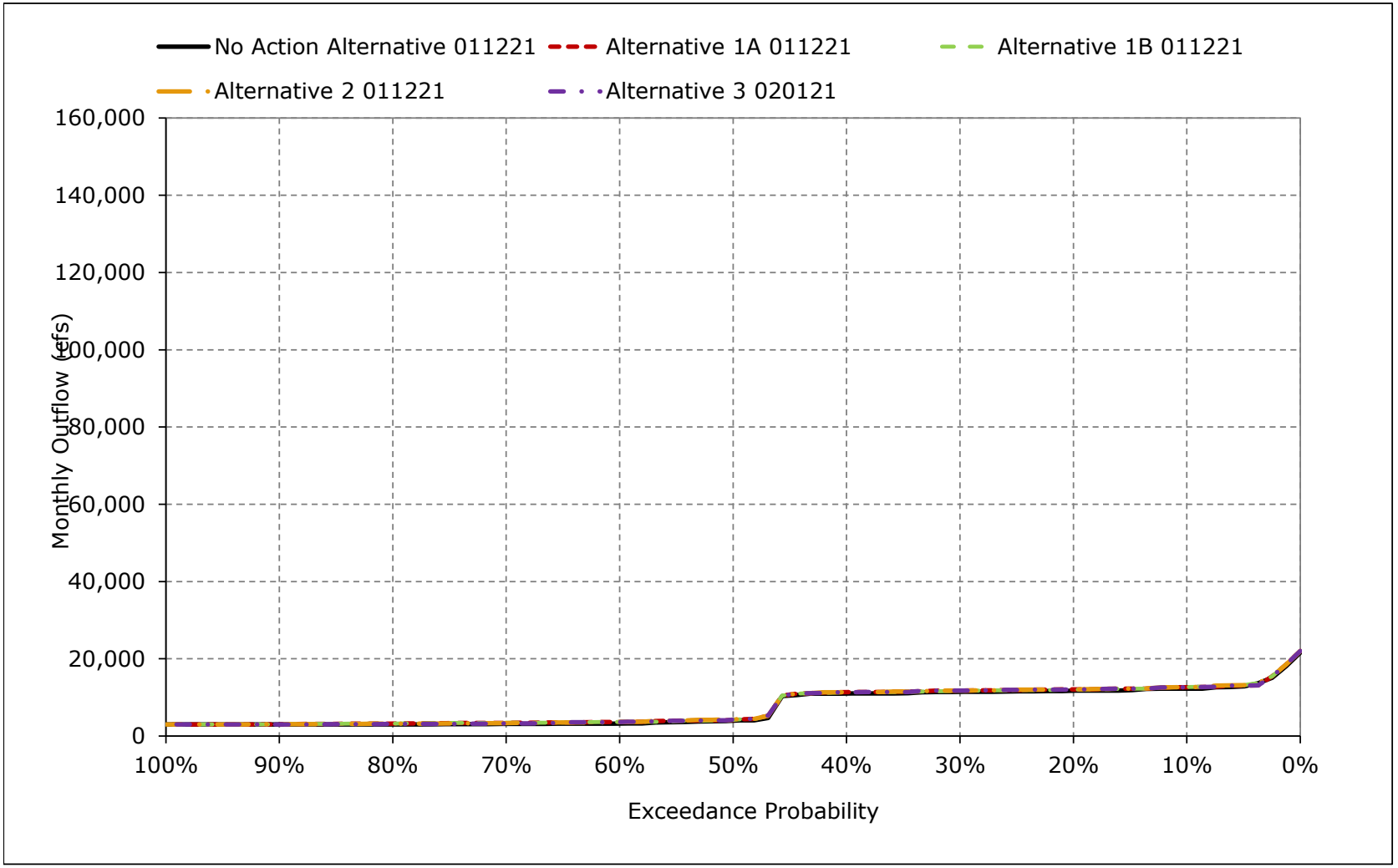


Table 5B3-6-1a. Old and Middle River Flow, No Action Alternative 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-2,764	-3,303	-4,107	-3,645	-3,411	-1,762	-506	-1,140	-1,801	-2,807	-3,558	-3,579
20%	-3,472	-3,883	-5,031	-3,645	-4,464	-3,258	-902	-1,789	-3,736	-4,689	-4,543	-4,993
30%	-4,204	-4,802	-5,290	-4,516	-4,464	-3,258	-1,043	-1,882	-4,660	-7,254	-5,377	-5,955
40%	-4,624	-6,033	-5,290	-4,516	-4,464	-3,258	-1,206	-1,971	-5,000	-8,268	-6,641	-6,631
50%	-5,210	-8,460	-5,290	-4,516	-4,464	-3,258	-1,479	-2,113	-5,000	-8,987	-8,283	-7,710
60%	-5,620	-8,890	-5,807	-5,000	-4,483	-3,258	-1,638	-2,297	-5,000	-9,605	-8,888	-8,594
70%	-6,718	-9,190	-8,781	-5,226	-4,483	-3,258	-1,957	-2,456	-5,000	-10,296	-9,218	-8,801
80%	-7,363	-9,384	-9,595	-5,226	-5,000	-3,258	-2,112	-2,667	-5,000	-10,666	-9,633	-9,090
90%	-8,282	-9,579	-9,725	-5,226	-5,000	-3,500	-2,318	-3,386	-5,000	-11,206	-10,285	-9,281
Long Term												
Full Simulation Period[a]	-5,347	-6,930	-6,368	-3,959	-3,942	-2,456	-1,158	-1,982	-4,260	-7,990	-7,278	-7,008
Water Year Types[b,c]												
Wet (32%)	-6,765	-8,737	-7,264	-2,304	-2,629	-829	-575	-1,616	-4,438	-8,312	-8,444	-8,563
Above Normal (15%)	-5,426	-9,010	-7,924	-4,331	-3,853	-2,754	-1,460	-2,386	-4,914	-9,402	-9,048	-8,647
Below Normal (17%)	-6,292	-6,617	-6,307	-4,707	-4,752	-3,289	-1,440	-2,263	-4,702	-10,508	-9,808	-8,176
Dry (22%)	-4,064	-5,241	-5,101	-5,090	-4,760	-3,307	-1,564	-2,146	-4,449	-7,982	-4,693	-5,428
Critical (15%)	-3,018	-3,836	-4,842	-4,605	-4,705	-3,433	-1,184	-1,799	-2,421	-2,952	-3,906	-3,008

Table 5B3-6-1b. Old and Middle River Flow, Alternative 1A 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-2,824	-3,458	-4,241	-3,645	-3,399	-1,661	-457	-1,138	-1,757	-3,471	-4,572	-4,636
20%	-3,938	-4,763	-5,178	-3,645	-4,464	-3,258	-867	-1,781	-3,570	-5,967	-5,149	-6,053
30%	-4,627	-5,588	-5,290	-4,516	-4,464	-3,258	-1,071	-1,879	-4,563	-7,641	-6,037	-6,508
40%	-5,249	-7,098	-5,290	-4,516	-4,464	-3,258	-1,213	-1,956	-5,000	-8,547	-7,316	-6,854
50%	-5,841	-8,639	-5,292	-4,516	-4,464	-3,258	-1,434	-2,105	-5,000	-9,213	-8,569	-7,843
60%	-6,120	-8,903	-6,351	-5,000	-4,483	-3,258	-1,621	-2,296	-5,000	-9,872	-8,884	-8,633
70%	-6,724	-9,222	-8,784	-5,226	-4,483	-3,258	-2,006	-2,474	-5,000	-10,346	-9,294	-8,832
80%	-7,268	-9,407	-9,538	-5,226	-5,000	-3,258	-2,111	-2,732	-5,000	-10,737	-9,646	-9,117
90%	-8,344	-9,579	-9,708	-5,226	-5,000	-3,500	-2,318	-3,386	-5,000	-11,274	-10,295	-9,350
Long Term												
Full Simulation Period[a]	-5,651	-7,230	-6,428	-3,973	-3,912	-2,460	-1,153	-1,978	-4,259	-8,337	-7,649	-7,352
Water Year Types[b,c]												
Wet (32%)	-6,721	-8,745	-7,256	-2,303	-2,619	-827	-575	-1,608	-4,431	-8,301	-8,457	-8,568
Above Normal (15%)	-5,481	-9,035	-7,890	-4,331	-3,811	-2,754	-1,461	-2,395	-4,911	-9,415	-9,057	-8,685
Below Normal (17%)	-6,750	-7,274	-6,480	-4,707	-4,662	-3,289	-1,433	-2,264	-4,671	-10,531	-10,014	-8,353
Dry (22%)	-4,952	-5,797	-5,271	-5,085	-4,748	-3,307	-1,537	-2,139	-4,452	-8,968	-5,685	-6,225
Critical (15%)	-3,267	-4,243	-4,844	-4,707	-4,683	-3,469	-1,198	-1,790	-2,468	-3,830	-4,677	-3,905

Table 5B3-6-1c. Old and Middle River Flow, Alternative 1A 011221 minus No Action Alternative 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-60	-155	-134	0	12	101	50	3	44	-664	-1,014	-1,057
20%	-466	-880	-147	0	0	0	35	8	166	-1,278	-606	-1,060
30%	-423	-785	0	0	0	0	-28	3	97	-387	-661	-553
40%	-626	-1,065	0	0	0	0	-8	15	0	-279	-675	-223
50%	-632	-179	-1	0	0	0	45	8	0	-227	-287	-133
60%	-501	-12	-544	0	0	0	17	1	0	-267	5	-38
70%	-6	-32	-4	0	0	0	-49	-18	0	-49	-76	-31
80%	95	-23	58	0	0	0	2	-65	0	-70	-13	-27
90%	-62	0	16	0	0	0	0	0	0	-68	-10	-68
Long Term												
Full Simulation Period[a]	-304	-300	-60	-13	30	-5	5	4	1	-347	-371	-344
Water Year Types[b,c]												
Wet (32%)	43	-9	8	1	9	1	1	8	7	11	-13	-4
Above Normal (15%)	-54	-25	34	0	42	0	-1	-9	4	-13	-9	-38
Below Normal (17%)	-458	-657	-173	0	90	0	7	-1	31	-23	-206	-178
Dry (22%)	-888	-556	-170	5	12	0	27	7	-3	-986	-992	-797
Critical (15%)	-249	-407	-2	-102	22	-36	-15	9	-47	-878	-771	-896

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-6-2a. Old and Middle River Flow, No Action Alternative 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-2,764	-3,303	-4,107	-3,645	-3,411	-1,762	-506	-1,140	-1,801	-2,807	-3,558	-3,579
20%	-3,472	-3,883	-5,031	-3,645	-4,464	-3,258	-902	-1,789	-3,736	-4,689	-4,543	-4,993
30%	-4,204	-4,802	-5,290	-4,516	-4,464	-3,258	-1,043	-1,882	-4,660	-7,254	-5,377	-5,955
40%	-4,624	-6,033	-5,290	-4,516	-4,464	-3,258	-1,206	-1,971	-5,000	-8,268	-6,641	-6,631
50%	-5,210	-8,460	-5,290	-4,516	-4,464	-3,258	-1,479	-2,113	-5,000	-8,987	-8,283	-7,710
60%	-5,620	-8,890	-5,807	-5,000	-4,483	-3,258	-1,638	-2,297	-5,000	-9,605	-8,888	-8,594
70%	-6,718	-9,190	-8,781	-5,226	-4,483	-3,258	-1,957	-2,456	-5,000	-10,296	-9,218	-8,801
80%	-7,363	-9,384	-9,595	-5,226	-5,000	-3,258	-2,112	-2,667	-5,000	-10,666	-9,633	-9,090
90%	-8,282	-9,579	-9,725	-5,226	-5,000	-3,500	-2,318	-3,386	-5,000	-11,206	-10,285	-9,281
Long Term												
Full Simulation Period[a]	-5,347	-6,930	-6,368	-3,959	-3,942	-2,456	-1,158	-1,982	-4,260	-7,990	-7,278	-7,008
Water Year Types[b,c]												
Wet (32%)	-6,765	-8,737	-7,264	-2,304	-2,629	-829	-575	-1,616	-4,438	-8,312	-8,444	-8,563
Above Normal (15%)	-5,426	-9,010	-7,924	-4,331	-3,853	-2,754	-1,460	-2,386	-4,914	-9,402	-9,048	-8,647
Below Normal (17%)	-6,292	-6,617	-6,307	-4,707	-4,752	-3,289	-1,440	-2,263	-4,702	-10,508	-9,808	-8,176
Dry (22%)	-4,064	-5,241	-5,101	-5,090	-4,760	-3,307	-1,564	-2,146	-4,449	-7,982	-4,693	-5,428
Critical (15%)	-3,018	-3,836	-4,842	-4,605	-4,705	-3,433	-1,184	-1,799	-2,421	-2,952	-3,906	-3,008

Table 5B3-6-2b. Old and Middle River Flow, Alternative 1B 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-2,966	-3,701	-4,034	-3,645	-3,410	-1,704	-457	-1,198	-1,833	-3,465	-4,566	-4,456
20%	-3,822	-4,601	-5,035	-3,645	-4,464	-3,258	-867	-1,781	-3,682	-6,141	-5,143	-5,930
30%	-4,680	-5,593	-5,290	-4,516	-4,464	-3,258	-1,071	-1,875	-4,577	-7,717	-6,137	-6,478
40%	-5,225	-7,234	-5,290	-4,516	-4,464	-3,258	-1,217	-1,956	-5,000	-8,629	-7,321	-6,847
50%	-5,841	-8,639	-5,290	-4,516	-4,464	-3,258	-1,432	-2,105	-5,000	-9,188	-8,540	-7,845
60%	-6,085	-8,946	-6,323	-5,000	-4,483	-3,258	-1,621	-2,330	-5,000	-9,800	-8,902	-8,680
70%	-6,754	-9,222	-8,787	-5,226	-4,483	-3,258	-2,006	-2,467	-5,000	-10,345	-9,294	-8,905
80%	-7,307	-9,407	-9,557	-5,226	-5,000	-3,258	-2,110	-2,736	-5,000	-10,738	-9,648	-9,168
90%	-8,347	-9,579	-9,708	-5,226	-5,000	-3,500	-2,318	-3,386	-5,000	-11,277	-10,295	-9,355
Long Term												
Full Simulation Period[a]	-5,647	-7,271	-6,329	-3,956	-3,921	-2,459	-1,162	-1,984	-4,272	-8,351	-7,649	-7,352
Water Year Types[b,c]												
Wet (32%)	-6,734	-8,745	-7,311	-2,303	-2,624	-812	-576	-1,608	-4,431	-8,302	-8,458	-8,569
Above Normal (15%)	-5,549	-9,049	-7,898	-4,331	-3,827	-2,754	-1,501	-2,415	-4,911	-9,420	-9,059	-8,739
Below Normal (17%)	-6,669	-7,271	-6,481	-4,707	-4,663	-3,289	-1,435	-2,260	-4,662	-10,506	-9,992	-8,415
Dry (22%)	-4,977	-5,965	-4,686	-5,078	-4,761	-3,307	-1,548	-2,157	-4,519	-9,042	-5,719	-6,167
Critical (15%)	-3,205	-4,259	-4,921	-4,605	-4,703	-3,491	-1,199	-1,787	-2,464	-3,837	-4,651	-3,868

Table 5B3-6-2c. Old and Middle River Flow, Alternative 1B 011221 minus No Action Alternative 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-202	-398	73	0	1	59	49	-58	-32	-658	-1,008	-877
20%	-349	-717	-4	0	0	0	35	8	54	-1,452	-600	-937
30%	-476	-791	0	0	0	0	-28	8	83	-463	-761	-523
40%	-601	-1,200	0	0	0	0	-12	15	0	-361	-681	-216
50%	-631	-180	0	0	0	0	47	8	0	-201	-258	-135
60%	-466	-56	-515	0	0	0	17	-32	0	-195	-14	-85
70%	-37	-32	-6	0	0	0	-49	-11	0	-49	-76	-104
80%	56	-23	39	0	0	0	3	-69	0	-72	-15	-78
90%	-66	0	16	0	0	0	0	0	0	-71	-10	-74
Long Term												
Full Simulation Period[a]	-300	-341	39	3	21	-3	-4	-2	-12	-361	-372	-344
Water Year Types[b,c]												
Wet (32%)	31	-9	-47	1	5	17	0	8	7	10	-14	-6
Above Normal (15%)	-123	-39	26	0	26	-1	-41	-29	4	-17	-11	-92
Below Normal (17%)	-377	-654	-174	0	89	0	5	3	40	2	-184	-239
Dry (22%)	-913	-724	415	11	-2	0	16	-12	-71	-1,060	-1,026	-739
Critical (15%)	-187	-423	-78	0	2	-58	-16	11	-43	-885	-745	-860

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-6-3a. Old and Middle River Flow, No Action Alternative 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-2,764	-3,303	-4,107	-3,645	-3,411	-1,762	-506	-1,140	-1,801	-2,807	-3,558	-3,579
20%	-3,472	-3,883	-5,031	-3,645	-4,464	-3,258	-902	-1,789	-3,736	-4,689	-4,543	-4,993
30%	-4,204	-4,802	-5,290	-4,516	-4,464	-3,258	-1,043	-1,882	-4,660	-7,254	-5,377	-5,955
40%	-4,624	-6,033	-5,290	-4,516	-4,464	-3,258	-1,206	-1,971	-5,000	-8,268	-6,641	-6,631
50%	-5,210	-8,460	-5,290	-4,516	-4,464	-3,258	-1,479	-2,113	-5,000	-8,987	-8,283	-7,710
60%	-5,620	-8,890	-5,807	-5,000	-4,483	-3,258	-1,638	-2,297	-5,000	-9,605	-8,888	-8,594
70%	-6,718	-9,190	-8,781	-5,226	-4,483	-3,258	-1,957	-2,456	-5,000	-10,296	-9,218	-8,801
80%	-7,363	-9,384	-9,595	-5,226	-5,000	-3,258	-2,112	-2,667	-5,000	-10,666	-9,633	-9,090
90%	-8,282	-9,579	-9,725	-5,226	-5,000	-3,500	-2,318	-3,386	-5,000	-11,206	-10,285	-9,281
Long Term												
Full Simulation Period[a]	-5,347	-6,930	-6,368	-3,959	-3,942	-2,456	-1,158	-1,982	-4,260	-7,990	-7,278	-7,008
Water Year Types[b,c]												
Wet (32%)	-6,765	-8,737	-7,264	-2,304	-2,629	-829	-575	-1,616	-4,438	-8,312	-8,444	-8,563
Above Normal (15%)	-5,426	-9,010	-7,924	-4,331	-3,853	-2,754	-1,460	-2,386	-4,914	-9,402	-9,048	-8,647
Below Normal (17%)	-6,292	-6,617	-6,307	-4,707	-4,752	-3,289	-1,440	-2,263	-4,702	-10,508	-9,808	-8,176
Dry (22%)	-4,064	-5,241	-5,101	-5,090	-4,760	-3,307	-1,564	-2,146	-4,449	-7,982	-4,693	-5,428
Critical (15%)	-3,018	-3,836	-4,842	-4,605	-4,705	-3,433	-1,184	-1,799	-2,421	-2,952	-3,906	-3,008

Table 5B3-6-3b. Old and Middle River Flow, Alternative 2 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-2,920	-3,502	-4,076	-3,645	-3,404	-1,759	-457	-1,138	-1,773	-3,480	-4,561	-4,356
20%	-3,836	-4,400	-5,196	-3,645	-4,464	-3,258	-867	-1,781	-3,571	-5,967	-5,015	-6,014
30%	-4,519	-5,589	-5,290	-4,516	-4,464	-3,258	-1,071	-1,879	-4,563	-7,717	-5,950	-6,451
40%	-5,162	-7,090	-5,290	-4,516	-4,464	-3,258	-1,213	-1,956	-5,000	-8,547	-7,314	-6,839
50%	-5,842	-8,639	-5,290	-4,516	-4,464	-3,258	-1,434	-2,105	-5,000	-9,156	-8,524	-7,850
60%	-6,108	-8,903	-6,324	-5,000	-4,483	-3,258	-1,618	-2,296	-5,000	-9,800	-8,884	-8,648
70%	-6,754	-9,222	-8,784	-5,226	-4,483	-3,258	-2,006	-2,474	-5,000	-10,346	-9,294	-8,832
80%	-7,274	-9,410	-9,538	-5,226	-5,000	-3,258	-2,110	-2,735	-5,000	-10,760	-9,648	-9,117
90%	-8,339	-9,579	-9,708	-5,226	-5,000	-3,500	-2,318	-3,386	-5,000	-11,268	-10,298	-9,350
Long Term												
Full Simulation Period[a]	-5,617	-7,209	-6,433	-3,957	-3,920	-2,466	-1,153	-1,980	-4,260	-8,326	-7,624	-7,325
Water Year Types[b,c]												
Wet (32%)	-6,743	-8,745	-7,257	-2,303	-2,619	-825	-575	-1,608	-4,431	-8,302	-8,456	-8,568
Above Normal (15%)	-5,480	-9,040	-7,890	-4,331	-3,815	-2,754	-1,459	-2,406	-4,911	-9,416	-9,057	-8,685
Below Normal (17%)	-6,738	-7,292	-6,483	-4,707	-4,662	-3,289	-1,432	-2,264	-4,671	-10,531	-10,009	-8,338
Dry (22%)	-4,825	-5,675	-5,274	-5,085	-4,770	-3,307	-1,537	-2,139	-4,453	-8,951	-5,672	-6,186
Critical (15%)	-3,192	-4,255	-4,869	-4,602	-4,700	-3,515	-1,199	-1,790	-2,469	-3,780	-4,535	-3,798

Table 5B3-6-3c. Old and Middle River Flow, Alternative 2 011221 minus No Action Alternative 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-156	-198	31	0	7	4	50	3	27	-673	-1,003	-777
20%	-363	-517	-165	0	0	0	35	8	166	-1,278	-472	-1,021
30%	-315	-787	0	0	0	0	-28	3	97	-463	-573	-496
40%	-539	-1,057	0	0	0	0	-8	15	0	-279	-674	-208
50%	-632	-179	0	0	0	0	45	8	0	-169	-241	-140
60%	-488	-12	-517	0	0	0	20	1	0	-195	5	-54
70%	-36	-32	-4	0	0	0	-49	-18	0	-49	-76	-31
80%	89	-26	58	0	0	0	2	-68	0	-94	-15	-27
90%	-57	0	16	0	0	0	0	0	0	-62	-13	-68
Long Term												
Full Simulation Period[a]	-270	-279	-65	2	22	-11	5	2	0	-337	-346	-317
Water Year Types[b,c]												
Wet (32%)	22	-9	7	1	9	3	1	8	7	10	-12	-5
Above Normal (15%)	-54	-30	34	0	38	0	1	-20	4	-14	-9	-38
Below Normal (17%)	-446	-675	-177	0	90	0	8	-1	31	-23	-201	-162
Dry (22%)	-761	-434	-173	5	-10	0	27	7	-4	-969	-978	-759
Critical (15%)	-174	-419	-27	3	5	-81	-15	9	-48	-828	-629	-790

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-6-4a. Old and Middle River Flow, No Action Alternative 011221, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-2,764	-3,303	-4,107	-3,645	-3,411	-1,762	-506	-1,140	-1,801	-2,807	-3,558	-3,579
20%	-3,472	-3,883	-5,031	-3,645	-4,464	-3,258	-902	-1,789	-3,736	-4,689	-4,543	-4,993
30%	-4,204	-4,802	-5,290	-4,516	-4,464	-3,258	-1,043	-1,882	-4,660	-7,254	-5,377	-5,955
40%	-4,624	-6,033	-5,290	-4,516	-4,464	-3,258	-1,206	-1,971	-5,000	-8,268	-6,641	-6,631
50%	-5,210	-8,460	-5,290	-4,516	-4,464	-3,258	-1,479	-2,113	-5,000	-8,987	-8,283	-7,710
60%	-5,620	-8,890	-5,807	-5,000	-4,483	-3,258	-1,638	-2,297	-5,000	-9,605	-8,888	-8,594
70%	-6,718	-9,190	-8,781	-5,226	-4,483	-3,258	-1,957	-2,456	-5,000	-10,296	-9,218	-8,801
80%	-7,363	-9,384	-9,595	-5,226	-5,000	-3,258	-2,112	-2,667	-5,000	-10,666	-9,633	-9,090
90%	-8,282	-9,579	-9,725	-5,226	-5,000	-3,500	-2,318	-3,386	-5,000	-11,206	-10,285	-9,281
Long Term												
Full Simulation Period[a]	-5,347	-6,930	-6,368	-3,959	-3,942	-2,456	-1,158	-1,982	-4,260	-7,990	-7,278	-7,008
Water Year Types[b,c]												
Wet (32%)	-6,765	-8,737	-7,264	-2,304	-2,629	-829	-575	-1,616	-4,438	-8,312	-8,444	-8,563
Above Normal (15%)	-5,426	-9,010	-7,924	-4,331	-3,853	-2,754	-1,460	-2,386	-4,914	-9,402	-9,048	-8,647
Below Normal (17%)	-6,292	-6,617	-6,307	-4,707	-4,752	-3,289	-1,440	-2,263	-4,702	-10,508	-9,808	-8,176
Dry (22%)	-4,064	-5,241	-5,101	-5,090	-4,760	-3,307	-1,564	-2,146	-4,449	-7,982	-4,693	-5,428
Critical (15%)	-3,018	-3,836	-4,842	-4,605	-4,705	-3,433	-1,184	-1,799	-2,421	-2,952	-3,906	-3,008

Table 5B3-6-4b. Old and Middle River Flow, Alternative 3 020121, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-2,762	-3,940	-4,014	-3,280	-3,422	-1,669	-457	-1,147	-2,018	-3,458	-4,266	-4,207
20%	-3,796	-4,598	-4,957	-3,645	-4,464	-3,258	-876	-1,781	-3,611	-5,525	-5,047	-5,928
30%	-4,753	-5,346	-5,290	-4,516	-4,464	-3,258	-1,071	-1,882	-4,577	-7,824	-6,133	-6,336
40%	-5,247	-6,460	-5,290	-4,516	-4,464	-3,258	-1,220	-1,971	-5,000	-8,599	-7,660	-6,846
50%	-5,707	-8,602	-5,290	-4,516	-4,464	-3,258	-1,444	-2,105	-5,000	-9,143	-8,522	-8,137
60%	-6,148	-9,028	-6,736	-5,000	-4,483	-3,258	-1,621	-2,330	-5,000	-9,894	-8,880	-8,666
70%	-6,671	-9,237	-9,012	-5,226	-4,483	-3,258	-2,006	-2,467	-5,000	-10,346	-9,294	-8,897
80%	-7,561	-9,407	-9,605	-5,226	-5,000	-3,258	-2,109	-2,721	-5,000	-10,765	-9,657	-9,200
90%	-8,463	-9,579	-9,763	-5,226	-5,000	-3,500	-2,318	-3,290	-5,000	-11,275	-10,306	-9,354
Long Term												
Full Simulation Period[a]	-5,670	-7,223	-6,500	-3,942	-3,937	-2,454	-1,163	-1,970	-4,272	-8,335	-7,618	-7,334
Water Year Types[b,c]												
Wet (32%)	-6,732	-8,745	-7,315	-2,303	-2,622	-807	-574	-1,522	-4,431	-8,306	-8,440	-8,548
Above Normal (15%)	-6,001	-9,033	-7,940	-4,331	-3,882	-2,769	-1,484	-2,416	-4,911	-9,458	-9,072	-8,953
Below Normal (17%)	-6,771	-7,233	-6,388	-4,707	-4,680	-3,289	-1,434	-2,259	-4,677	-10,534	-9,992	-8,443
Dry (22%)	-4,939	-5,809	-5,543	-5,051	-4,775	-3,307	-1,559	-2,208	-4,528	-8,973	-5,537	-6,108
Critical (15%)	-2,848	-4,224	-4,858	-4,546	-4,717	-3,451	-1,205	-1,796	-2,431	-3,753	-4,734	-3,628

Table 5B3-6-4c. Old and Middle River Flow, Alternative 3 020121 minus No Action Alternative 011221, Monthly Flow (combined flows)(cfs)

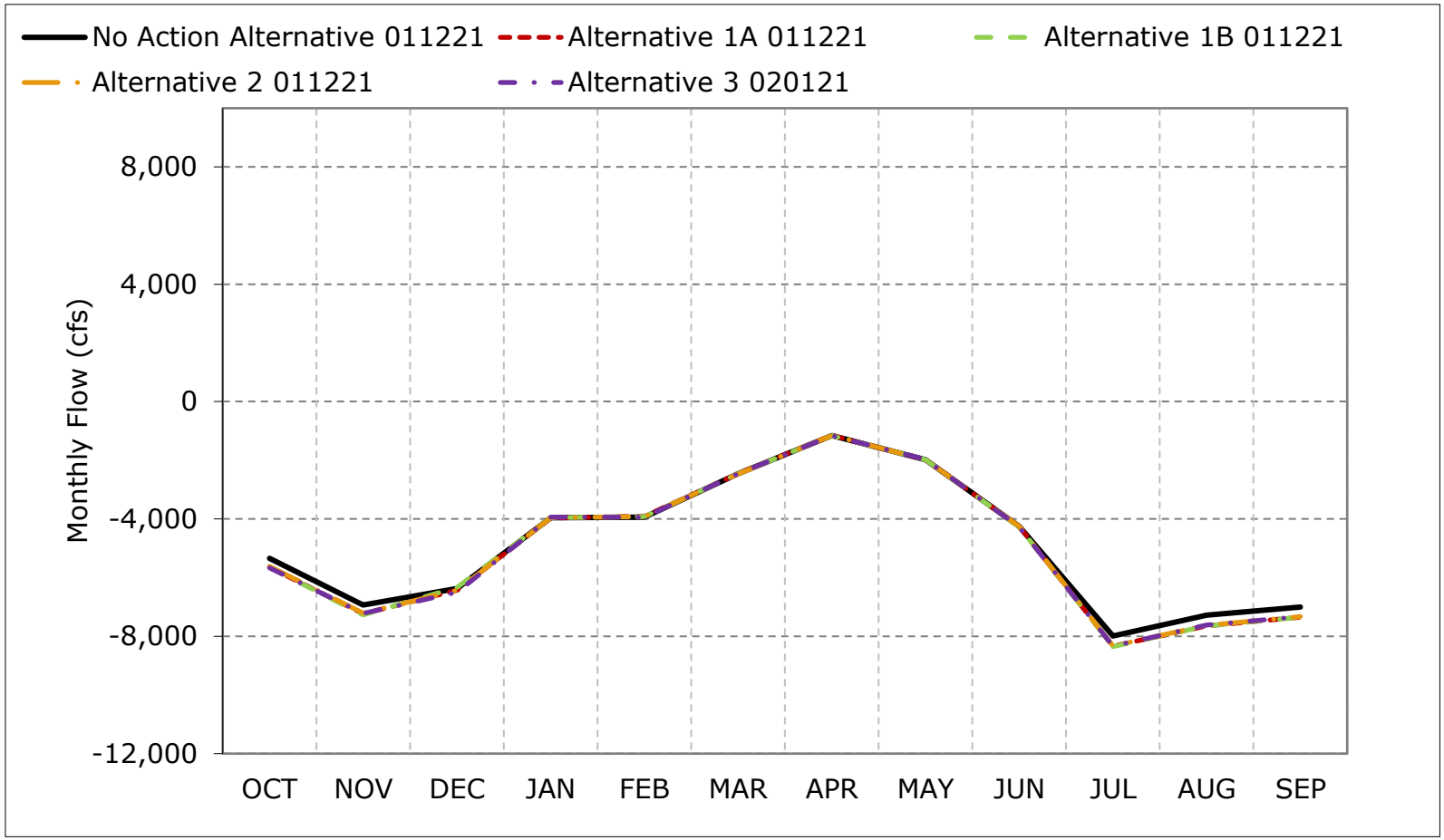
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2	-637	93	365	-11	93	49	-7	-217	-651	-708	-628
20%	-323	-714	74	0	0	0	27	8	125	-836	-504	-934
30%	-549	-544	0	0	0	0	-28	0	83	-570	-757	-381
40%	-623	-426	0	0	0	0	-14	0	0	-331	-1,019	-216
50%	-497	-142	0	0	0	0	34	8	0	-156	-239	-428
60%	-528	-137	-929	0	0	0	16	-33	0	-290	8	-71
70%	47	-47	-231	0	0	0	-49	-11	0	-49	-76	-96
80%	-198	-23	-9	0	0	0	3	-54	0	-99	-24	-110
90%	-182	0	-38	0	0	0	0	95	0	-69	-21	-73
Long Term												
Full Simulation Period[a]	-323	-293	-132	18	5	2	-4	12	-12	-345	-340	-326
Water Year Types[b,c]												
Wet (32%)	32	-9	-51	2	6	21	1	93	7	7	4	15
Above Normal (15%)	-574	-23	-16	0	-29	-15	-24	-30	4	-56	-25	-306
Below Normal (17%)	-479	-616	-82	0	73	-1	6	3	24	-25	-184	-267
Dry (22%)	-875	-567	-442	39	-15	0	5	-63	-80	-991	-844	-681
Critical (15%)	169	-388	-16	59	-12	-17	-22	2	-10	-801	-828	-620

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

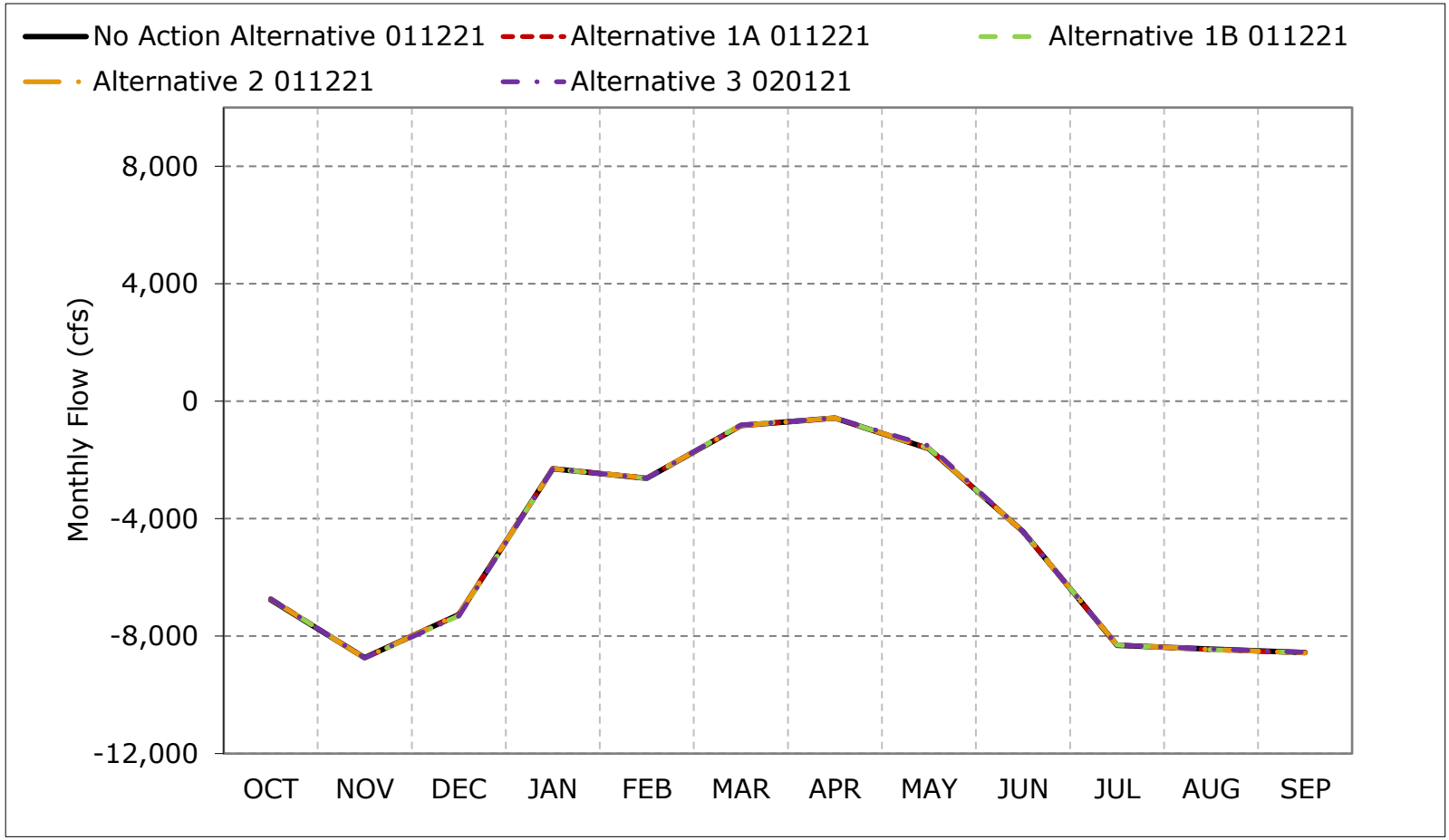
c These results are displayed with calendar year - year type sorting.

Figure 5B3-6-1. Old and Middle River Flow, Long-Term Average Flow



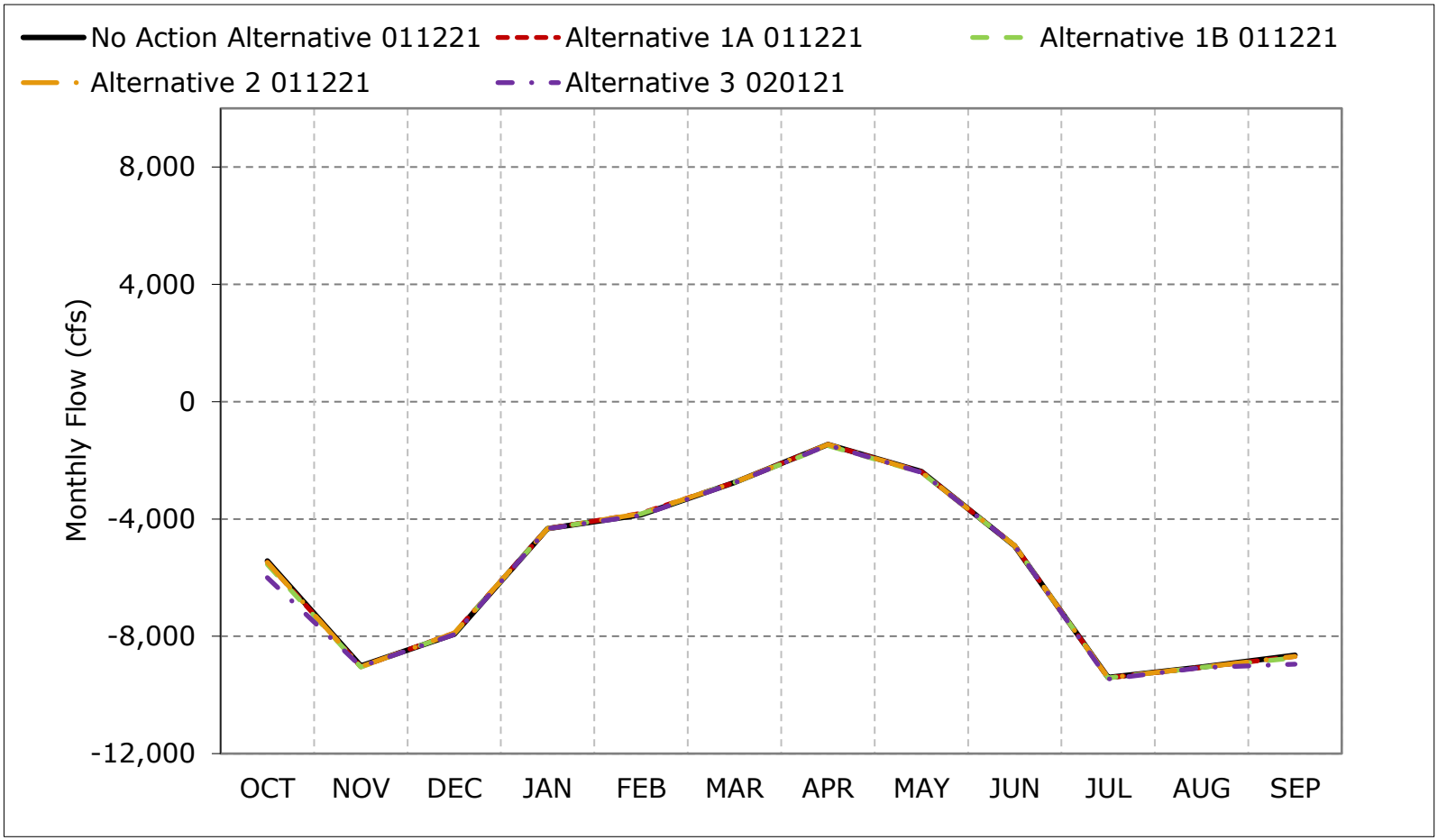
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-6-2. Old and Middle River Flow, Wet Year Average Flow



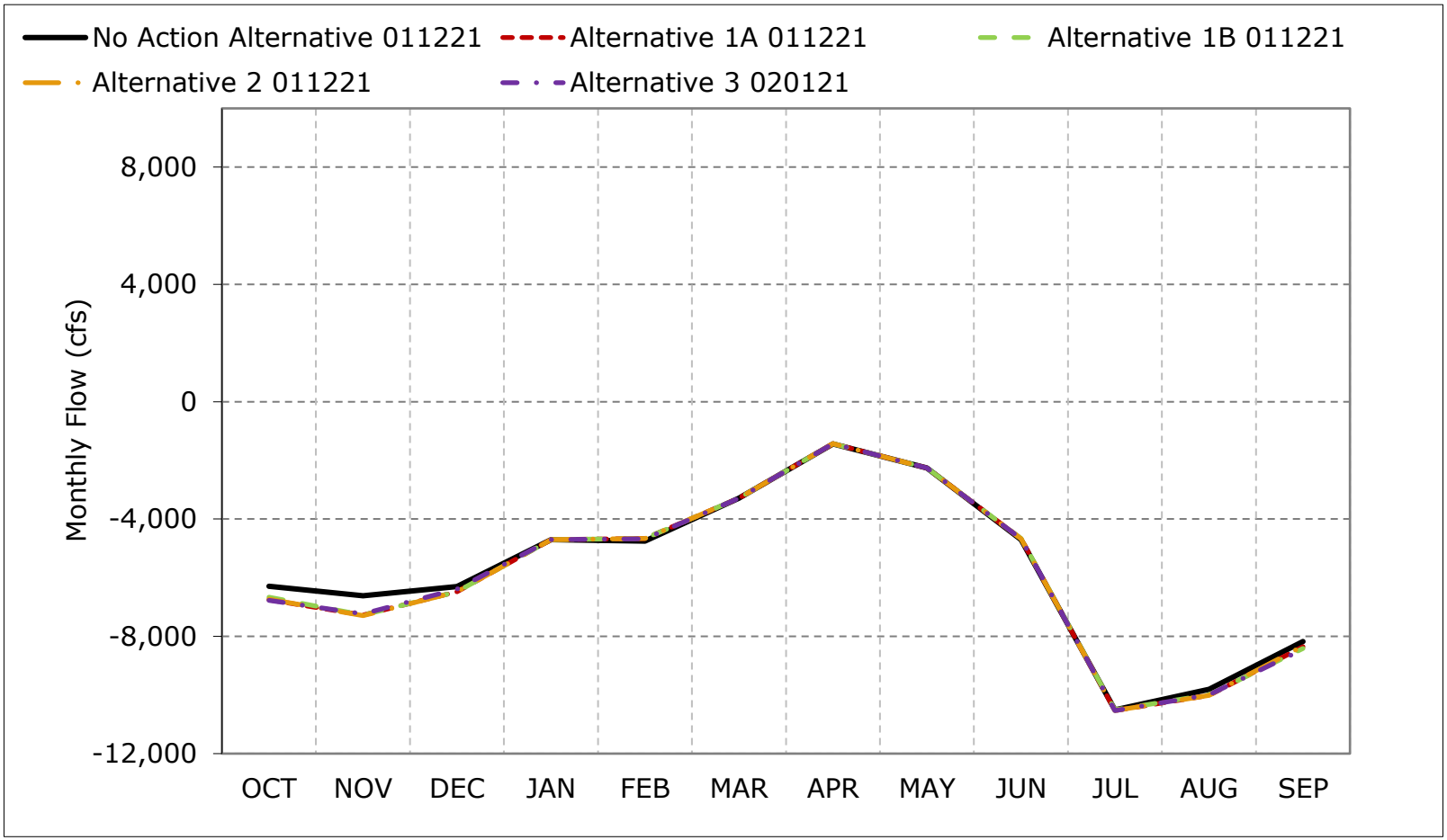
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-6-3. Old and Middle River Flow, Above Normal Year Average Flow



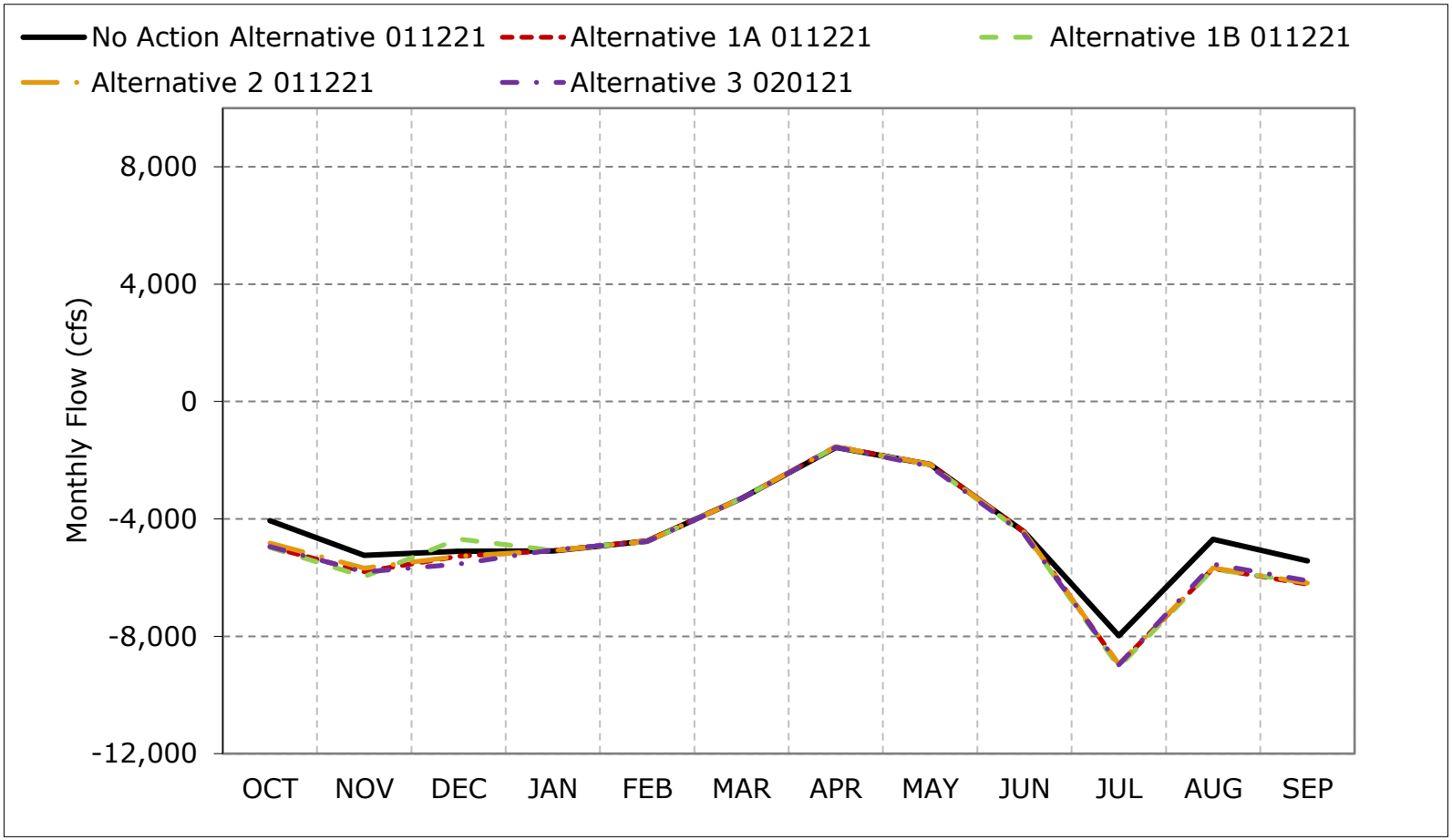
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-6-4. Old and Middle River Flow, Below Normal Year Average Flow



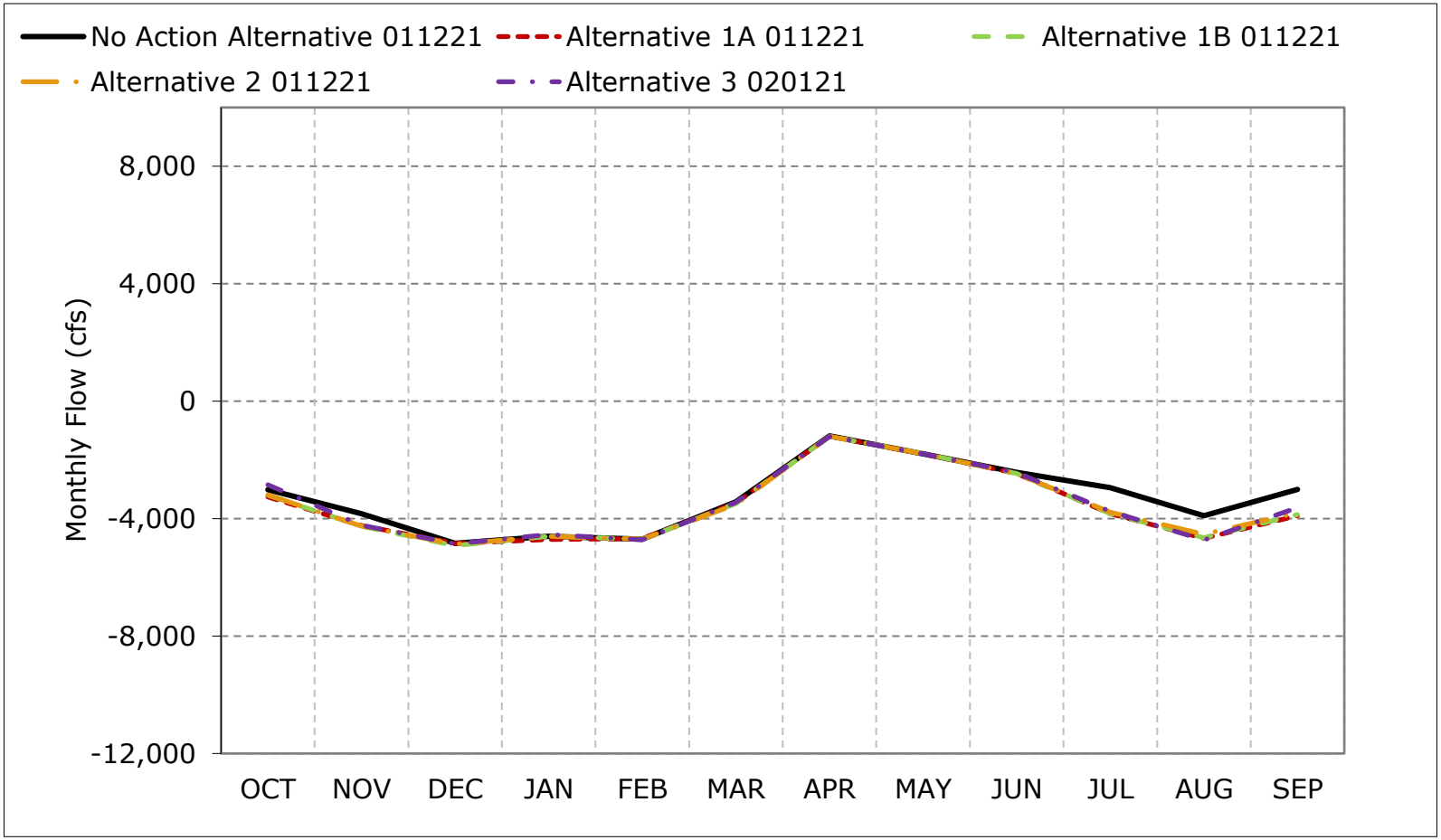
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-6-5. Old and Middle River Flow, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-6-6. Old and Middle River Flow, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-6-7. Old and Middle River Flow, October

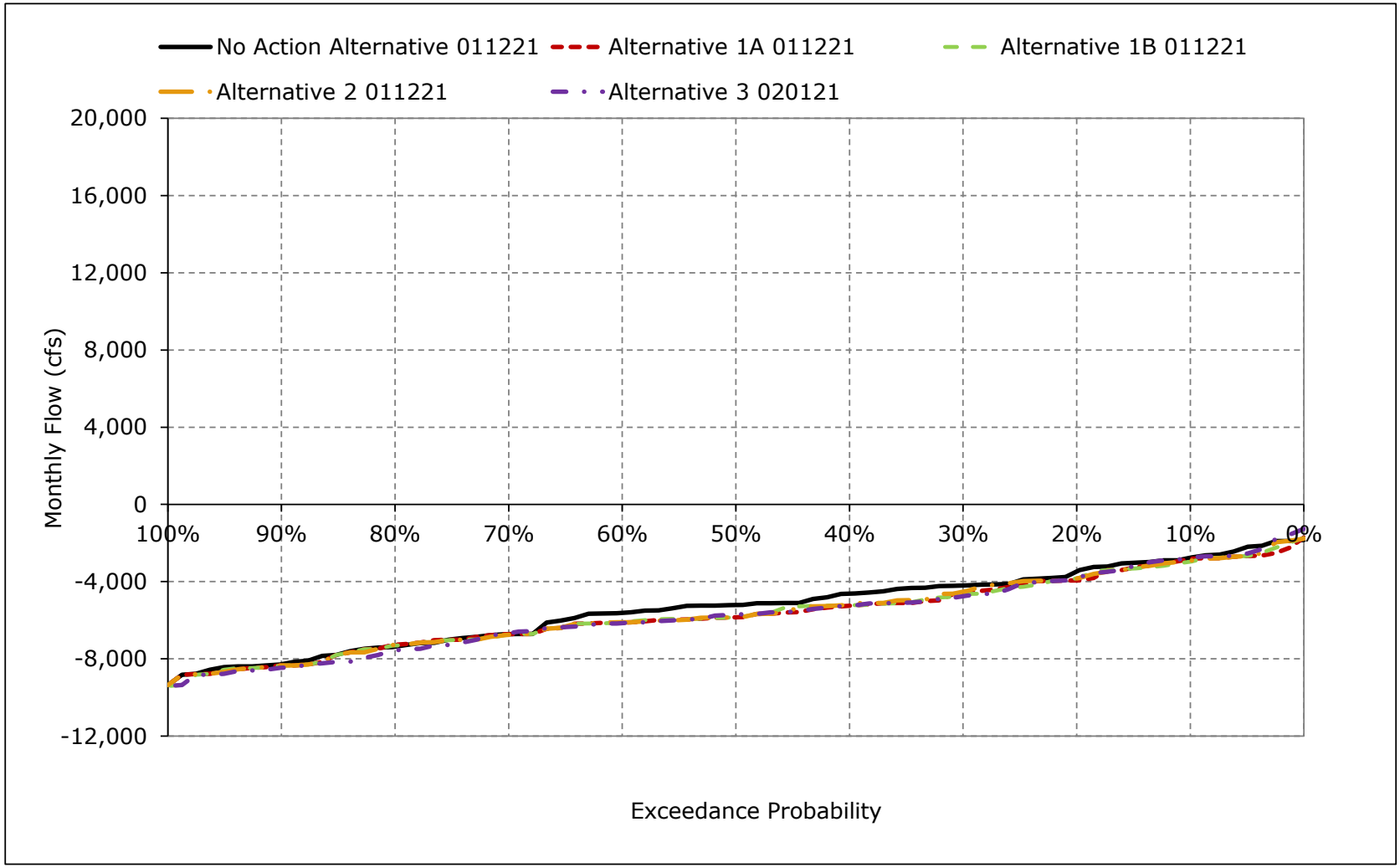


Figure 5B3-6-8. Old and Middle River Flow, November

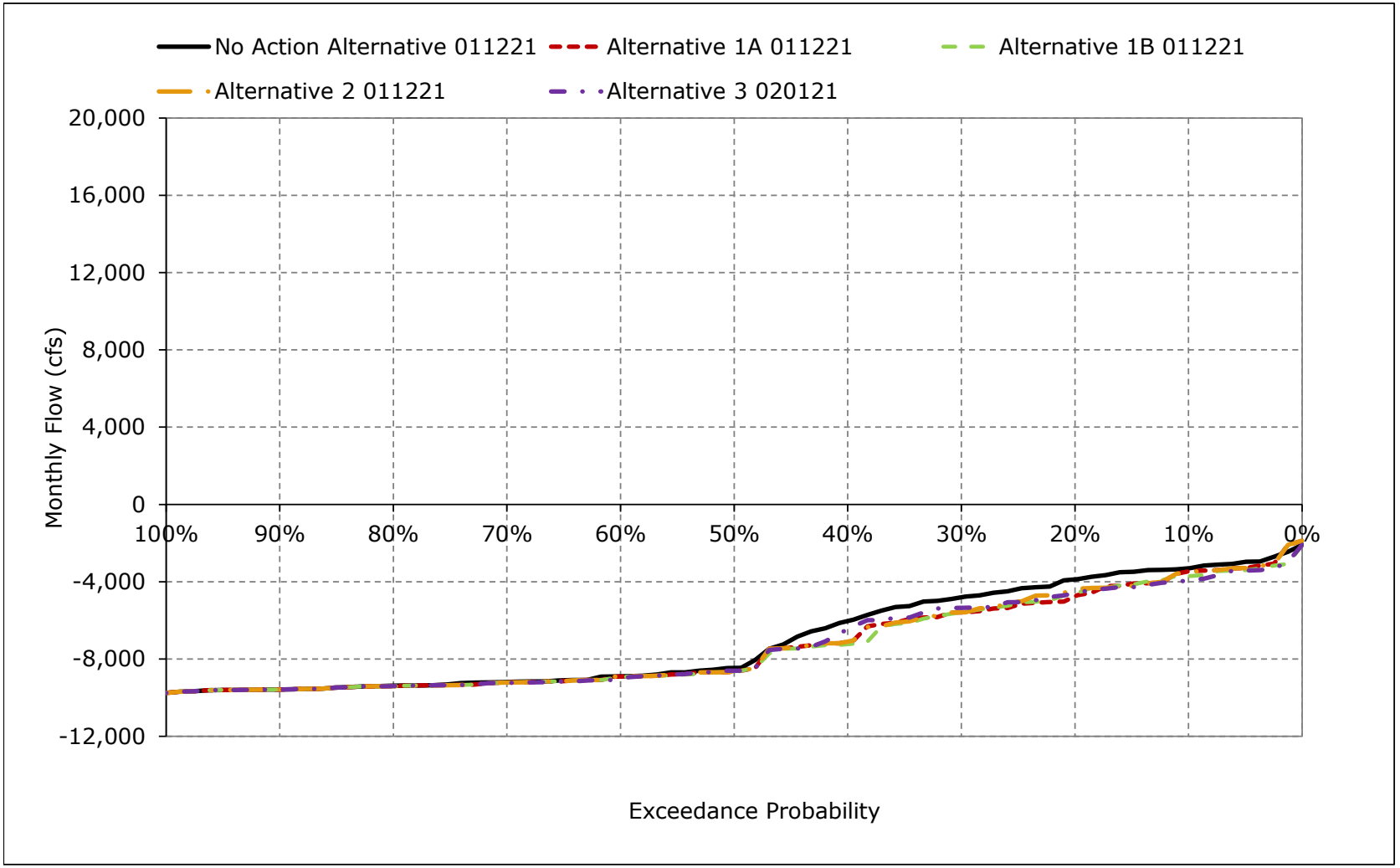


Figure 5B3-6-9. Old and Middle River Flow, December

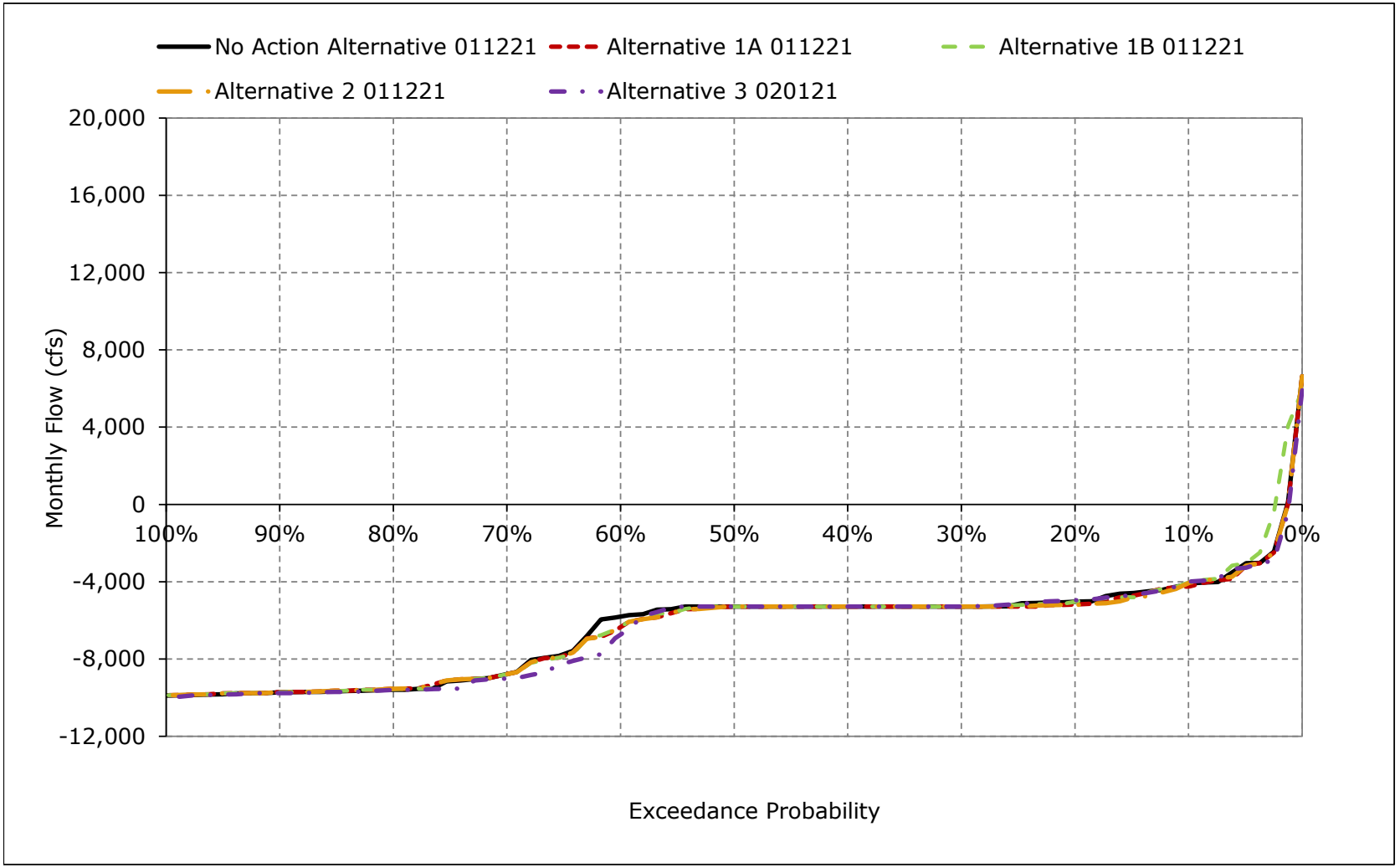


Figure 5B3-6-10. Old and Middle River Flow, January

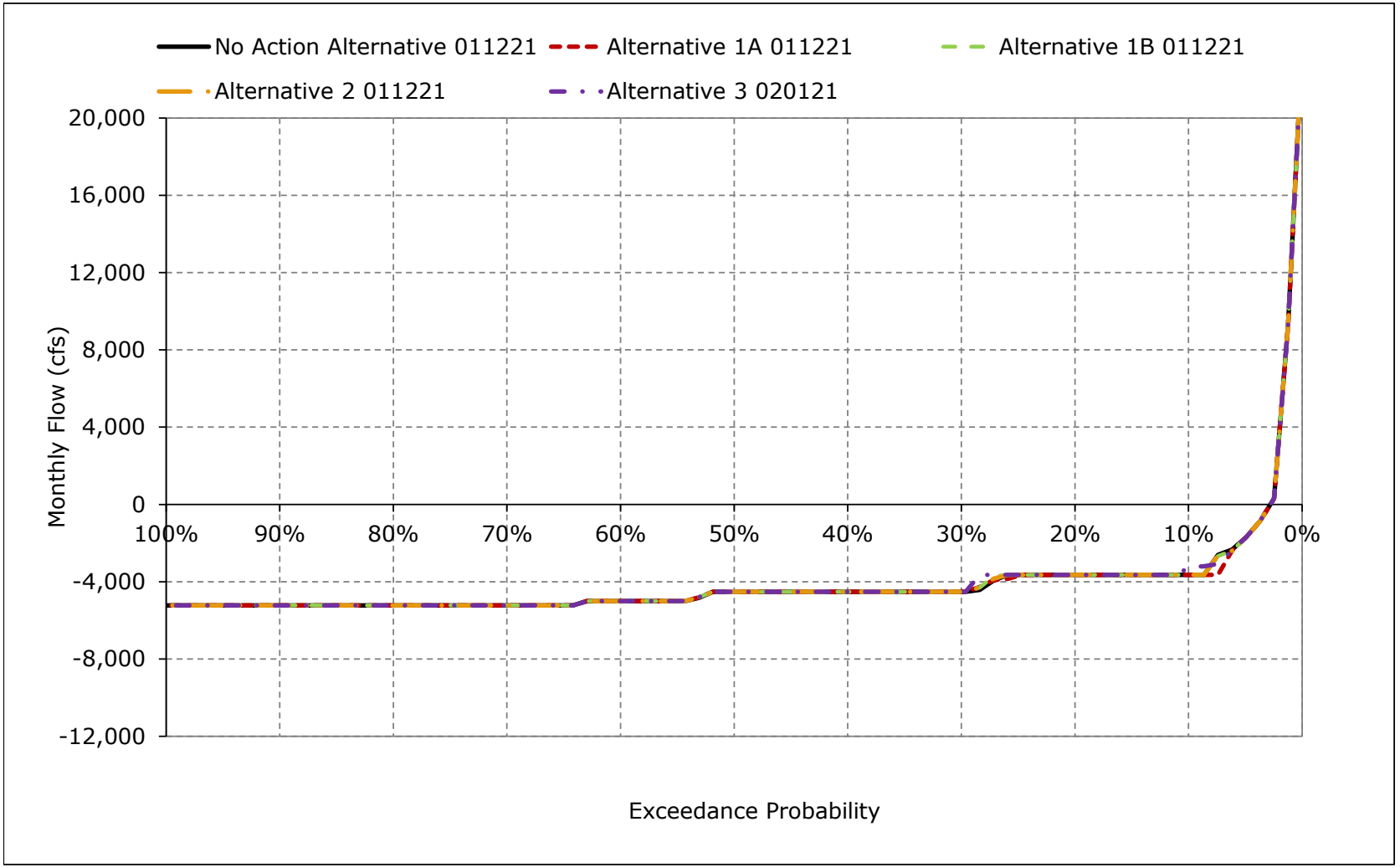


Figure 5B3-6-11. Old and Middle River Flow, February

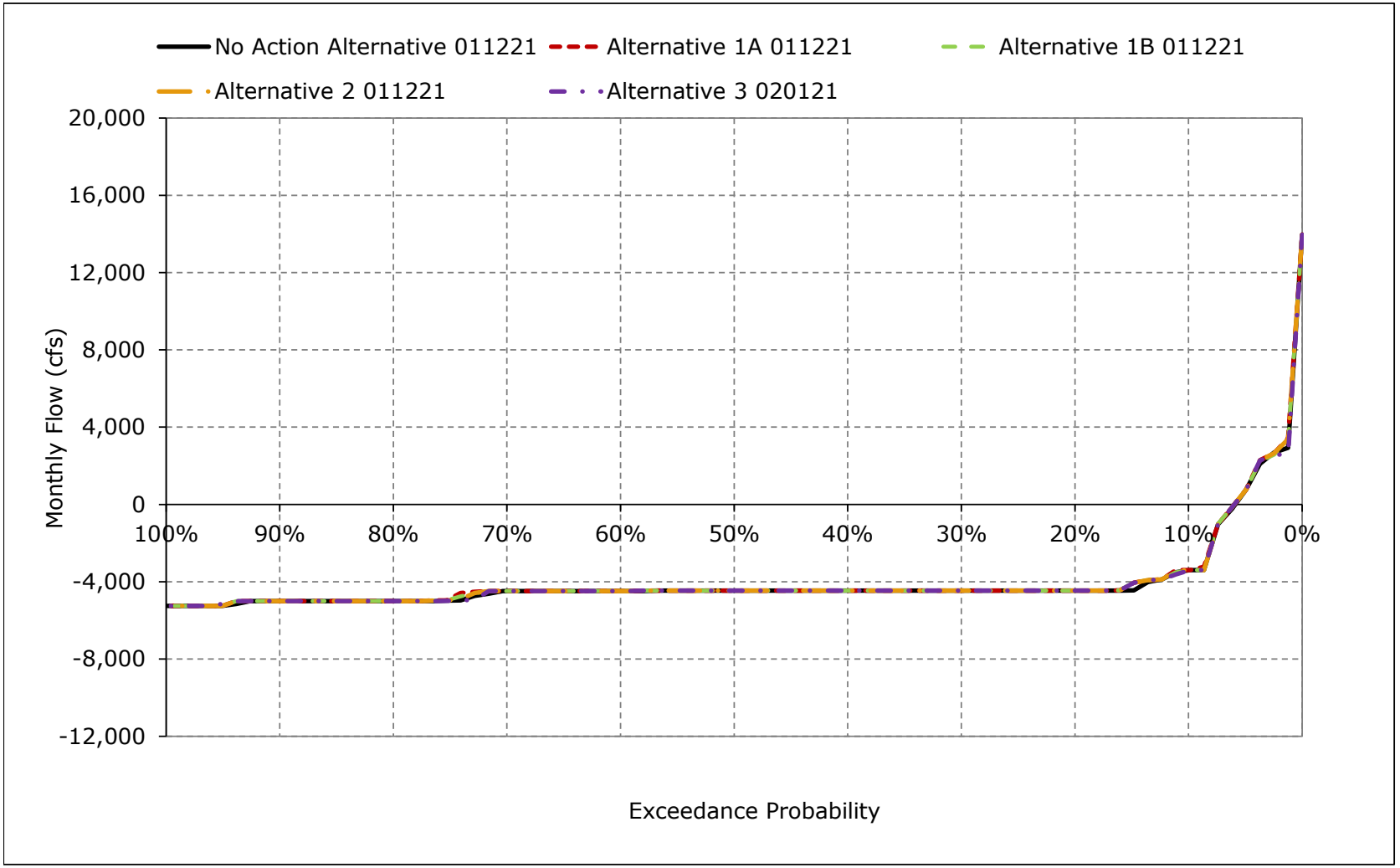


Figure 5B3-6-12. Old and Middle River Flow, March

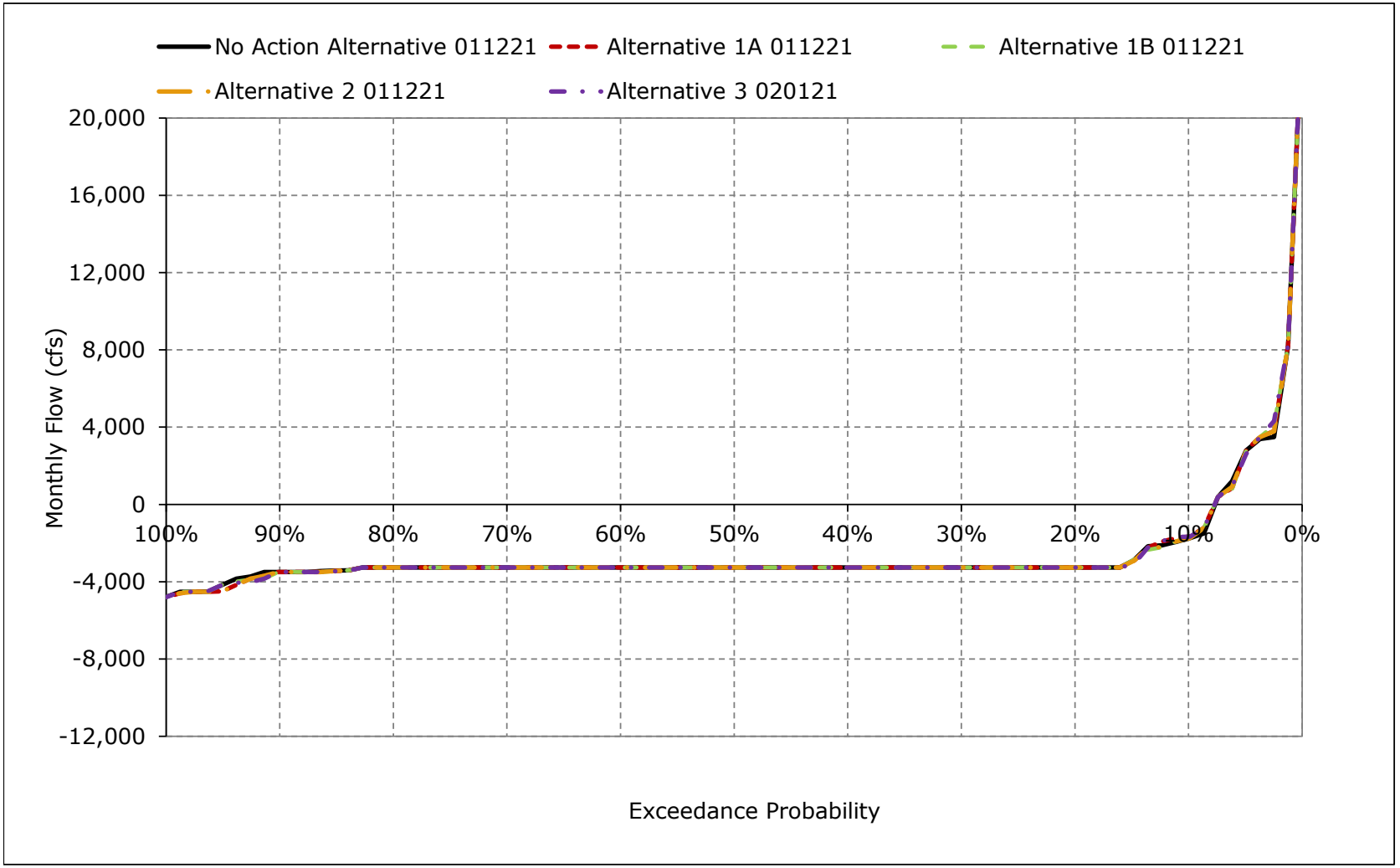


Figure 5B3-6-13. Old and Middle River Flow, April

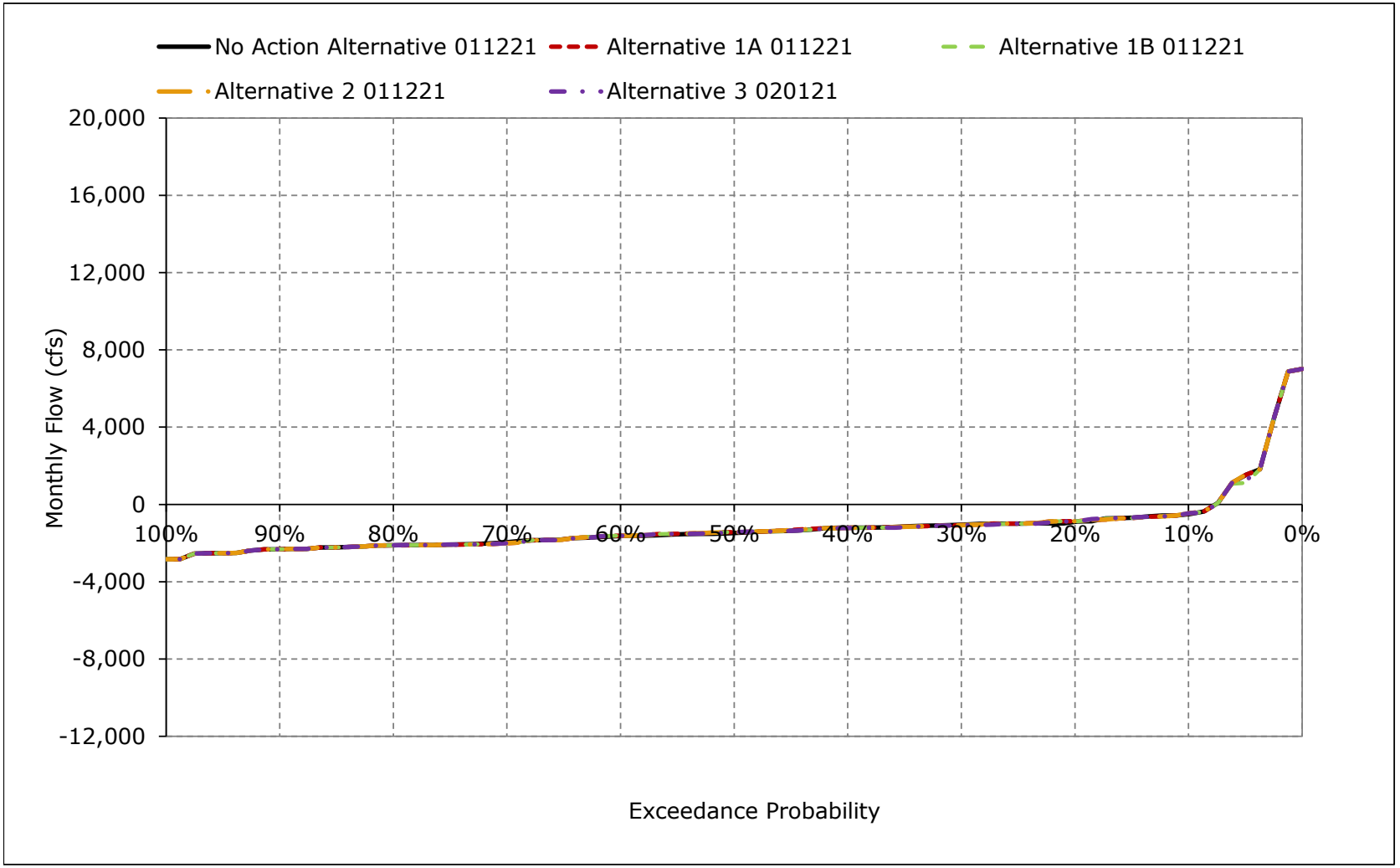


Figure 5B3-6-14. Old and Middle River Flow, May

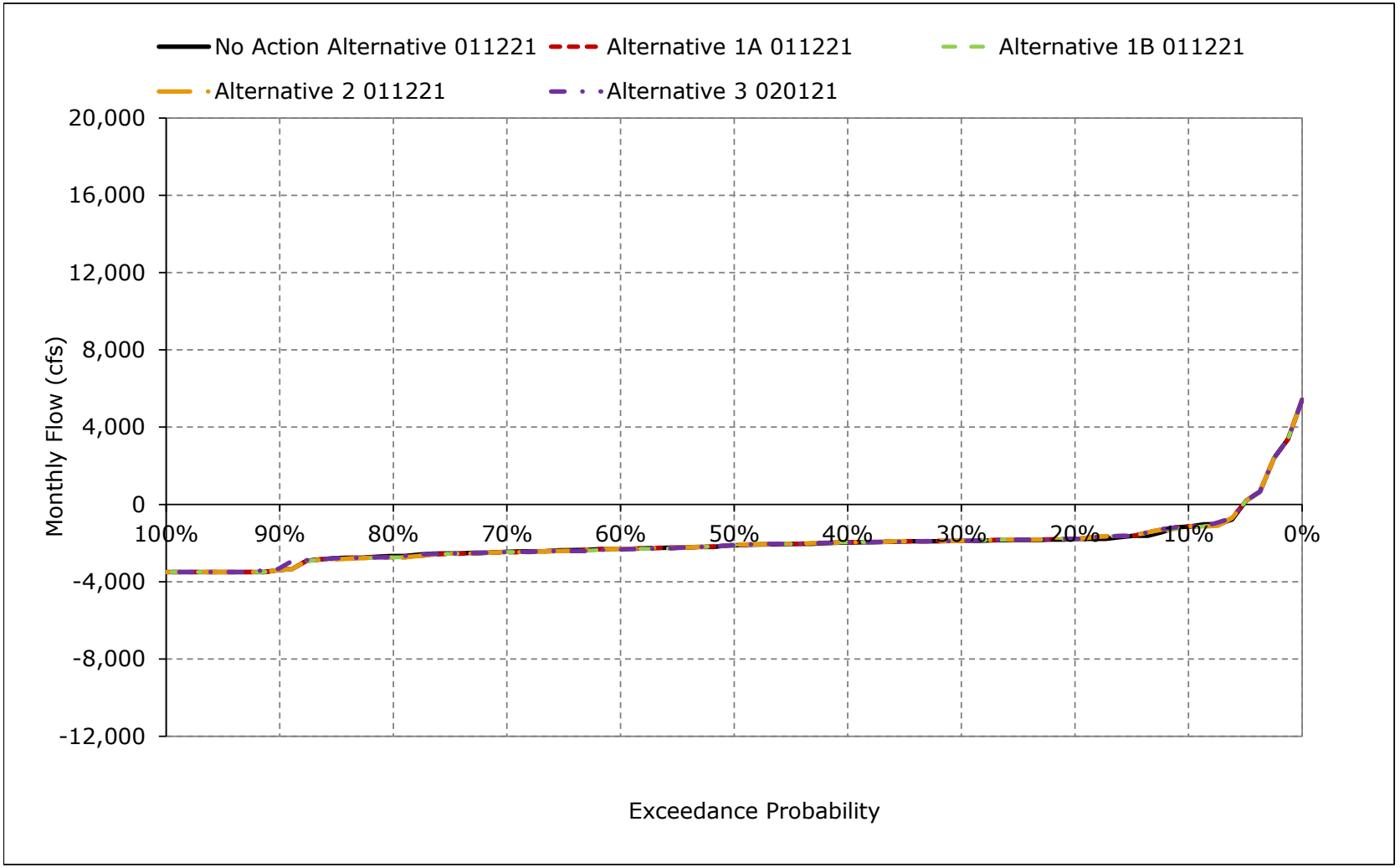


Figure 5B3-6-15. Old and Middle River Flow, June

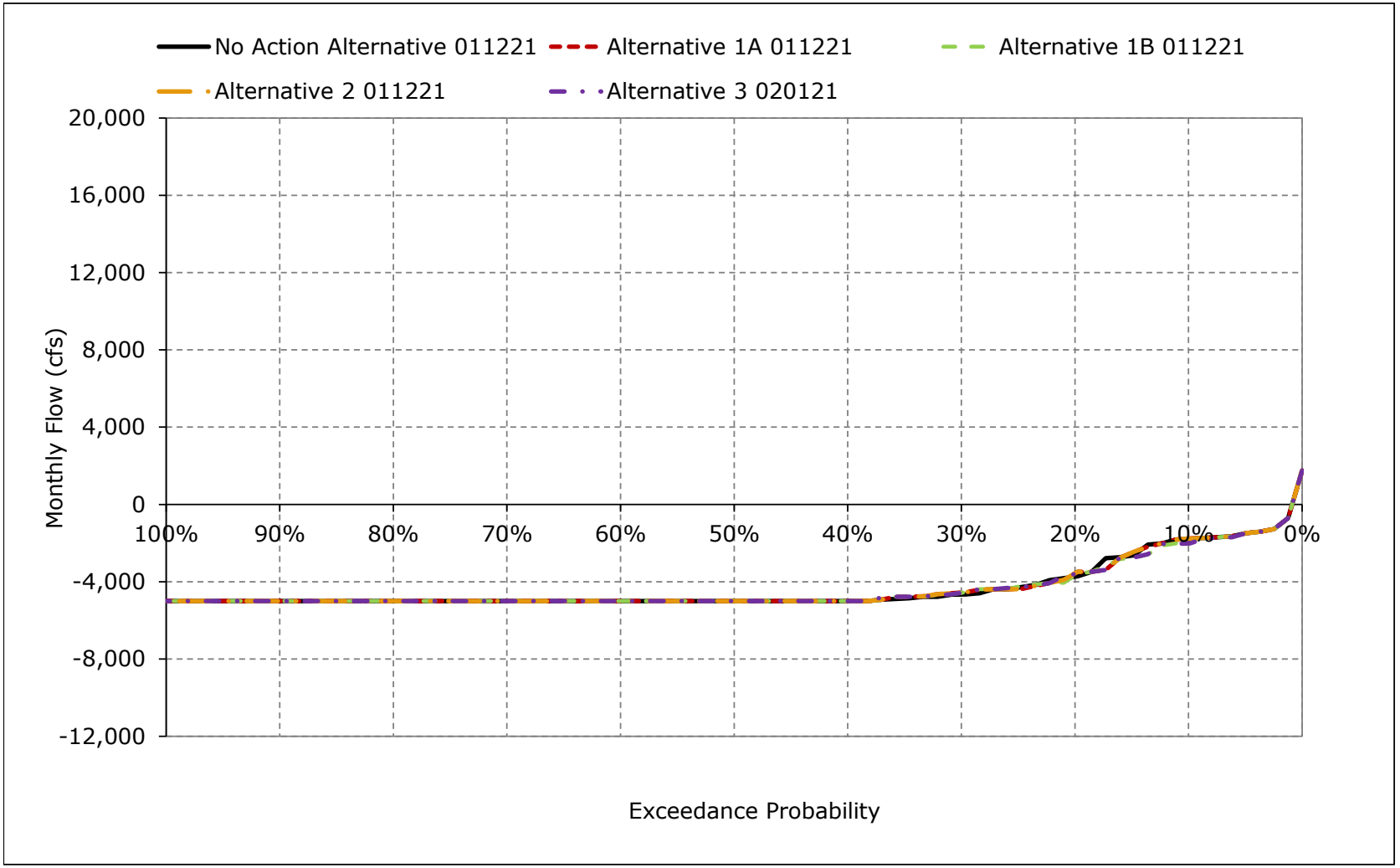


Figure 5B3-6-16. Old and Middle River Flow, July

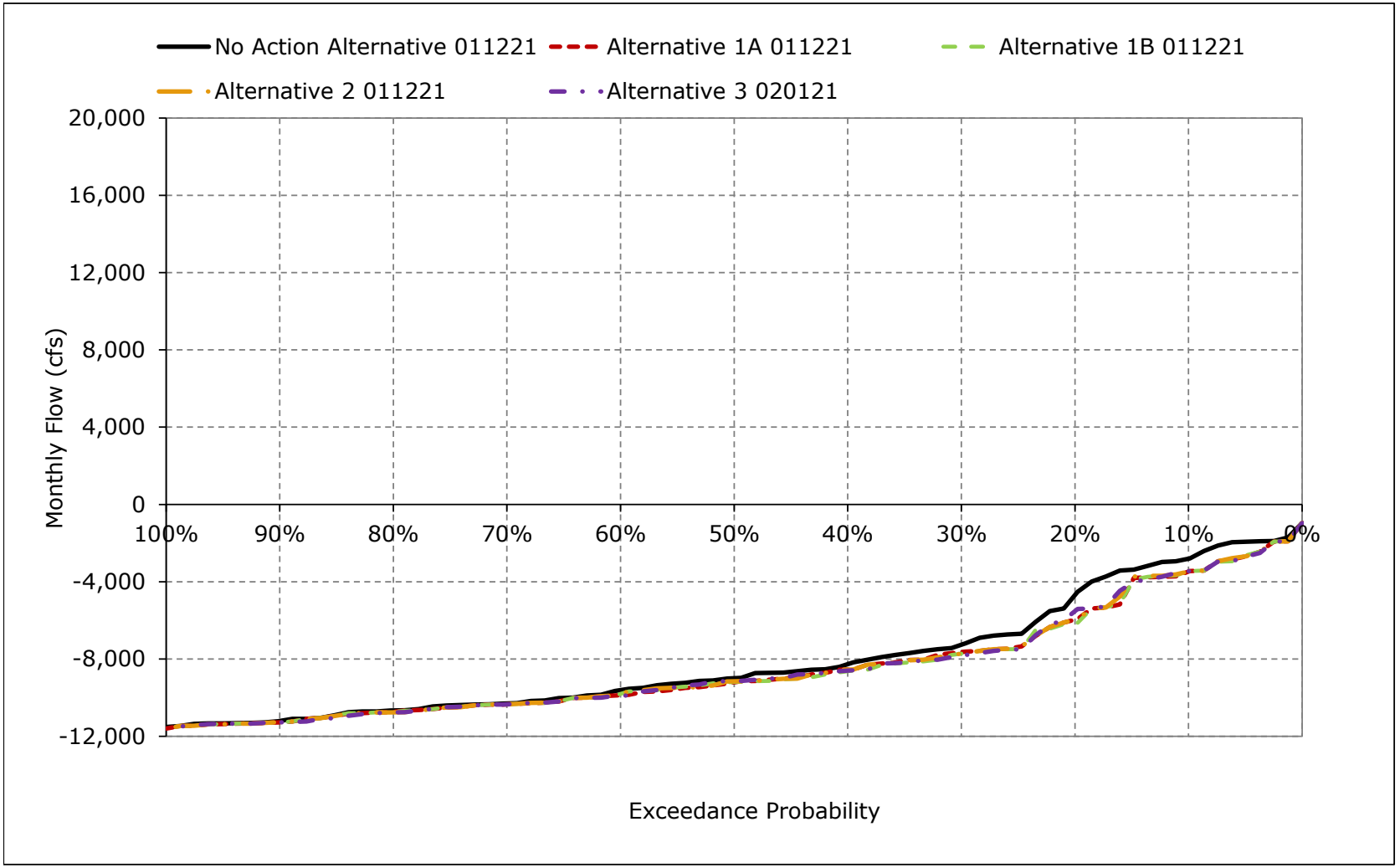


Figure 5B3-6-17. Old and Middle River Flow, August

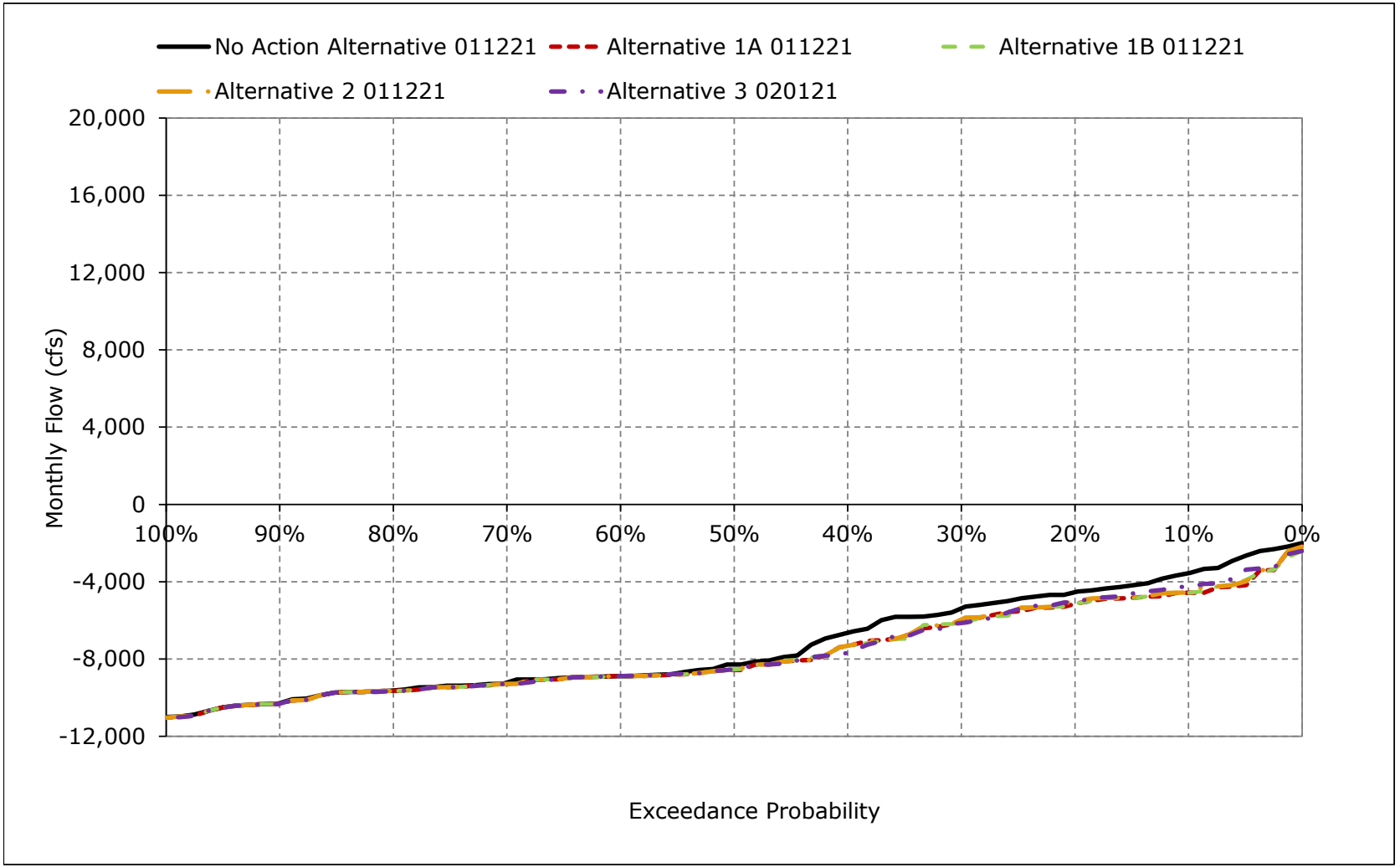


Figure 5B3-6-18. Old and Middle River Flow, September

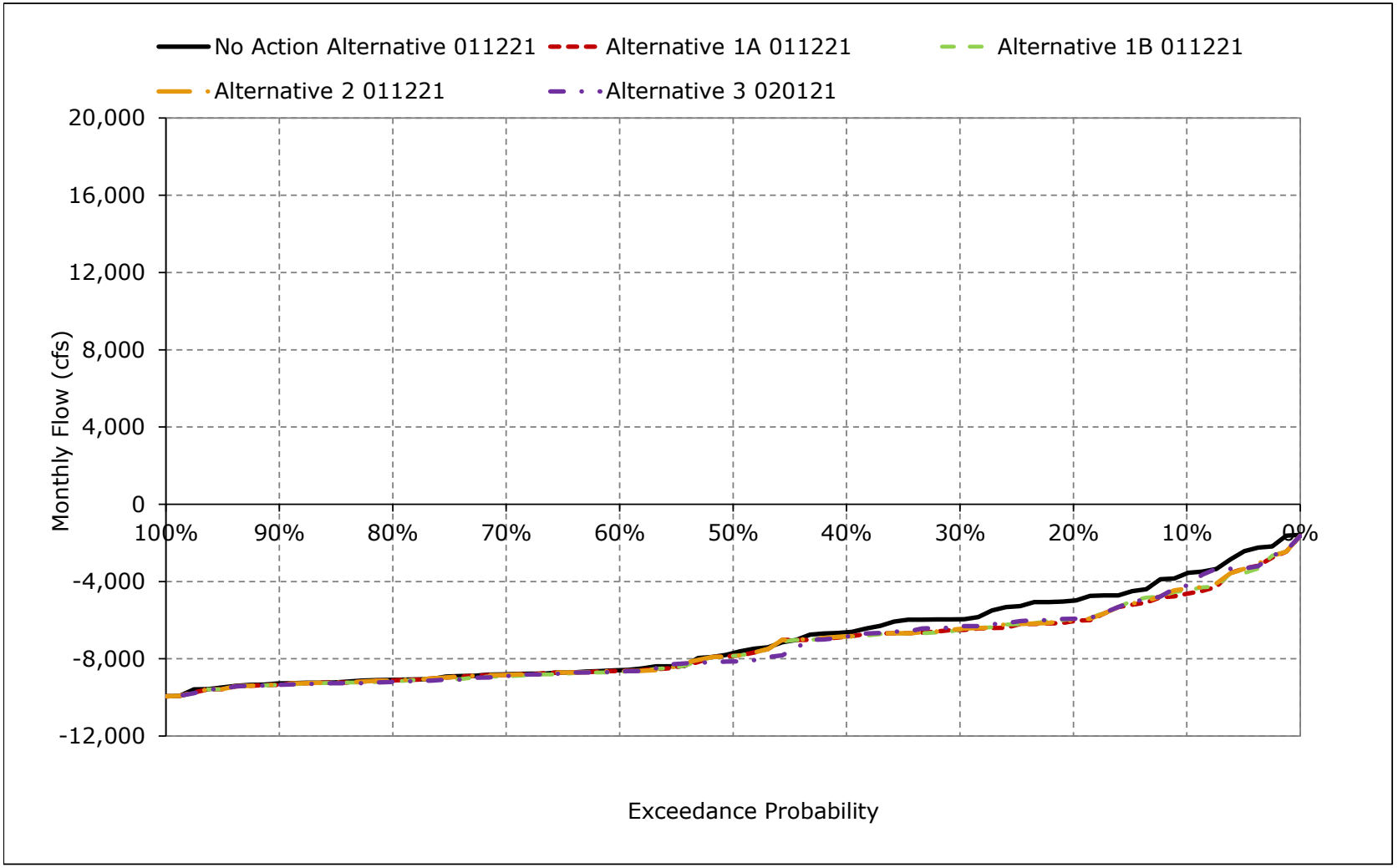


Table 5B3-7-1a. San Joaquin River at Vernalis, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,637	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,180	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,276	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,057	1,315	1,101	1,237	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,419	991	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (32%)	3,220	3,384	4,517	9,488	11,733	12,943	12,481	10,172	9,283	6,810	3,306	3,297
Above Normal (15%)	2,611	2,058	2,450	4,077	6,370	7,011	7,685	5,702	4,724	2,628	2,020	2,325
Below Normal (17%)	2,489	2,254	3,570	2,959	5,427	4,523	6,436	4,649	2,369	1,859	1,888	2,086
Dry (22%)	2,054	1,689	2,191	1,881	2,336	2,392	3,371	2,516	1,456	1,191	1,286	1,747
Critical (15%)	1,668	1,389	1,424	1,429	1,762	1,429	1,516	1,465	975	845	958	1,355

Table 5B3-7-1b. San Joaquin River at Vernalis, Alternative 1A 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,638	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,691	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,662	3,181	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,275	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,058	1,315	1,103	1,236	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,418	992	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (32%)	3,220	3,384	4,517	9,488	11,733	12,943	12,481	10,172	9,283	6,810	3,306	3,297
Above Normal (15%)	2,611	2,058	2,450	4,077	6,370	7,011	7,685	5,702	4,724	2,628	2,020	2,325
Below Normal (17%)	2,489	2,254	3,570	2,959	5,427	4,523	6,436	4,649	2,369	1,859	1,888	2,086
Dry (22%)	2,054	1,689	2,191	1,881	2,336	2,392	3,371	2,517	1,457	1,191	1,287	1,747
Critical (15%)	1,668	1,389	1,424	1,429	1,762	1,429	1,516	1,465	975	845	958	1,355

Table 5B3-7-1c. San Joaquin River at Vernalis, Alternative 1A 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	1	0	2	-1	0
90%	0	0	0	0	0	0	0	-1	1	0	0	0
Long Term												
Full Simulation Period[a]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[b,c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (15%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (17%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (22%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	0	0	0	0	0

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-7-2a. San Joaquin River at Vernalis, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,637	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,180	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,276	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,057	1,315	1,101	1,237	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,419	991	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (32%)	3,220	3,384	4,517	9,488	11,733	12,943	12,481	10,172	9,283	6,810	3,306	3,297
Above Normal (15%)	2,611	2,058	2,450	4,077	6,370	7,011	7,685	5,702	4,724	2,628	2,020	2,325
Below Normal (17%)	2,489	2,254	3,570	2,959	5,427	4,523	6,436	4,649	2,369	1,859	1,888	2,086
Dry (22%)	2,054	1,689	2,191	1,881	2,336	2,392	3,371	2,516	1,456	1,191	1,286	1,747
Critical (15%)	1,668	1,389	1,424	1,429	1,762	1,429	1,516	1,465	975	845	958	1,355

Table 5B3-7-2b. San Joaquin River at Vernalis, Alternative 1B 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,638	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,662	3,181	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,275	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,825
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,203	2,288	1,446	1,198	1,336	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,720	2,567	2,058	1,316	1,103	1,235	1,659
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,418	993	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,247	2,089	2,324
Water Year Types[b,c]												
Wet (32%)	3,220	3,384	4,517	9,488	11,733	12,943	12,481	10,172	9,283	6,810	3,306	3,297
Above Normal (15%)	2,611	2,058	2,450	4,077	6,370	7,011	7,685	5,702	4,724	2,628	2,020	2,325
Below Normal (17%)	2,489	2,254	3,570	2,959	5,427	4,523	6,436	4,649	2,369	1,859	1,888	2,086
Dry (22%)	2,054	1,689	2,191	1,881	2,336	2,392	3,371	2,517	1,457	1,191	1,287	1,747
Critical (15%)	1,668	1,389	1,424	1,429	1,762	1,429	1,516	1,465	975	845	958	1,356

Table 5B3-7-2c. San Joaquin River at Vernalis, Alternative 1B 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	1
70%	1	0	0	0	0	0	0	0	0	0	4	0
80%	0	0	0	0	0	0	0	1	0	2	-2	0
90%	0	0	0	0	0	0	0	-1	1	0	0	0
Long Term												
Full Simulation Period[a]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[b,c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (15%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (17%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (22%)	0	0	0	0	0	0	0	1	1	1	1	0
Critical (15%)	0	0	0	0	0	0	0	0	0	0	0	0

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-7-3a. San Joaquin River at Vernalis, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,637	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,180	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,276	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,057	1,315	1,101	1,237	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,419	991	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (32%)	3,220	3,384	4,517	9,488	11,733	12,943	12,481	10,172	9,283	6,810	3,306	3,297
Above Normal (15%)	2,611	2,058	2,450	4,077	6,370	7,011	7,685	5,702	4,724	2,628	2,020	2,325
Below Normal (17%)	2,489	2,254	3,570	2,959	5,427	4,523	6,436	4,649	2,369	1,859	1,888	2,086
Dry (22%)	2,054	1,689	2,191	1,881	2,336	2,392	3,371	2,516	1,456	1,191	1,286	1,747
Critical (15%)	1,668	1,389	1,424	1,429	1,762	1,429	1,516	1,465	975	845	958	1,355

Table 5B3-7-3b. San Joaquin River at Vernalis, Alternative 2 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,638	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,691	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,662	3,181	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,419	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,275	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,058	1,315	1,103	1,236	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,418	992	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (32%)	3,220	3,384	4,517	9,488	11,733	12,943	12,481	10,172	9,283	6,810	3,306	3,297
Above Normal (15%)	2,611	2,058	2,450	4,077	6,370	7,011	7,685	5,702	4,724	2,628	2,020	2,325
Below Normal (17%)	2,489	2,254	3,570	2,959	5,427	4,523	6,436	4,649	2,369	1,859	1,888	2,086
Dry (22%)	2,054	1,689	2,191	1,881	2,336	2,392	3,371	2,517	1,457	1,191	1,287	1,747
Critical (15%)	1,668	1,389	1,424	1,429	1,762	1,429	1,516	1,465	975	845	958	1,355

Table 5B3-7-3c. San Joaquin River at Vernalis, Alternative 2 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	1	0	2	-1	0
90%	0	0	0	0	0	0	0	-1	1	0	0	0
Long Term												
Full Simulation Period[a]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[b,c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (15%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (17%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (22%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (15%)	0	0	0	0	0	0	0	0	0	0	0	0

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-7-4a. San Joaquin River at Vernalis, No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,637	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,180	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,276	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,057	1,315	1,101	1,237	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,419	991	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (32%)	3,220	3,384	4,517	9,488	11,733	12,943	12,481	10,172	9,283	6,810	3,306	3,297
Above Normal (15%)	2,611	2,058	2,450	4,077	6,370	7,011	7,685	5,702	4,724	2,628	2,020	2,325
Below Normal (17%)	2,489	2,254	3,570	2,959	5,427	4,523	6,436	4,649	2,369	1,859	1,888	2,086
Dry (22%)	2,054	1,689	2,191	1,881	2,336	2,392	3,371	2,516	1,456	1,191	1,286	1,747
Critical (15%)	1,668	1,389	1,424	1,429	1,762	1,429	1,516	1,465	975	845	958	1,355

Table 5B3-7-4b. San Joaquin River at Vernalis, Alternative 3 020121, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,638	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,138	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,181	2,645	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,419	1,743	2,198	2,383
50%	2,457	1,855	1,872	2,278	3,499	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,275	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,409	1,404	1,825
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,203	2,288	1,446	1,198	1,338	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,720	2,567	2,056	1,316	1,100	1,236	1,659
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,575	1,419	995	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,247	2,089	2,324
Water Year Types[b,c]												
Wet (32%)	3,220	3,384	4,517	9,488	11,733	12,943	12,481	10,172	9,283	6,810	3,306	3,297
Above Normal (15%)	2,611	2,058	2,450	4,077	6,369	7,011	7,685	5,702	4,724	2,628	2,020	2,325
Below Normal (17%)	2,489	2,254	3,570	2,959	5,427	4,523	6,436	4,648	2,369	1,859	1,888	2,086
Dry (22%)	2,055	1,689	2,191	1,881	2,336	2,392	3,371	2,517	1,457	1,192	1,287	1,747
Critical (15%)	1,668	1,389	1,424	1,429	1,762	1,429	1,516	1,465	975	845	958	1,356

Table 5B3-7-4c. San Joaquin River at Vernalis, Alternative 3 020121 minus No Action Alternative 011221, Monthly Flow (cfs)

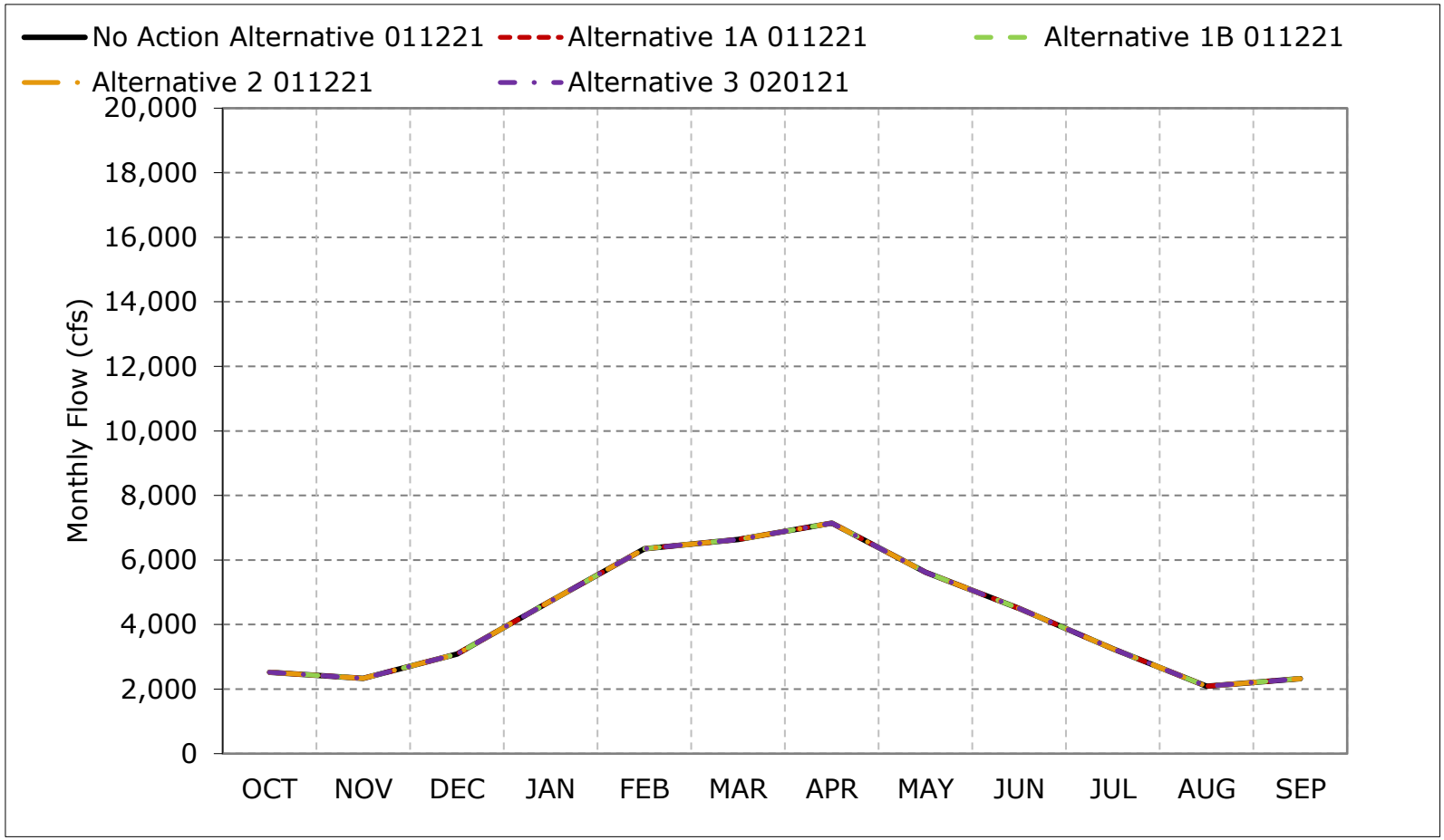
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	1	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	2	0	2
70%	0	0	0	0	0	0	0	1	0	0	6	0
80%	0	0	0	0	0	0	0	0	1	-1	-1	0
90%	0	0	0	0	0	0	0	0	4	0	0	0
Long Term												
Full Simulation Period[a]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[b,c]												
Wet (32%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (15%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (17%)	0	0	0	0	0	0	0	-1	0	0	0	0
Dry (22%)	0	0	0	0	0	0	0	1	1	1	1	0
Critical (15%)	0	0	0	0	0	0	0	1	0	0	0	0

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

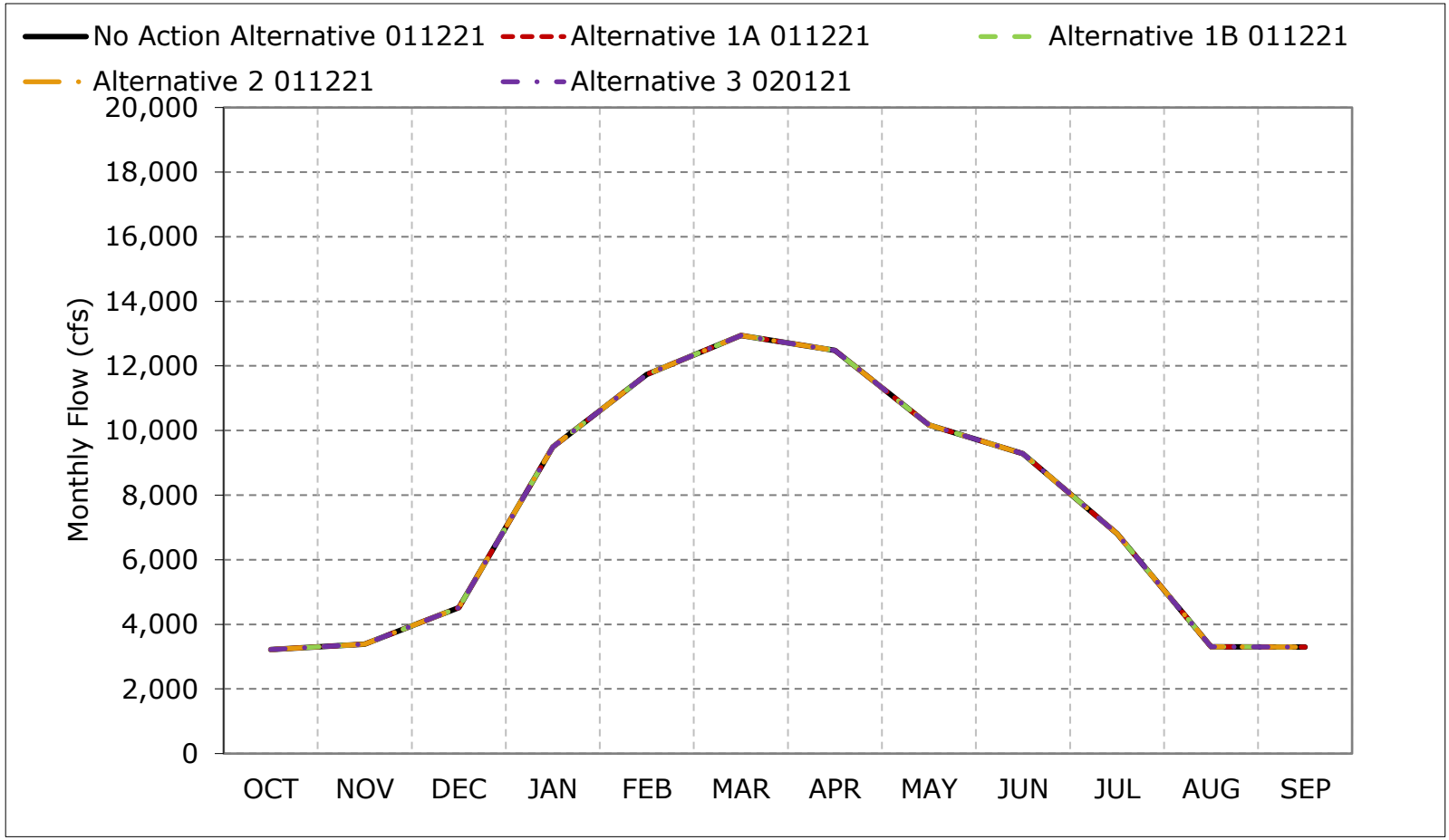
c These results are displayed with calendar year - year type sorting.

Figure 5B3-7-1. San Joaquin River at Vernalis, Long-Term Average Flow



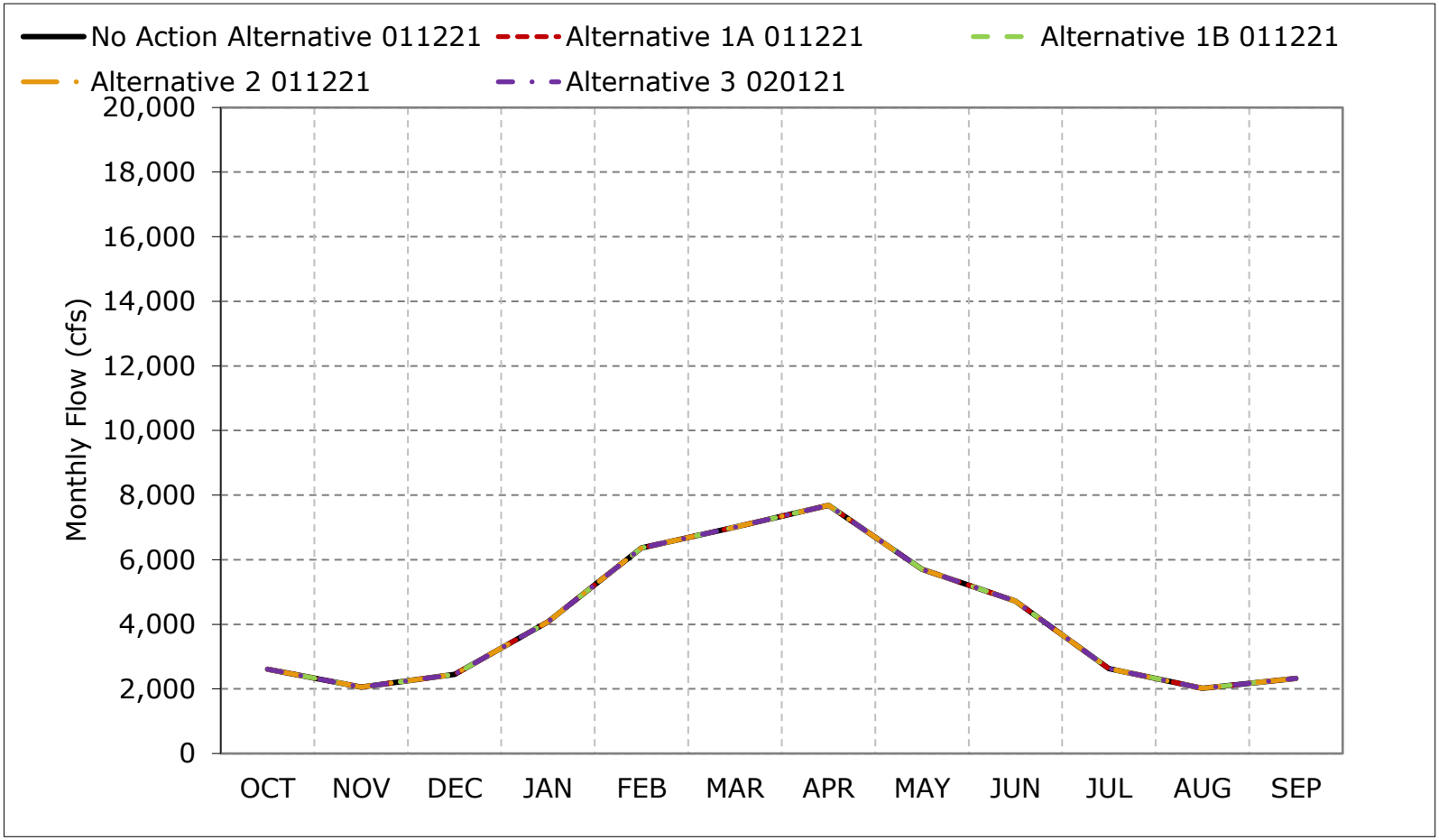
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-7-2. San Joaquin River at Vernalis, Wet Year Average Flow



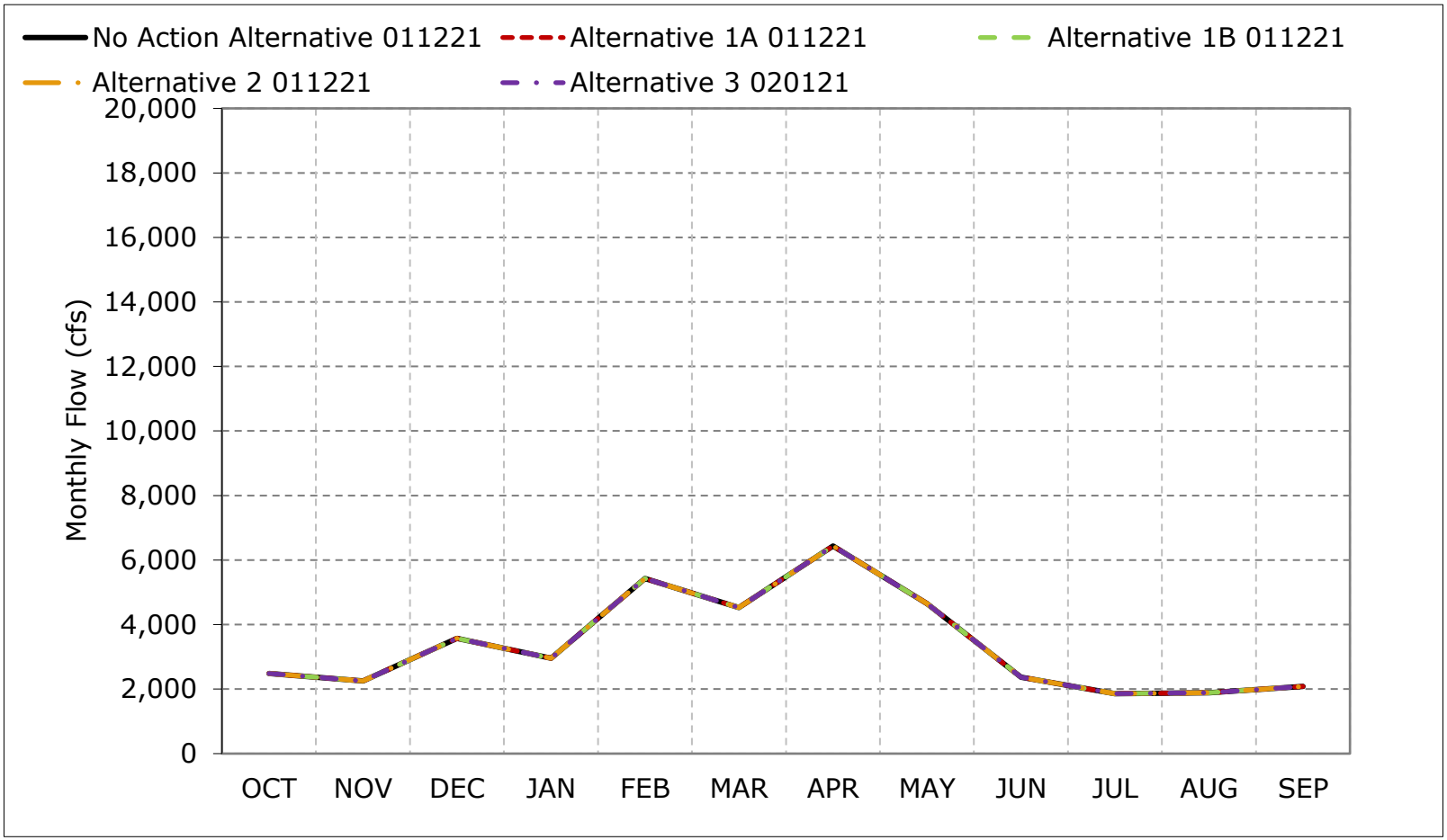
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-7-3. San Joaquin River at Vernalis, Above Normal Year Average Flow



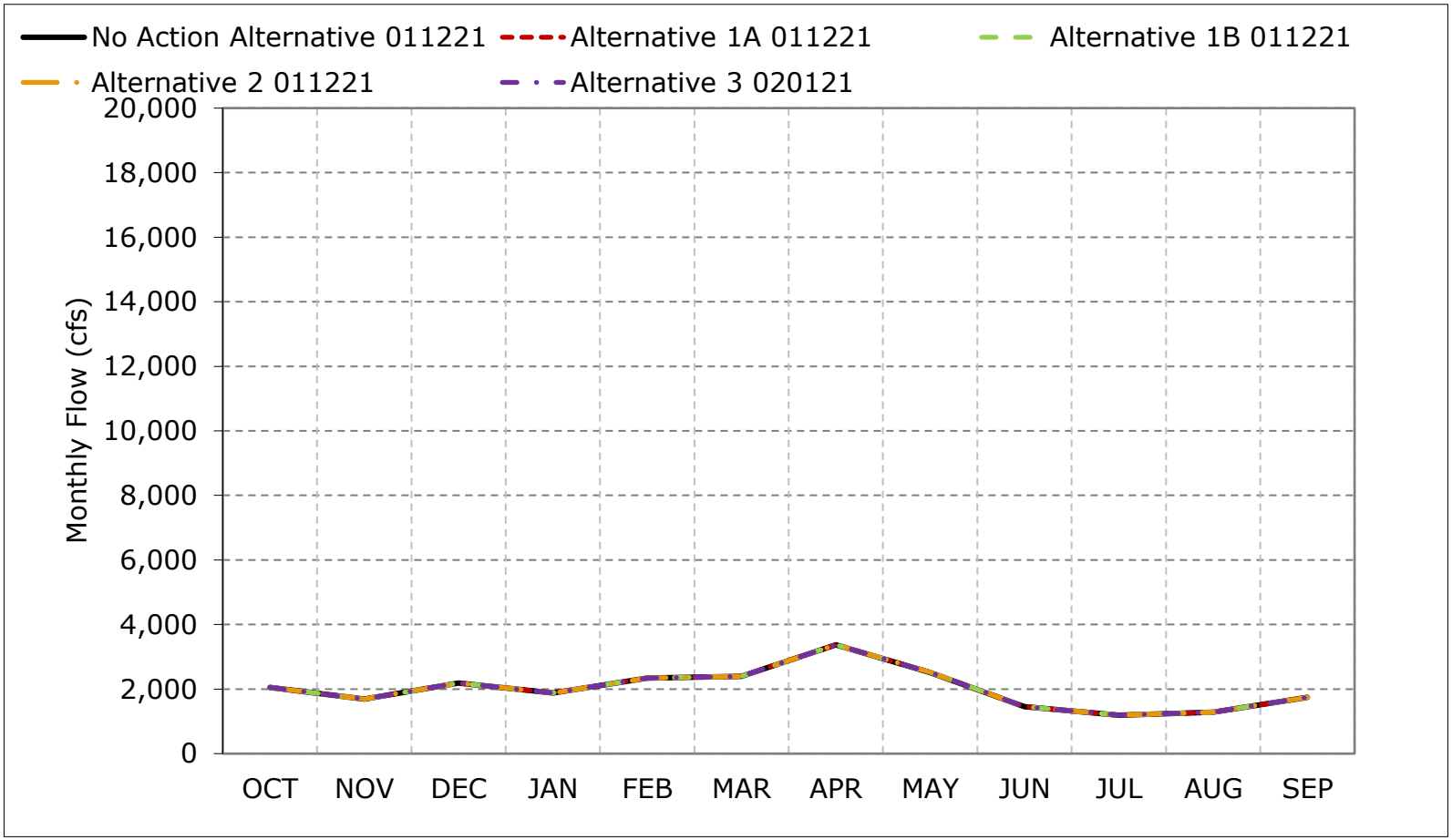
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-7-4. San Joaquin River at Vernalis, Below Normal Year Average Flow



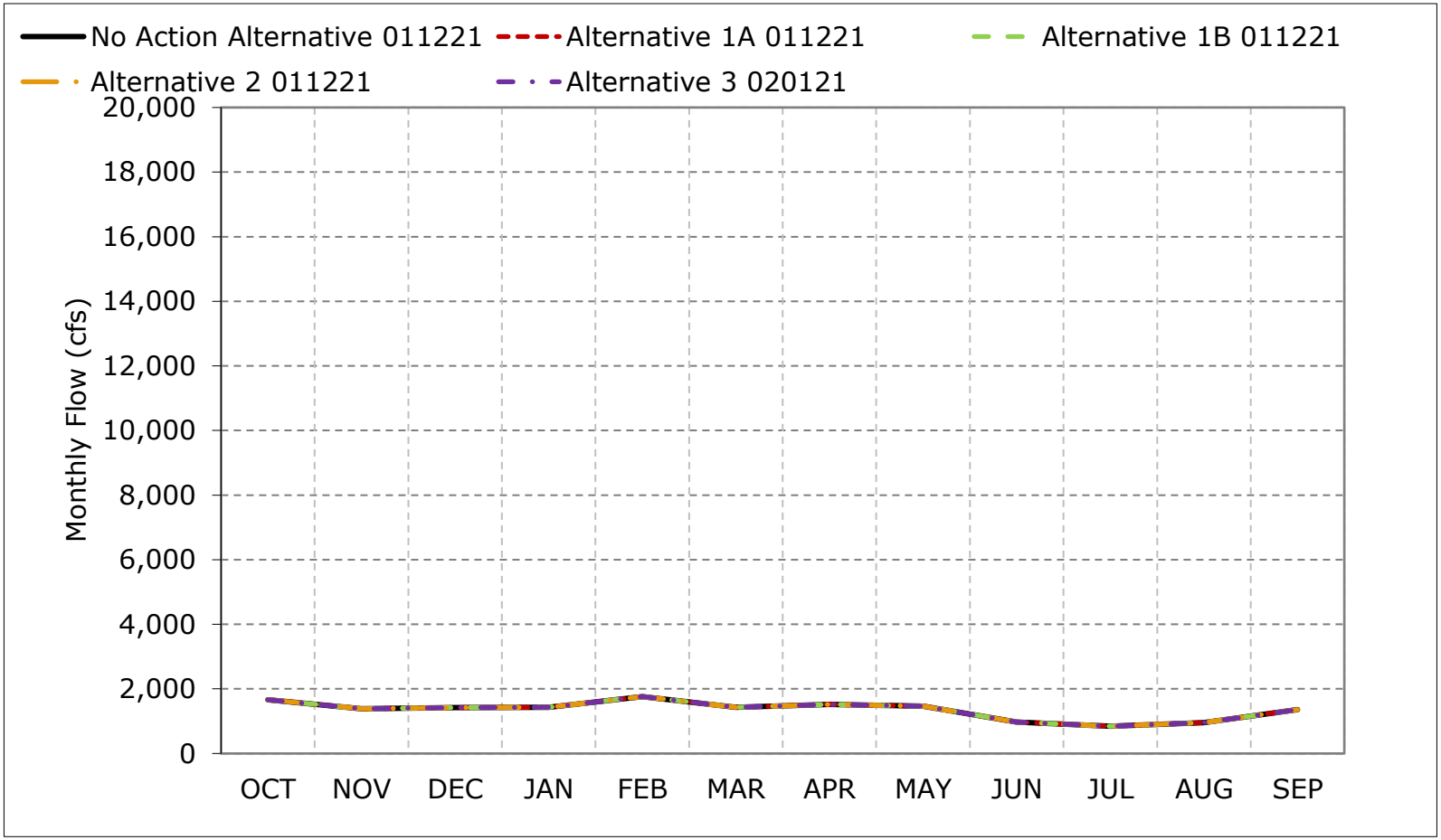
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-7-5. San Joaquin River at Vernalis, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-7-6. San Joaquin River at Vernalis, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-7-7. San Joaquin River at Vernalis, October

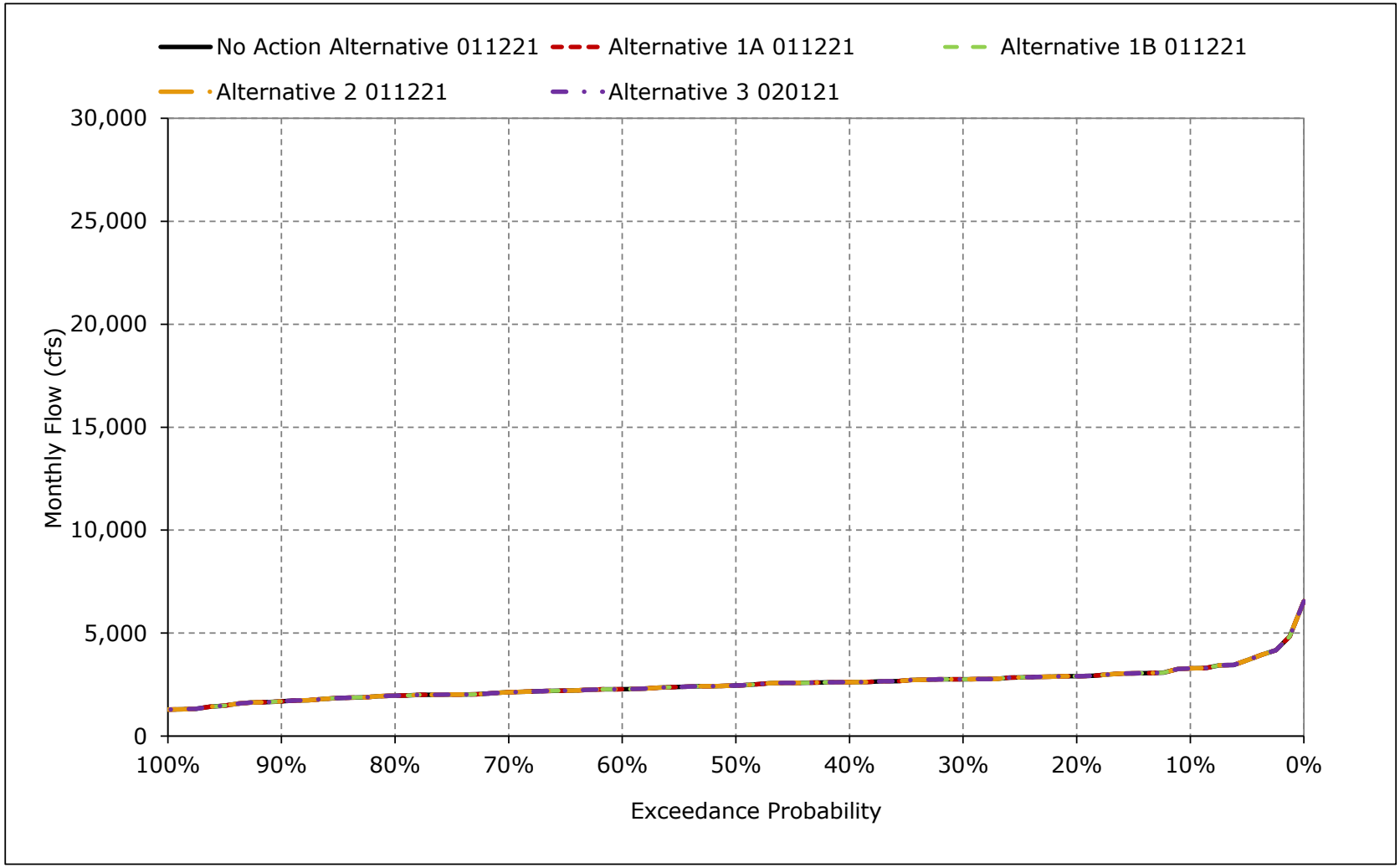


Figure 5B3-7-8. San Joaquin River at Vernalis, November

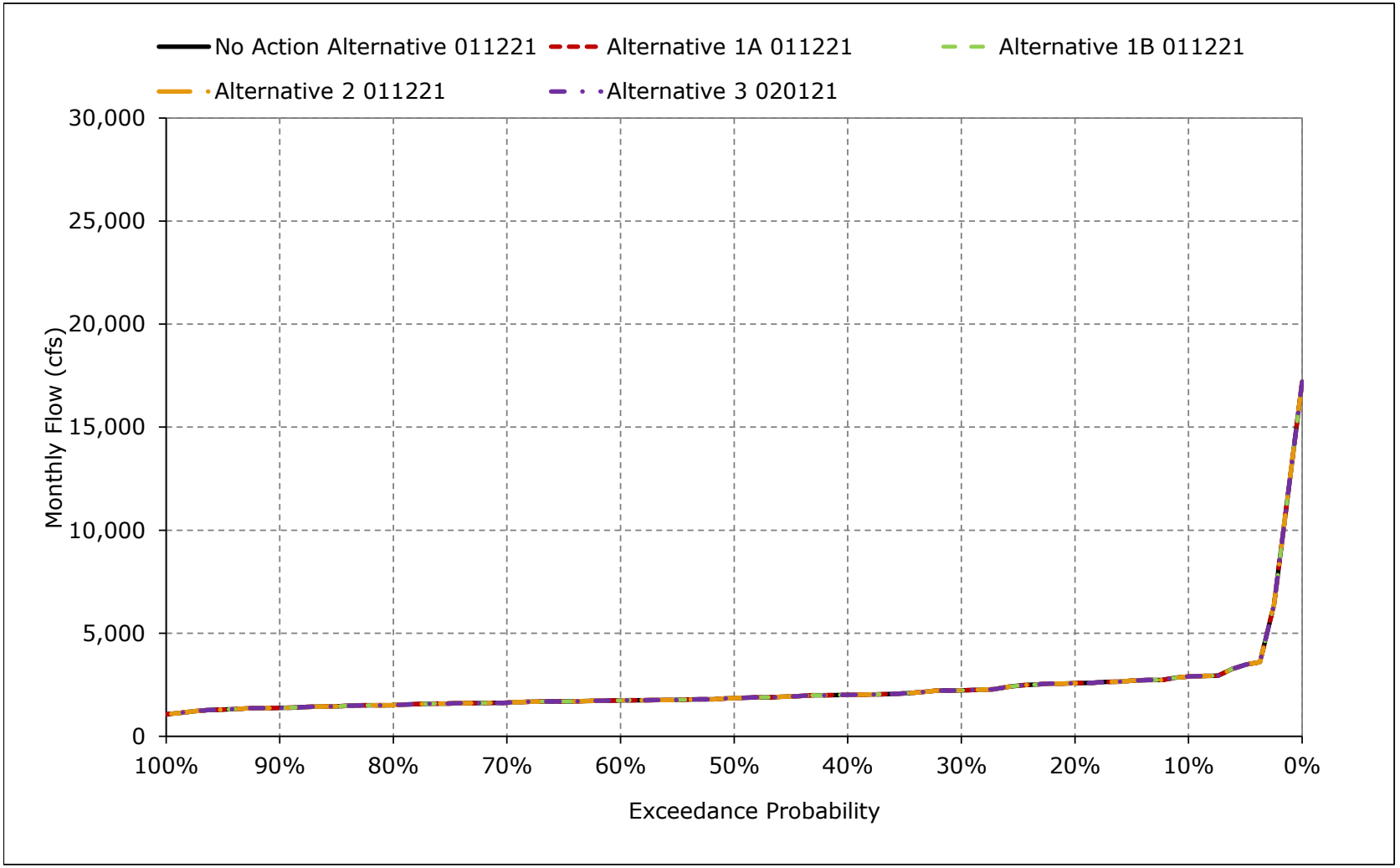


Figure 5B3-7-9. San Joaquin River at Vernalis, December

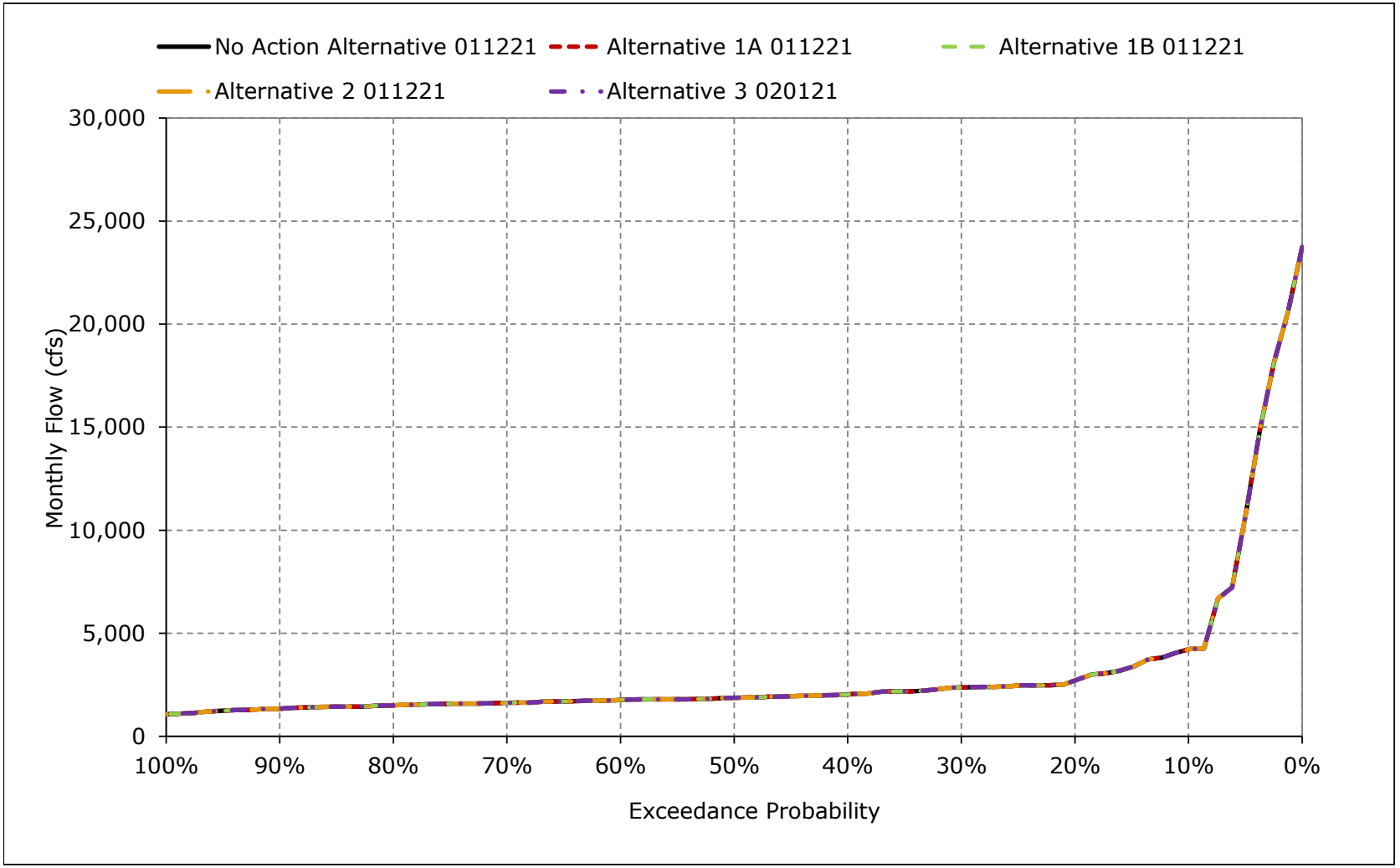


Figure 5B3-7-10. San Joaquin River at Vernalis, January

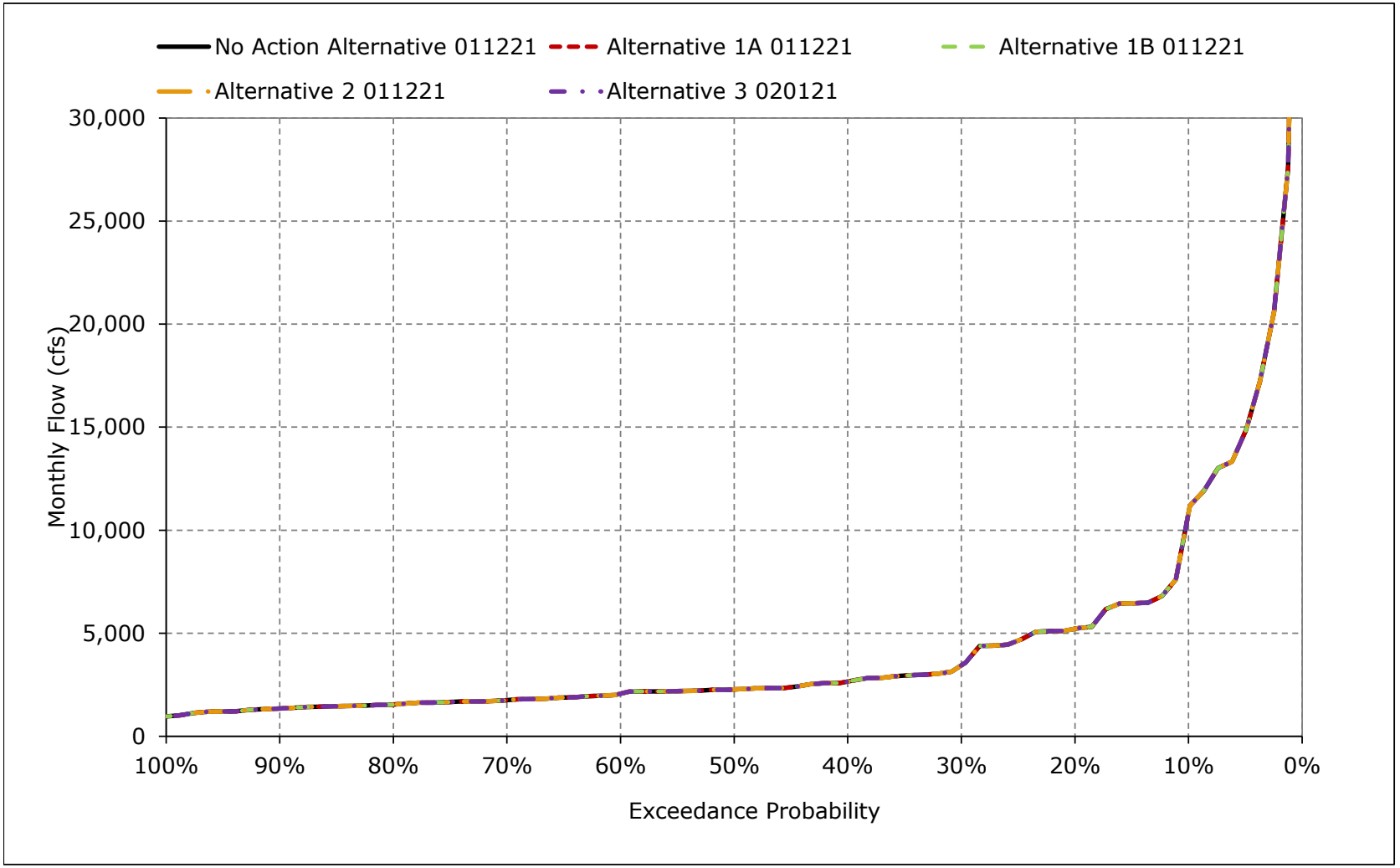


Figure 5B3-7-11. San Joaquin River at Vernalis, February

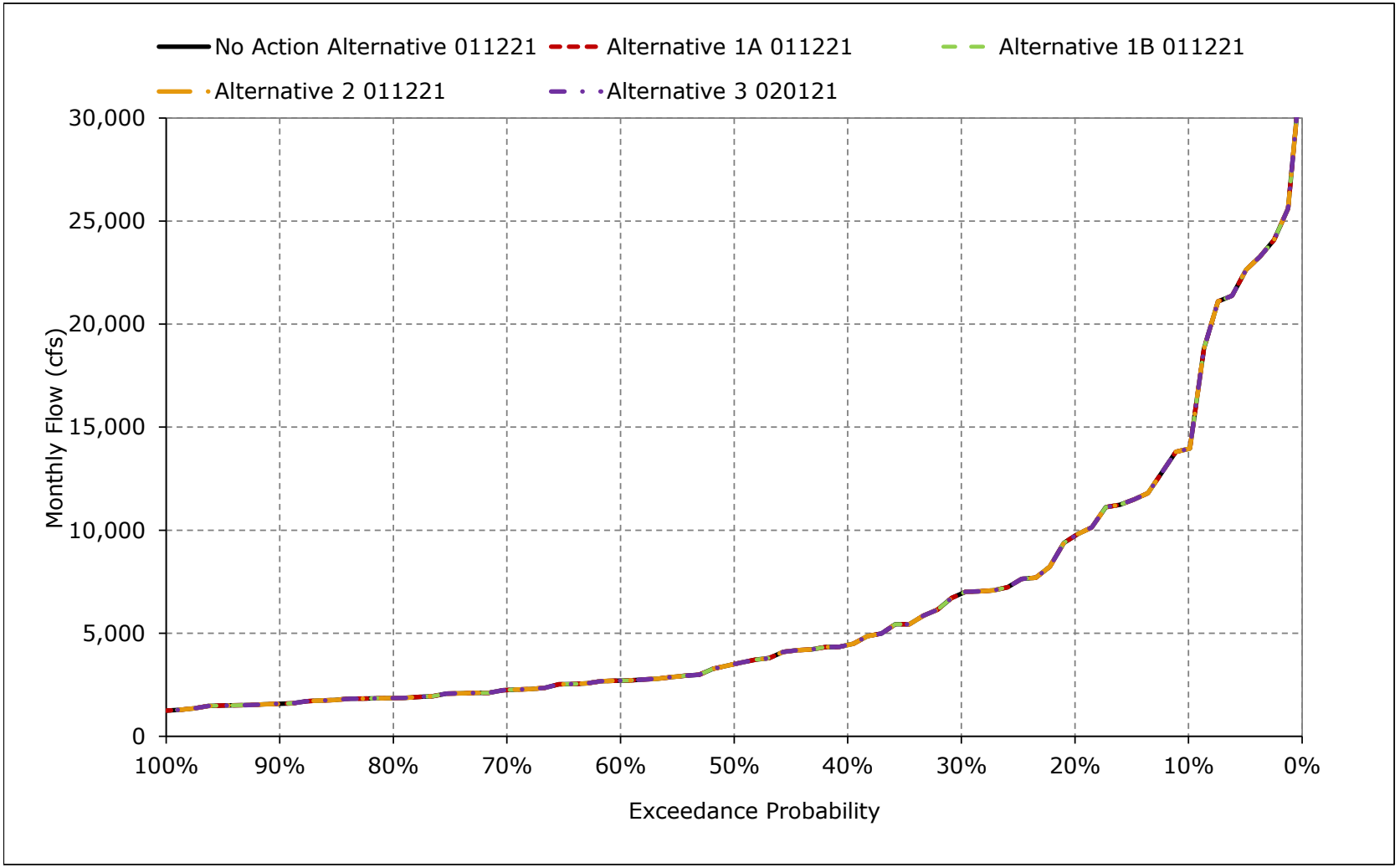


Figure 5B3-7-12. San Joaquin River at Vernalis, March

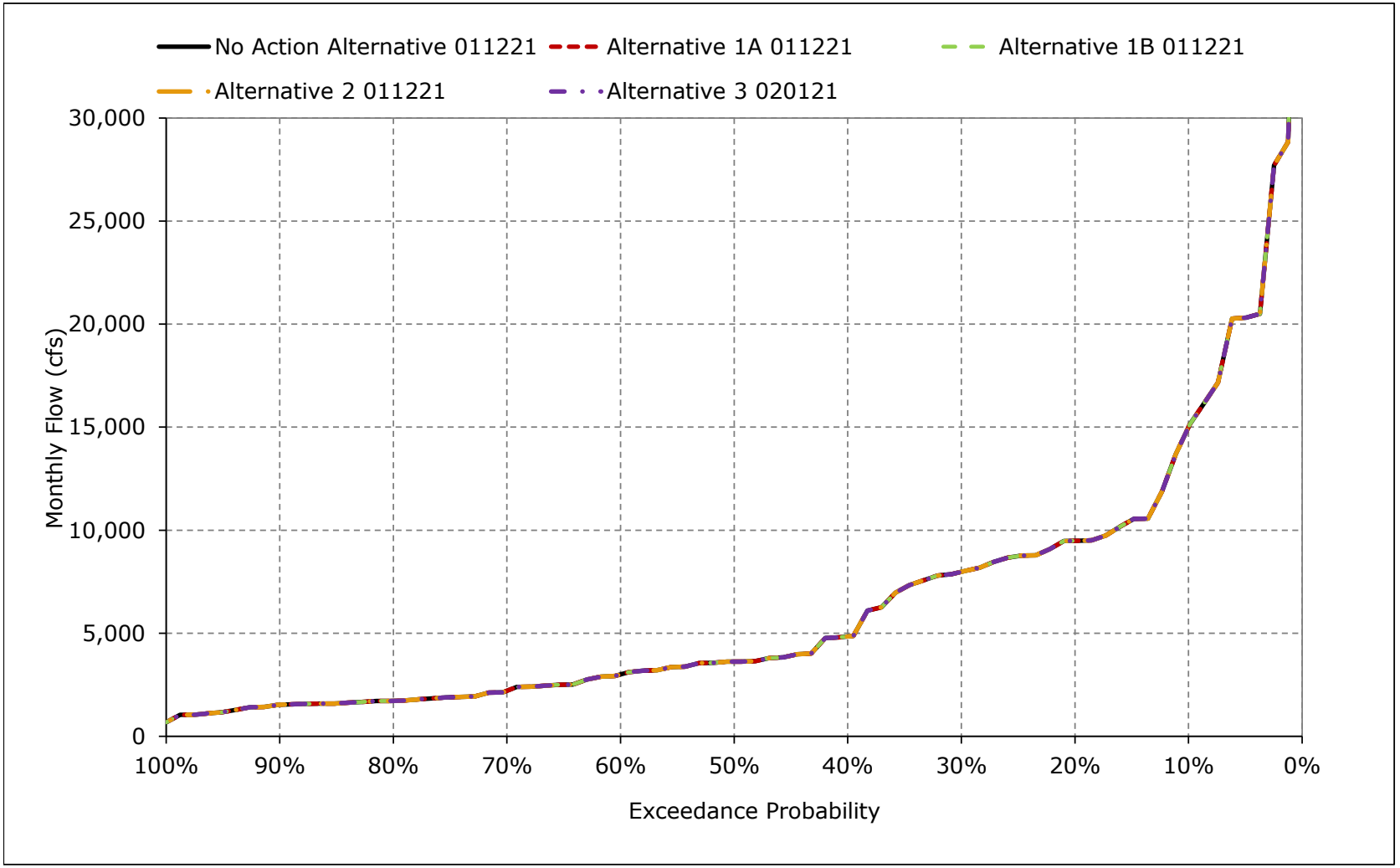


Figure 5B3-7-13. San Joaquin River at Vernalis, April

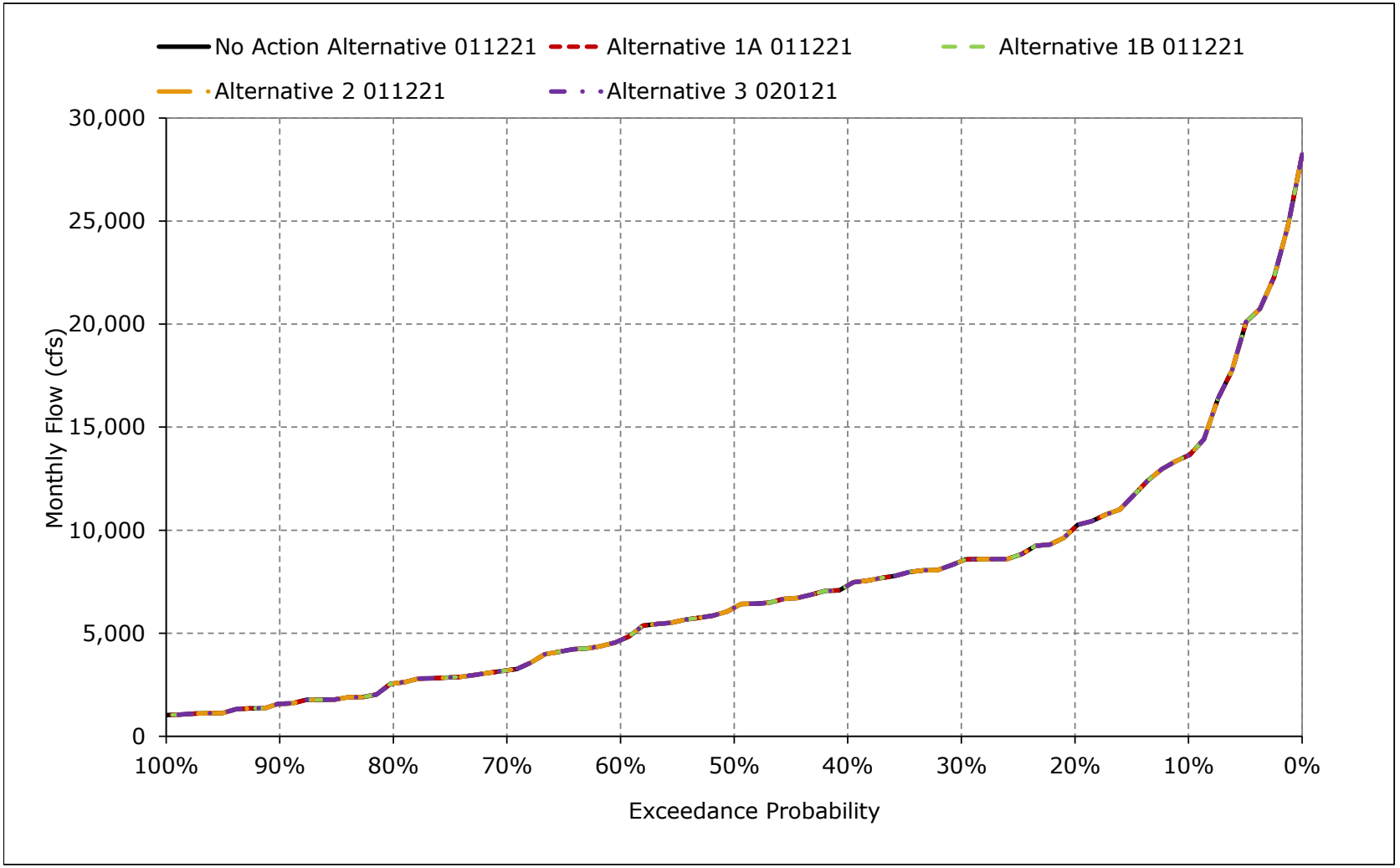


Figure 5B3-7-14. San Joaquin River at Vernalis, May

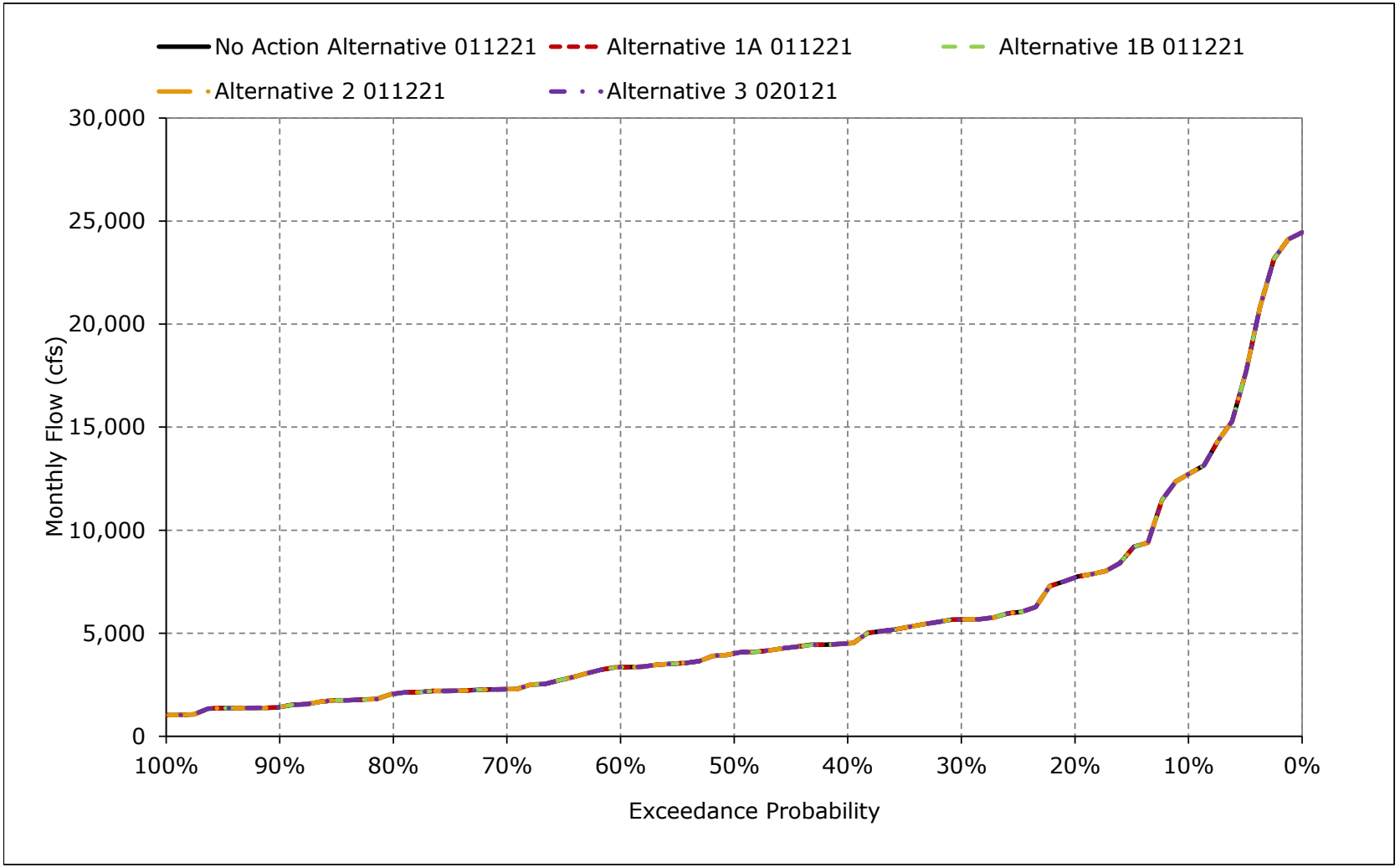


Figure 5B3-7-15. San Joaquin River at Vernalis, June

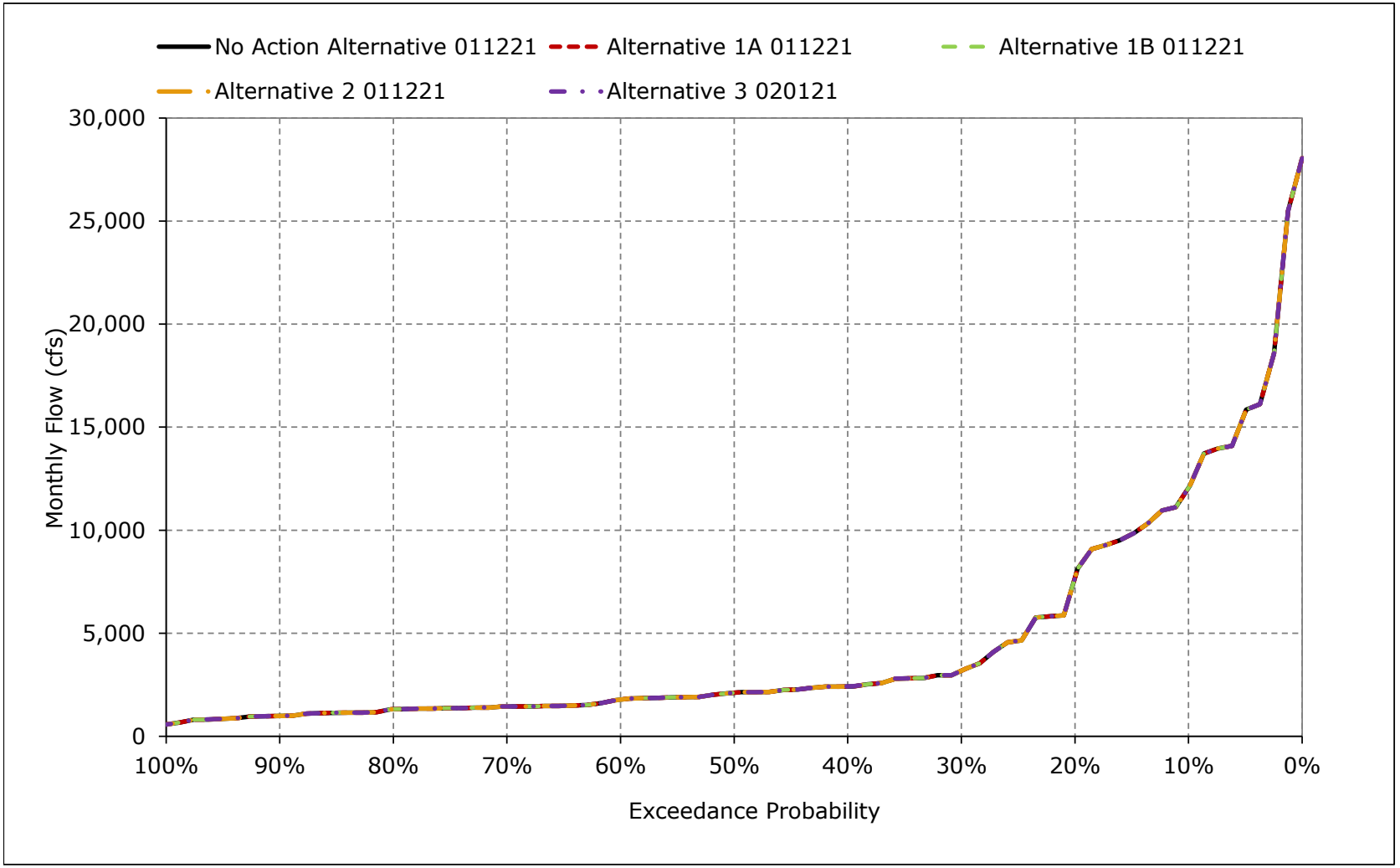


Figure 5B3-7-16. San Joaquin River at Vernalis, July

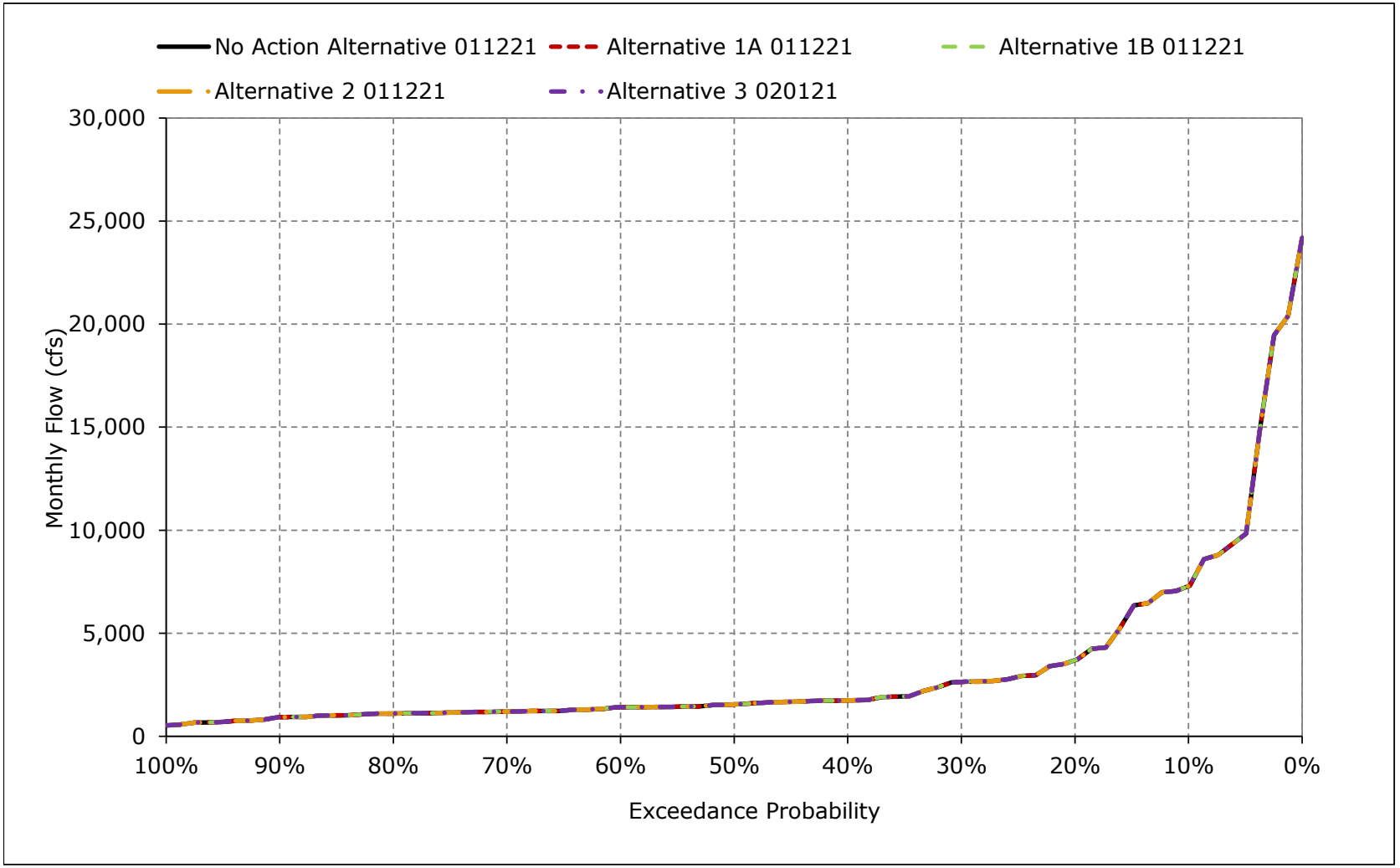


Figure 5B3-7-17. San Joaquin River at Vernalis, August

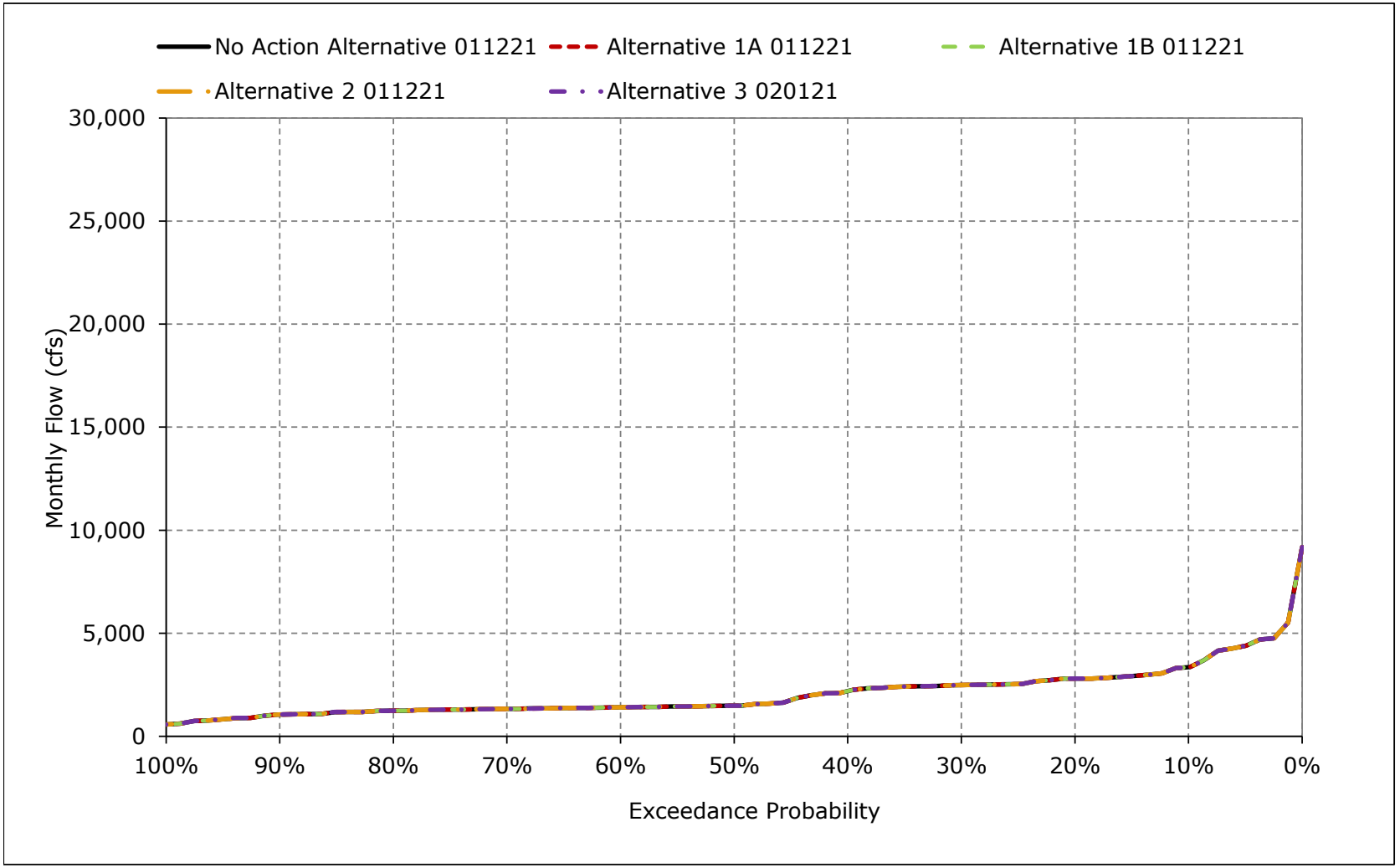


Figure 5B3-7-18. San Joaquin River at Vernalis, September

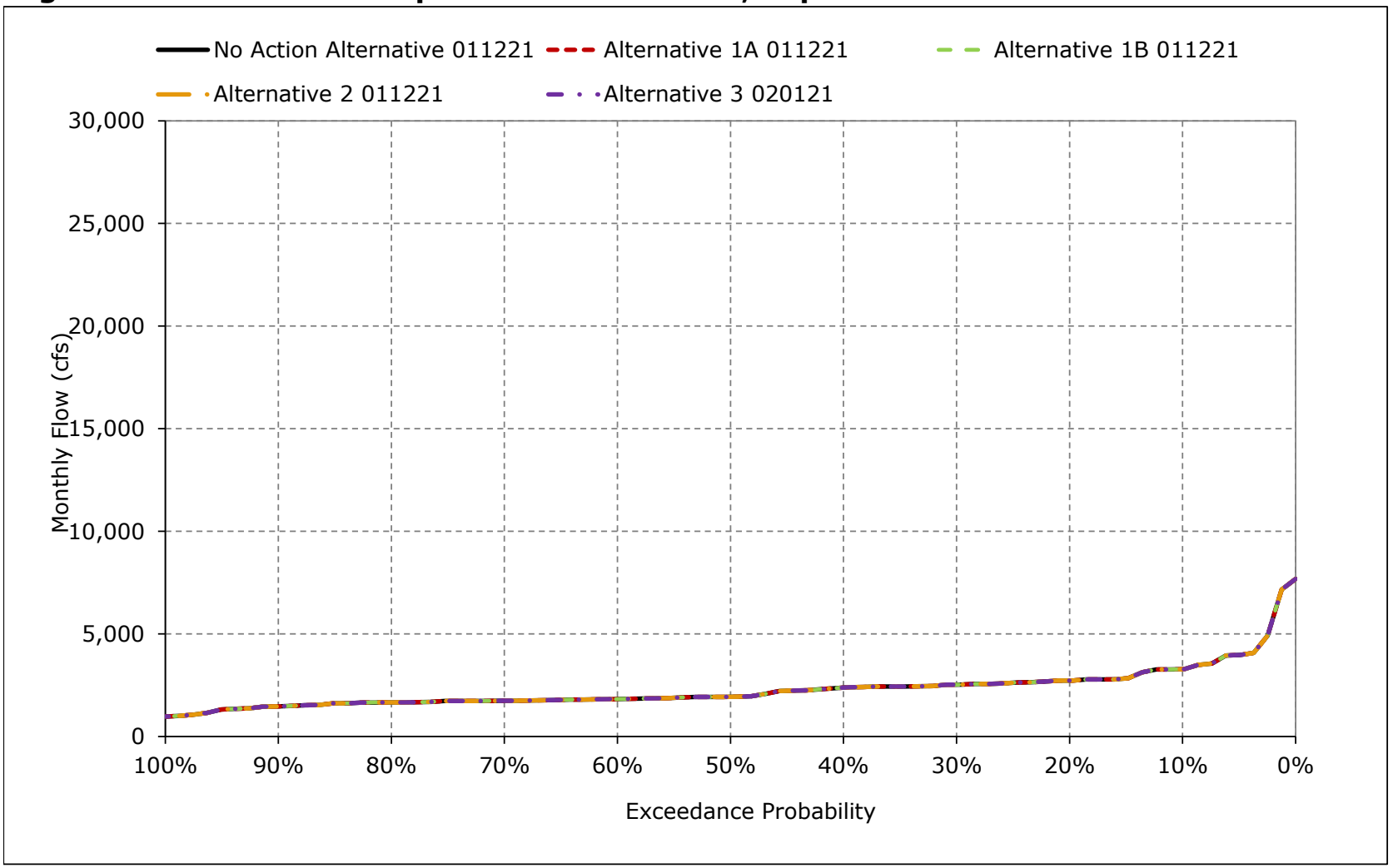


Table 5B3-8-1a. San Joaquin River at Vernalis (60-20-20), No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,637	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,180	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,276	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,057	1,315	1,101	1,237	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,419	991	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (29%)	3,200	3,525	5,005	9,319	13,056	14,635	13,554	11,626	11,276	7,743	3,517	3,393
Above Normal (20%)	2,858	2,184	2,590	5,309	6,930	5,914	7,824	4,981	2,495	2,054	2,232	2,481
Below Normal (16%)	2,349	2,124	2,917	2,269	2,772	3,236	5,357	3,778	1,915	1,409	1,407	1,825
Dry (16%)	2,064	1,670	2,453	2,122	2,472	2,474	3,213	2,290	1,397	1,198	1,331	1,776
Critical (20%)	1,655	1,398	1,394	1,398	1,766	1,504	1,487	1,452	971	850	972	1,412

Table 5B3-8-1b. San Joaquin River at Vernalis (60-20-20), Alternative 1A 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,638	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,691	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,662	3,181	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,275	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,058	1,315	1,103	1,236	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,418	992	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (29%)	3,200	3,525	5,005	9,319	13,056	14,636	13,554	11,626	11,276	7,743	3,516	3,393
Above Normal (20%)	2,858	2,184	2,590	5,309	6,930	5,914	7,824	4,981	2,495	2,054	2,232	2,481
Below Normal (16%)	2,349	2,124	2,917	2,269	2,772	3,236	5,357	3,778	1,915	1,408	1,407	1,825
Dry (16%)	2,064	1,670	2,453	2,122	2,472	2,474	3,213	2,290	1,397	1,199	1,332	1,776
Critical (20%)	1,655	1,398	1,394	1,398	1,766	1,504	1,487	1,452	971	850	972	1,412

Table 5B3-8-1c. San Joaquin River at Vernalis (60-20-20), Alternative 1A 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	1	0	2	-1	0
90%	0	0	0	0	0	0	0	-1	1	0	0	0
Long Term												
Full Simulation Period[a]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[b,c]												
Wet (29%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (20%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (20%)	0	0	0	0	0	0	0	0	0	0	0	0

a Based on the 82-year simulation period.

b As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-8-2a. San Joaquin River at Vernalis (60-20-20), No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,637	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,180	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,276	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,057	1,315	1,101	1,237	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,419	991	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (29%)	3,200	3,525	5,005	9,319	13,056	14,635	13,554	11,626	11,276	7,743	3,517	3,393
Above Normal (20%)	2,858	2,184	2,590	5,309	6,930	5,914	7,824	4,981	2,495	2,054	2,232	2,481
Below Normal (16%)	2,349	2,124	2,917	2,269	2,772	3,236	5,357	3,778	1,915	1,409	1,407	1,825
Dry (16%)	2,064	1,670	2,453	2,122	2,472	2,474	3,213	2,290	1,397	1,198	1,331	1,776
Critical (20%)	1,655	1,398	1,394	1,398	1,766	1,504	1,487	1,452	971	850	972	1,412

Table 5B3-8-2b. San Joaquin River at Vernalis (60-20-20), Alternative 1B 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,638	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,662	3,181	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,275	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,825
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,203	2,288	1,446	1,198	1,336	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,720	2,567	2,058	1,316	1,103	1,235	1,659
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,418	993	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,247	2,089	2,324
Water Year Types[b,c]												
Wet (29%)	3,200	3,525	5,005	9,319	13,056	14,636	13,554	11,626	11,275	7,743	3,516	3,393
Above Normal (20%)	2,858	2,184	2,590	5,309	6,930	5,914	7,824	4,981	2,495	2,054	2,232	2,481
Below Normal (16%)	2,349	2,124	2,917	2,269	2,772	3,236	5,357	3,778	1,915	1,408	1,407	1,825
Dry (16%)	2,065	1,670	2,453	2,122	2,472	2,474	3,213	2,290	1,398	1,199	1,332	1,776
Critical (20%)	1,655	1,398	1,394	1,398	1,766	1,505	1,487	1,452	972	851	973	1,412

Table 5B3-8-2c. San Joaquin River at Vernalis (60-20-20), Alternative 1B 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	1
70%	1	0	0	0	0	0	0	0	0	0	4	0
80%	0	0	0	0	0	0	0	1	0	2	-2	0
90%	0	0	0	0	0	0	0	-1	1	0	0	0
Long Term												
Full Simulation Period[a]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[b,c]												
Wet (29%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (20%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	1	1	1	0
Critical (20%)	0	0	0	0	0	0	0	0	1	1	1	0

a Based on the 82-year simulation period.

b As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-8-3a. San Joaquin River at Vernalis (60-20-20), No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,637	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,180	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,276	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,057	1,315	1,101	1,237	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,419	991	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (29%)	3,200	3,525	5,005	9,319	13,056	14,635	13,554	11,626	11,276	7,743	3,517	3,393
Above Normal (20%)	2,858	2,184	2,590	5,309	6,930	5,914	7,824	4,981	2,495	2,054	2,232	2,481
Below Normal (16%)	2,349	2,124	2,917	2,269	2,772	3,236	5,357	3,778	1,915	1,409	1,407	1,825
Dry (16%)	2,064	1,670	2,453	2,122	2,472	2,474	3,213	2,290	1,397	1,198	1,331	1,776
Critical (20%)	1,655	1,398	1,394	1,398	1,766	1,504	1,487	1,452	971	850	972	1,412

Table 5B3-8-3b. San Joaquin River at Vernalis (60-20-20), Alternative 2 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,638	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,691	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,662	3,181	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,419	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,275	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,058	1,315	1,103	1,236	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,418	992	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (29%)	3,200	3,525	5,005	9,319	13,056	14,636	13,554	11,626	11,276	7,743	3,516	3,393
Above Normal (20%)	2,858	2,184	2,590	5,309	6,930	5,914	7,824	4,981	2,495	2,054	2,232	2,481
Below Normal (16%)	2,349	2,124	2,917	2,269	2,772	3,236	5,357	3,778	1,915	1,408	1,407	1,825
Dry (16%)	2,064	1,670	2,453	2,122	2,472	2,474	3,213	2,290	1,397	1,199	1,332	1,776
Critical (20%)	1,655	1,398	1,394	1,398	1,766	1,504	1,487	1,452	971	850	972	1,412

Table 5B3-8-3c. San Joaquin River at Vernalis (60-20-20), Alternative 2 011221 minus No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	1	0	2	-1	0
90%	0	0	0	0	0	0	0	-1	1	0	0	0
Long Term												
Full Simulation Period[a]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[b,c]												
Wet (29%)	0	0	0	0	0	0	0	0	0	0	0	0
Above Normal (20%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Critical (20%)	0	0	0	0	0	0	0	0	0	0	0	0

a Based on the 82-year simulation period.

b As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

Table 5B3-8-4a. San Joaquin River at Vernalis (60-20-20), No Action Alternative 011221, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,637	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,137	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,180	2,644	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,418	1,743	2,198	2,383
50%	2,457	1,855	1,871	2,278	3,500	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,276	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,407	1,404	1,824
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,204	2,288	1,446	1,198	1,333	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,719	2,567	2,057	1,315	1,101	1,237	1,658
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,574	1,419	991	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,246	2,089	2,323
Water Year Types[b,c]												
Wet (29%)	3,200	3,525	5,005	9,319	13,056	14,635	13,554	11,626	11,276	7,743	3,517	3,393
Above Normal (20%)	2,858	2,184	2,590	5,309	6,930	5,914	7,824	4,981	2,495	2,054	2,232	2,481
Below Normal (16%)	2,349	2,124	2,917	2,269	2,772	3,236	5,357	3,778	1,915	1,409	1,407	1,825
Dry (16%)	2,064	1,670	2,453	2,122	2,472	2,474	3,213	2,290	1,397	1,198	1,331	1,776
Critical (20%)	1,655	1,398	1,394	1,398	1,766	1,504	1,487	1,452	971	850	972	1,412

Table 5B3-8-4b. San Joaquin River at Vernalis (60-20-20), Alternative 3 020121, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,290	2,898	4,217	10,826	13,951	14,996	13,638	12,723	12,058	7,285	3,349	3,276
20%	2,913	2,582	2,710	5,216	9,726	9,482	10,138	7,705	7,681	3,692	2,801	2,725
30%	2,760	2,230	2,375	3,444	6,922	7,983	8,505	5,663	3,181	2,645	2,482	2,532
40%	2,622	2,006	2,029	2,657	4,429	4,840	7,320	4,508	2,419	1,743	2,198	2,383
50%	2,457	1,855	1,872	2,278	3,499	3,622	6,235	4,016	2,110	1,547	1,480	1,935
60%	2,275	1,739	1,761	2,071	2,705	3,001	4,666	3,350	1,782	1,409	1,404	1,825
70%	2,129	1,635	1,628	1,759	2,247	2,214	3,203	2,288	1,446	1,198	1,338	1,748
80%	1,961	1,513	1,501	1,538	1,852	1,720	2,567	2,056	1,316	1,100	1,236	1,659
90%	1,684	1,377	1,339	1,349	1,584	1,536	1,575	1,419	995	934	1,060	1,464
Long Term												
Full Simulation Period[a]	2,523	2,333	3,090	4,732	6,350	6,636	7,143	5,620	4,502	3,247	2,089	2,324
Water Year Types[b,c]												
Wet (29%)	3,200	3,525	5,005	9,319	13,056	14,635	13,554	11,626	11,276	7,743	3,516	3,393
Above Normal (20%)	2,858	2,184	2,590	5,309	6,930	5,914	7,824	4,981	2,495	2,054	2,232	2,481
Below Normal (16%)	2,349	2,124	2,917	2,269	2,772	3,236	5,357	3,778	1,915	1,408	1,407	1,825
Dry (16%)	2,065	1,670	2,453	2,122	2,472	2,474	3,213	2,290	1,398	1,199	1,332	1,776
Critical (20%)	1,655	1,398	1,395	1,398	1,766	1,505	1,487	1,453	972	851	973	1,412

Table 5B3-8-4c. San Joaquin River at Vernalis (60-20-20), Alternative 3 020121 minus No Action Alternative 011221, Monthly Flow (cfs)

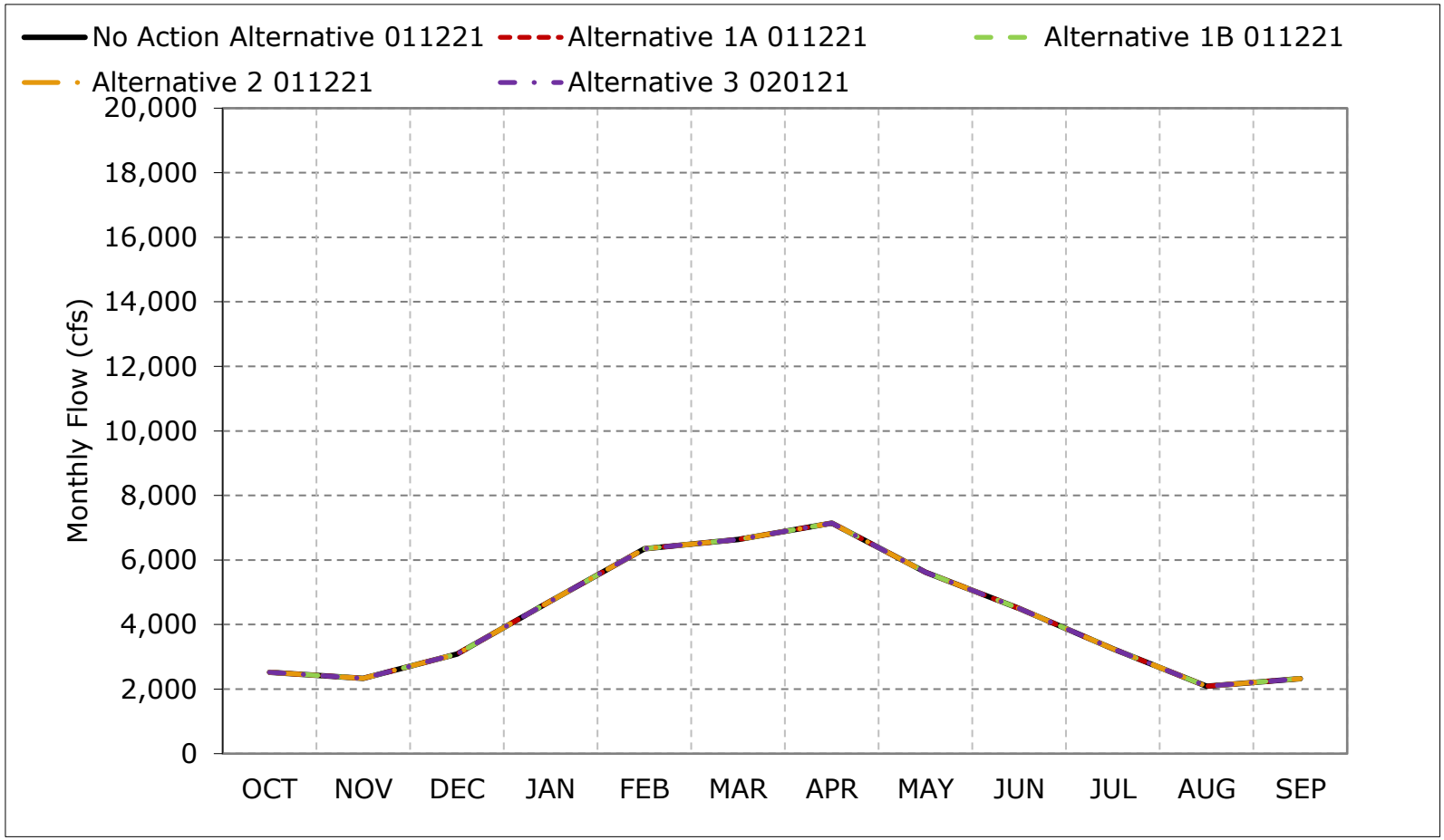
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	0	0	0	0	0
20%	0	0	0	0	0	0	0	0	0	0	0	0
30%	0	0	0	0	0	0	0	0	0	0	0	0
40%	0	0	0	0	0	0	0	0	1	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	2	0	2
70%	0	0	0	0	0	0	0	1	0	0	6	0
80%	0	0	0	0	0	0	0	0	1	-1	-1	0
90%	0	0	0	0	0	0	0	0	4	0	0	0
Long Term												
Full Simulation Period[a]	0	0	0	0	0	0	0	0	0	0	0	0
Water Year Types[b,c]												
Wet (29%)	0	0	0	0	0	0	0	-1	0	0	0	0
Above Normal (20%)	0	0	0	0	0	0	0	0	0	0	0	0
Below Normal (16%)	0	0	0	0	0	0	0	0	0	0	0	0
Dry (16%)	0	0	0	0	0	0	0	1	1	1	1	0
Critical (20%)	0	0	0	0	0	0	0	1	1	1	1	0

a Based on the 82-year simulation period.

b As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

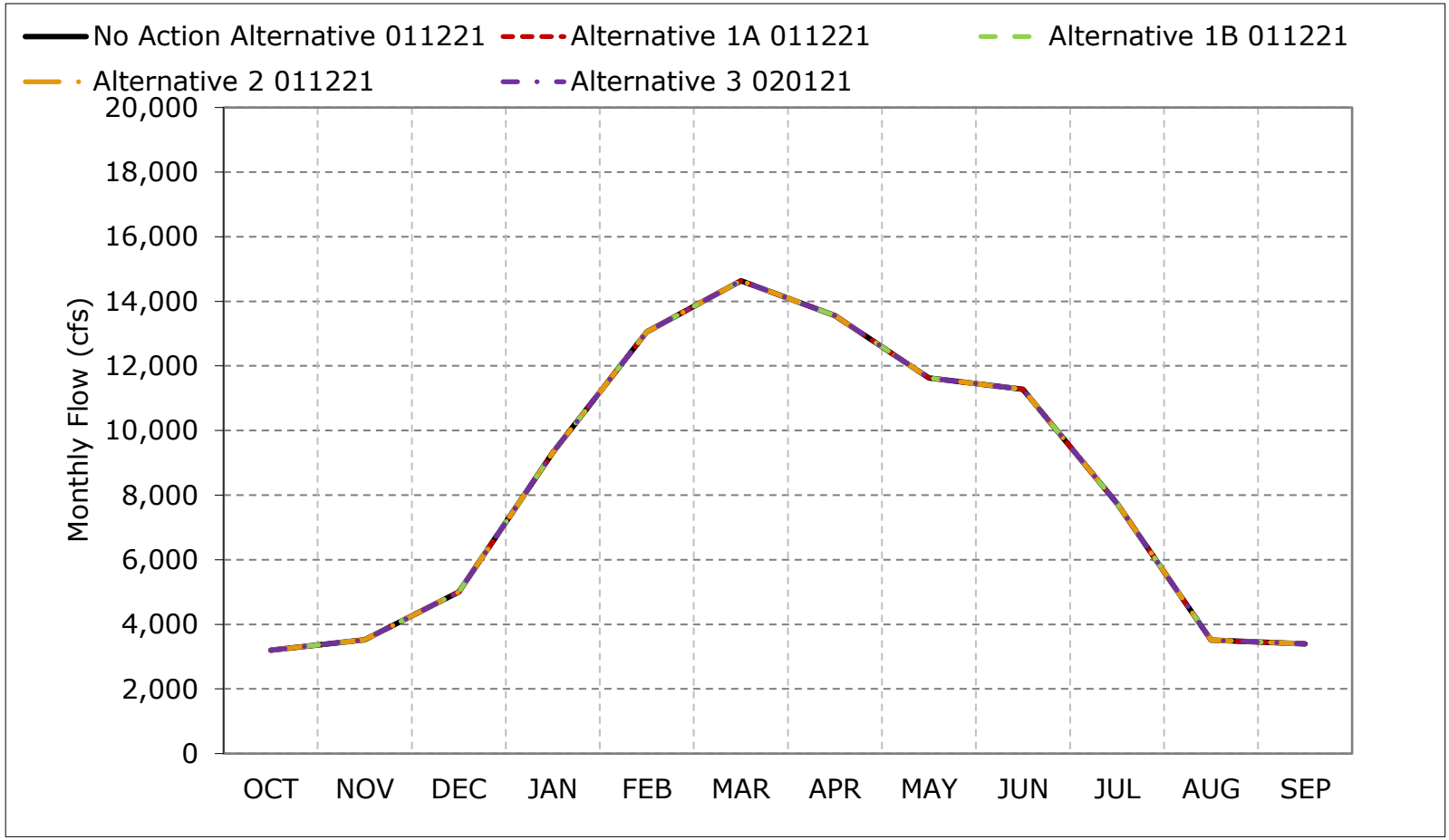
c These results are displayed with calendar year - year type sorting.

Figure 5B3-8-1. San Joaquin River at Vernalis (60-20-20), Long-Term Average Flow



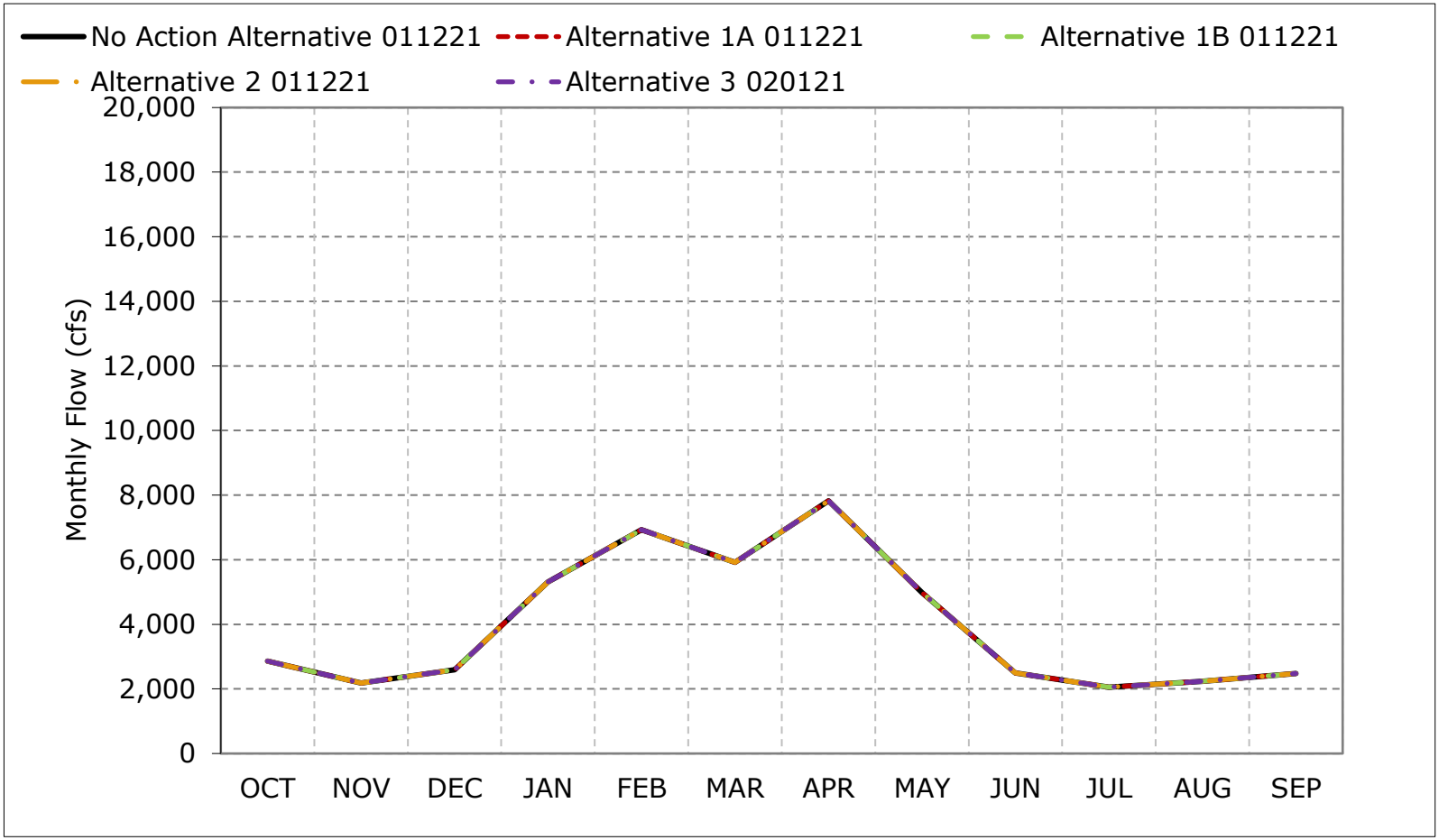
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-8-2. San Joaquin River at Vernalis (60-20-20), Wet Year Average Flow



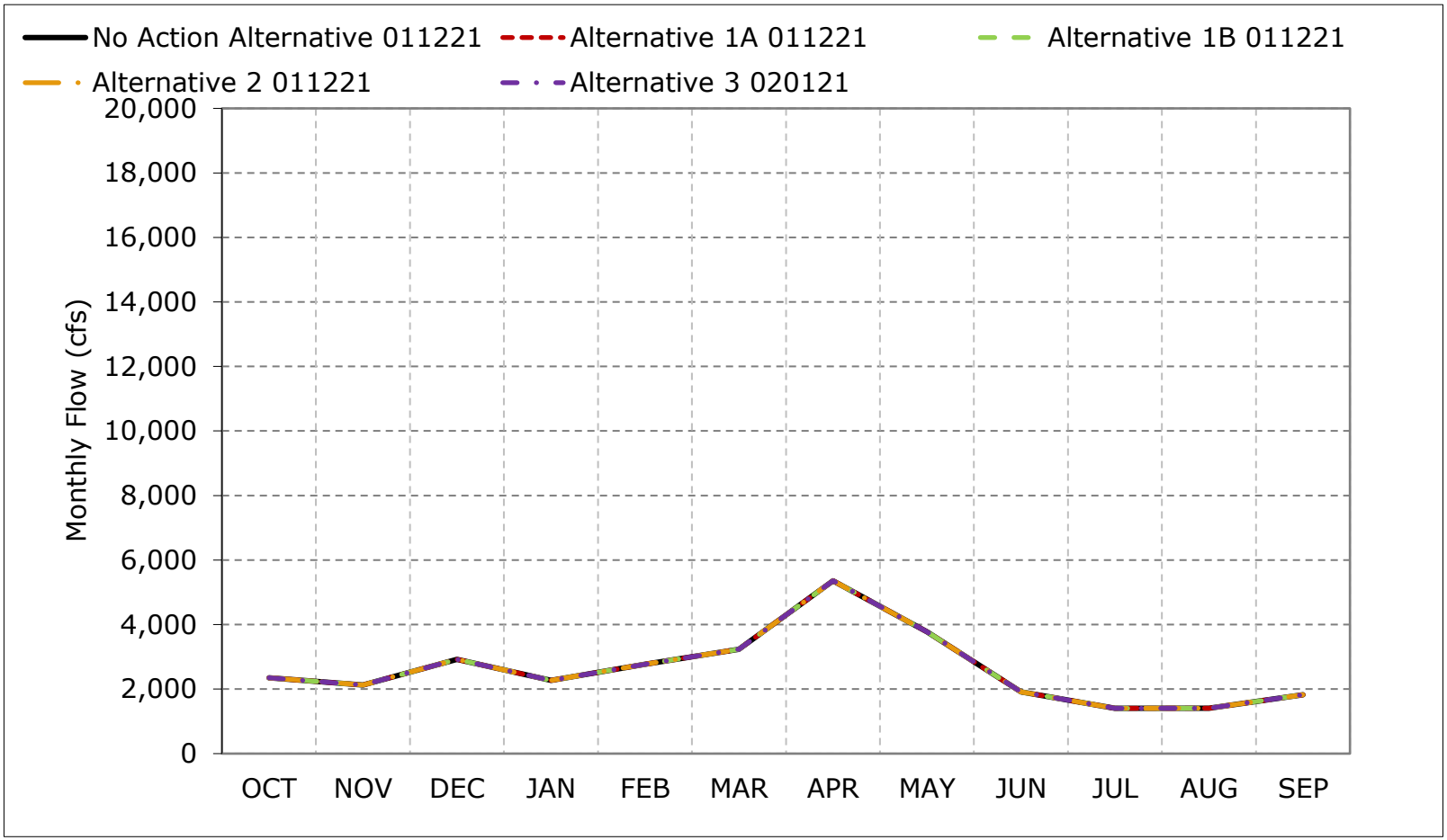
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-8-3. San Joaquin River at Vernalis (60-20-20), Above Normal Year Average Flow



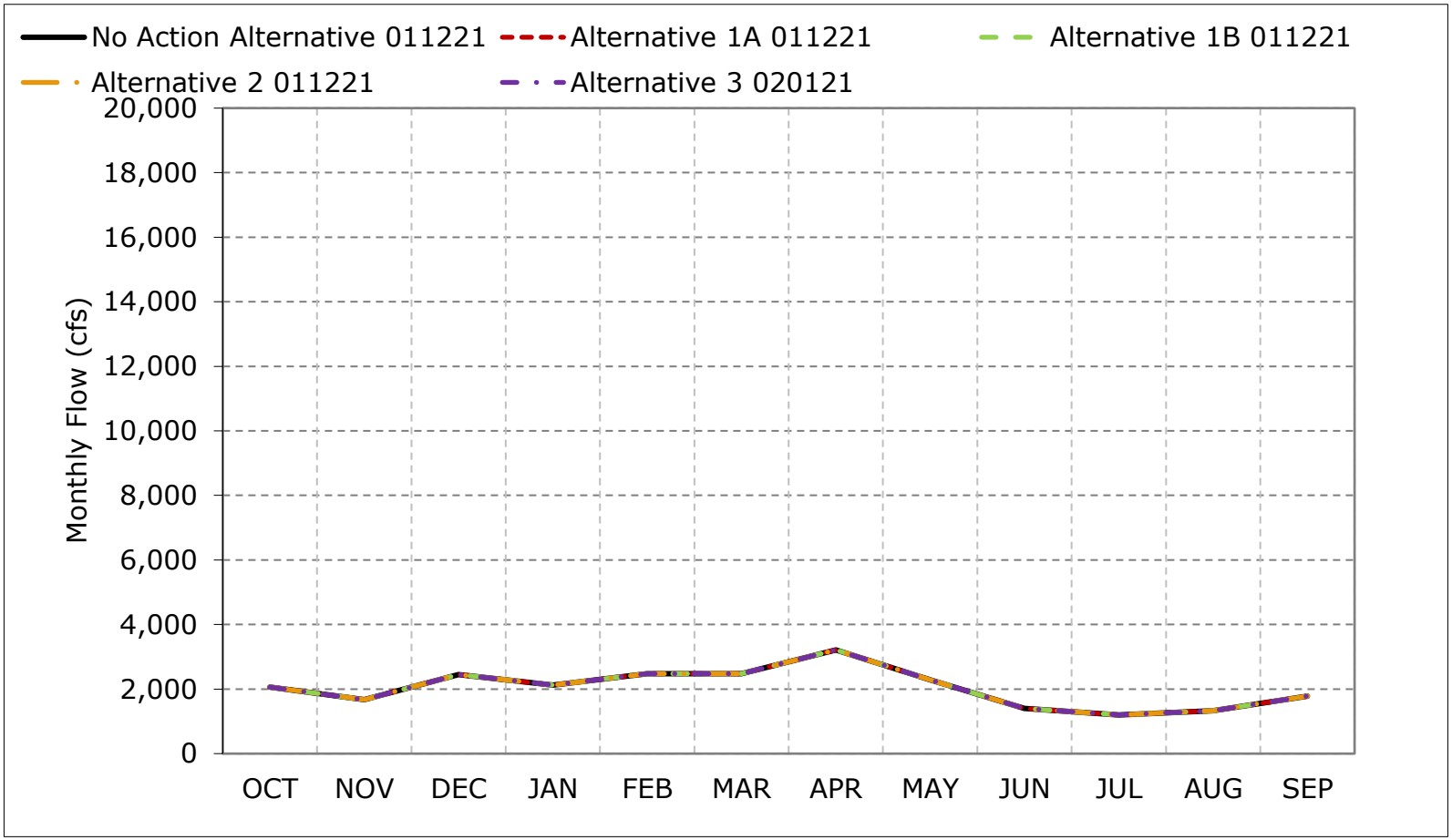
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-8-4. San Joaquin River at Vernalis (60-20-20), Below Normal Year Average Flow



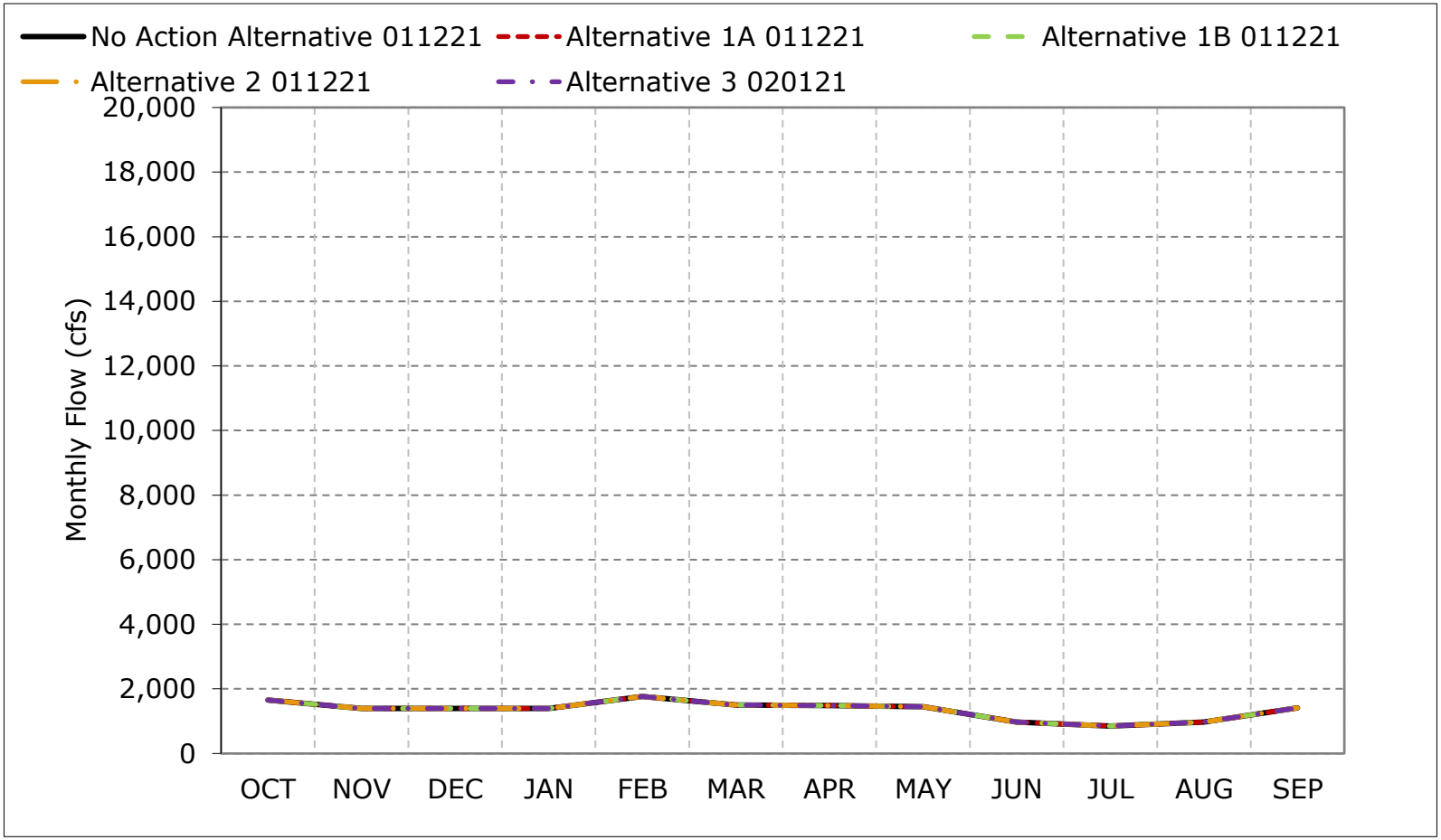
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-8-5. San Joaquin River at Vernalis (60-20-20), Dry Year Average Flow



*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.

Figure 5B3-8-6. San Joaquin River at Vernalis (60-20-20), Critical Year Average Flow



*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with calendar year - year type sorting.