Appendix 4F

Attachment 3: Flow Results (CalSim 3)

Appendix 4F
Attachment 3: Flow Results (CalSim 3)

The following results of the CalSim 3 model are included for river flow conditions for the following scenarios:

- Baseline Conditions (Updated) (040424)
- Alternative 1 plus CVP Proposed Action, Sacramento and Feather River VAs (102023)
- Alternative 1 plus CVP Proposed Action, Sacramento and Feather River VAs, includes TUCPs (102023)

Title	Model Parameter	Table Numbers	Figure Numbers
Sacramento River Flow at Freeport	C_SAC048	4F-3-1-1a to 4F-3-1-2c	4F-3-1a to 4F-3-1r
Georgiana Slough Flow	C_SAC029B	4F-3-2-1a to 4F-3-2-2c	4F-3-2a to 4F-3-2r
Yolo Bypass Flow	C_YBP020	4F-3-3-1a to 4F-3-3-2c	4F-3-3a to 4F-3-3r
Sacramento River Flow at Rio Vista	C_SAC007	4F-3-4-1a to 4F-3-4-2c	4F-3-4a to 4F-3-4r
San Joaquin River at Vernalis	C_SJR070	4F-3-5-1a to 4F-3-5-2c	4F-3-5a to 4F-3-5r
San Joaquin River at Vernalis (60-20-20)	C_SJR070	4F-3-6-1a to 4F-3-6-2c	4F-3-6a to 4F-3-6f
Mokelumne River below Cosumnes	C_MOK019	4F-3-7-1a to 4F-3-7-2c	4F-3-7a to 4F-3-7r
Old and Middle River Flow	C_OMR014	4F-3-8-1a to 4F-3-8-2c	4F-3-8a to 4F-3-8r
Qwest	C_SJR013	4F-3-9-1a to 4F-3-9-2c	4F-3-9a to 4F-3-9r
Delta Outflow	NDOI	4F-3-10-1a to 4F-3-10-2c	4F-3-10a to 4F-3-10r

Report formats:

- Monthly tables comparing two scenarios (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 scenarios.
- Monthly exceedance charts (all months) including all scenarios.

Table 4F-3-1-1a. Sacramento River Flow at Freeport, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	15,836	22,456	50,214	62,194	69,277	65,843	52,801	43,765	28,055	22,868	19,017	20,490
20% Exceedance	14,437	15,164	33,046	51,801	60,195	52,978	36,838	33,365	22,001	22,161	18,411	19,874
30% Exceedance	13,720	14,235	24,010	33,898	49,108	41,592	25,288	22,681	16,255	20,603	18,072	18,439
40% Exceedance	13,073	13,723	18,057	26,550	36,508	32,477	20,069	16,947	14,089	19,946	17,555	16,690
50% Exceedance	11,780	13,122	15,189	21,734	27,577	24,024	16,406	15,383	13,659	19,273	16,744	15,582
60% Exceedance	9,956	11,536	14,470	19,403	21,753	21,550	12,544	12,900	13,244	18,546	15,851	13,492
70% Exceedance	8,559	10,320	12,759	14,574	18,511	18,662	11,262	11,427	12,731	17,072	14,263	11,058
80% Exceedance	7,400	9,082	10,410	12,404	16,158	14,899	10,779	10,784	11,439	15,175	11,602	9,932
90% Exceedance	6,617	7,335	9,322	10,943	13,228	12,271	9,452	8,851	10,087	11,173	8,898	8,891
Full Simulation Period Average[a]	11,712	14,113	22,654	29,700	35,939	32,604	23,408	20,585	17,102	18,467	15,490	14,989
Wet Water Years (30%)	14,209	19,122	38,333	49,632	58,897	51,638	41,547	34,746	25,705	19,828	17,643	19,755
Above Normal Water Years (11%)	10,776	12,892	19,063	40,685	44,419	44,391	26,264	23,033	18,474	21,171	18,985	19,113
Below Normal Water Years (21%)	11,909	13,808	16,626	22,295	28,700	26,846	17,617	17,024	13,914	21,106	17,475	15,024
Dry Water Years (22%)	11,277	12,059	16,252	15,858	22,058	20,188	12,675	12,069	13,104	18,208	13,676	10,906
Critical Water Years (16%)	8,011	8,786	12,441	13,529	15,650	13,441	9,792	8,735	9,706	10,948	8,943	8,786

Table 4F-3-1-1b. Sacramento River Flow at Freeport, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	15,684	21,533	51,165	62,476	69,259	65,793	52,766	43,749	27,406	22,405	18,638	21,725
20% Exceedance	14,648	15,641	33,758	51,611	61,148	52,987	37,696	34,578	21,971	21,604	18,097	20,689
30% Exceedance	13,808	14,272	23,986	34,594	48,995	41,094	26,319	22,994	16,237	20,590	17,681	19,154
40% Exceedance	13,209	13,715	18,199	27,430	37,481	32,607	20,668	17,752	13,973	19,580	17,023	17,357
50% Exceedance	11,303	13,051	15,526	21,907	27,992	24,142	17,077	16,206	13,513	18,941	16,596	15,737
60% Exceedance	9,776	11,522	14,498	19,393	21,858	21,583	13,765	14,049	13,140	18,112	15,652	12,873
70% Exceedance	8,952	10,297	12,743	14,678	18,871	18,655	12,187	12,652	12,691	16,632	13,847	11,112
80% Exceedance	7,785	9,000	10,774	12,588	16,563	15,186	11,156	11,973	12,044	14,853	10,534	10,042
90% Exceedance	6,653	7,478	9,404	10,966	12,964	12,343	9,812	9,608	9,030	10,754	8,716	8,743
Full Simulation Period Average[a]	11,736	14,202	22,847	29,877	36,180	32,637	23,962	21,294	17,132	18,142	15,117	15,330
Wet Water Years (30%)	14,270	19,297	38,811	49,821	59,065	51,555	41,597	34,912	25,754	19,787	17,598	20,634
Above Normal Water Years (11%)	10,670	12,925	19,235	40,984	45,400	44,313	27,158	24,269	18,566	20,997	18,433	20,316
Below Normal Water Years (21%)	11,860	13,873	16,831	22,598	28,875	26,872	18,995	18,173	14,285	20,660	16,998	14,696
Dry Water Years (22%)	11,321	12,194	16,274	15,926	21,848	20,485	13,338	13,282	13,083	17,506	12,981	11,022
Critical Water Years (16%)	8,125	8,723	12,331	13,583	16,228	13,412	9,825	8,826	9,281	10,667	8,654	8,713

Table 4F-3-1-1c. Sacramento River Flow at Freeport, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-152	-923	951	282	-18	-50	-35	-15	-649	-462	-380	1,235
20% Exceedance	211	477	711	-191	953	9	858	1,214	-30	-558	-314	815
30% Exceedance	88	37	-23	697	-113	-498	1,031	313	-18	-13	-391	715
40% Exceedance	136	-7	141	880	973	130	599	805	-116	-366	-532	667
50% Exceedance	-477	-71	336	174	416	117	671	823	-147	-332	-148	155
60% Exceedance	-180	-14	28	-10	105	33	1,221	1,149	-104	-433	-199	-619
70% Exceedance	394	-23	-17	104	360	-6	925	1,225	-40	-440	-416	54
80% Exceedance	385	-82	364	184	405	288	377	1,189	605	-322	-1,068	111
90% Exceedance	36	142	82	22	-263	72	361	757	-1,057	-419	-182	-148
Full Simulation Period Average[a]	24	89	193	177	241	33	554	708	30	-325	-373	341
Wet Water Years (30%)	61	175	478	189	168	-83	50	166	50	-41	-45	879
Above Normal Water Years (11%)	-106	34	172	299	981	-78	894	1,237	92	-174	-552	1,203
Below Normal Water Years (21%)	-50	65	205	303	175	25	1,378	1,149	371	-446	-477	-328
Dry Water Years (22%)	44	135	22	68	-210	297	664	1,213	-21	-702	-695	116
Critical Water Years (16%)	114	-63	-111	54	577	-29	34	91	-425	-281	-289	-72

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-1-2a. Sacramento River Flow at Freeport, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	15,836	22,456	50,214	62,194	69,277	65,843	52,801	43,765	28,055	22,868	19,017	20,490
20% Exceedance	14,437	15,164	33,046	51,801	60,195	52,978	36,838	33,365	22,001	22,161	18,411	19,874
30% Exceedance	13,720	14,235	24,010	33,898	49,108	41,592	25,288	22,681	16,255	20,603	18,072	18,439
40% Exceedance	13,073	13,723	18,057	26,550	36,508	32,477	20,069	16,947	14,089	19,946	17,555	16,690
50% Exceedance	11,780	13,122	15,189	21,734	27,577	24,024	16,406	15,383	13,659	19,273	16,744	15,582
60% Exceedance	9,956	11,536	14,470	19,403	21,753	21,550	12,544	12,900	13,244	18,546	15,851	13,492
70% Exceedance	8,559	10,320	12,759	14,574	18,511	18,662	11,262	11,427	12,731	17,072	14,263	11,058
80% Exceedance	7,400	9,082	10,410	12,404	16,158	14,899	10,779	10,784	11,439	15,175	11,602	9,932
90% Exceedance	6,617	7,335	9,322	10,943	13,228	12,271	9,452	8,851	10,087	11,173	8,898	8,891
Full Simulation Period Average[a]	11,712	14,113	22,654	29,700	35,939	32,604	23,408	20,585	17,102	18,467	15,490	14,989
Wet Water Years (30%)	14,209	19,122	38,333	49,632	58,897	51,638	41,547	34,746	25,705	19,828	17,643	19,755
Above Normal Water Years (11%)	10,776	12,892	19,063	40,685	44,419	44,391	26,264	23,033	18,474	21,171	18,985	19,113
Below Normal Water Years (21%)	11,909	13,808	16,626	22,295	28,700	26,846	17,617	17,024	13,914	21,106	17,475	15,024
Dry Water Years (22%)	11,277	12,059	16,252	15,858	22,058	20,188	12,675	12,069	13,104	18,208	13,676	10,906
Critical Water Years (16%)	8,011	8,786	12,441	13,529	15,650	13,441	9,792	8,735	9,706	10,948	8,943	8,786

Table 4F-3-1-2b. Sacramento River Flow at Freeport, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	15,691	22,029	51,180	62,469	69,265	65,801	52,772	43,759	27,367	22,407	18,680	21,760
20% Exceedance	14,646	15,642	33,762	52,353	61,402	53,004	37,956	34,580	21,973	21,581	18,073	20,703
30% Exceedance	13,894	14,348	23,995	34,839	48,997	41,103	26,315	23,022	16,249	20,589	17,682	19,151
40% Exceedance	13,358	13,718	18,222	27,444	37,876	32,608	20,550	17,818	13,974	19,617	17,083	17,517
50% Exceedance	11,756	13,055	15,528	21,909	28,006	24,156	17,078	16,207	13,483	18,944	16,601	15,844
60% Exceedance	9,923	11,527	14,500	19,393	21,863	21,585	13,763	14,487	13,115	18,103	15,664	12,870
70% Exceedance	9,083	10,417	12,729	14,683	18,876	18,657	12,189	12,773	12,612	16,664	13,942	11,086
80% Exceedance	8,151	8,984	10,522	12,593	16,657	14,730	10,864	11,979	12,045	15,023	10,635	10,044
90% Exceedance	6,871	7,504	9,405	10,966	12,987	11,138	9,403	9,628	9,385	10,385	8,731	8,769
Full Simulation Period Average[a]	11,884	14,266	22,834	29,919	36,227	32,548	23,756	21,327	17,078	18,025	15,079	15,341
Wet Water Years (30%)	14,300	19,334	38,801	49,832	59,074	51,559	41,604	34,919	25,760	19,786	17,604	20,640
Above Normal Water Years (11%)	10,706	13,020	19,247	41,168	45,466	44,322	27,160	24,289	18,636	21,037	18,436	20,312
Below Normal Water Years (21%)	12,051	13,950	16,797	22,645	28,987	26,902	19,021	18,199	14,290	20,687	17,014	14,821
Dry Water Years (22%)	11,338	12,216	16,298	15,950	21,892	20,455	13,393	13,302	13,075	17,523	13,059	11,060
Critical Water Years (16%)	8,694	8,853	12,275	13,602	16,248	12,844	8,415	8,943	8,893	9,849	8,273	8,557

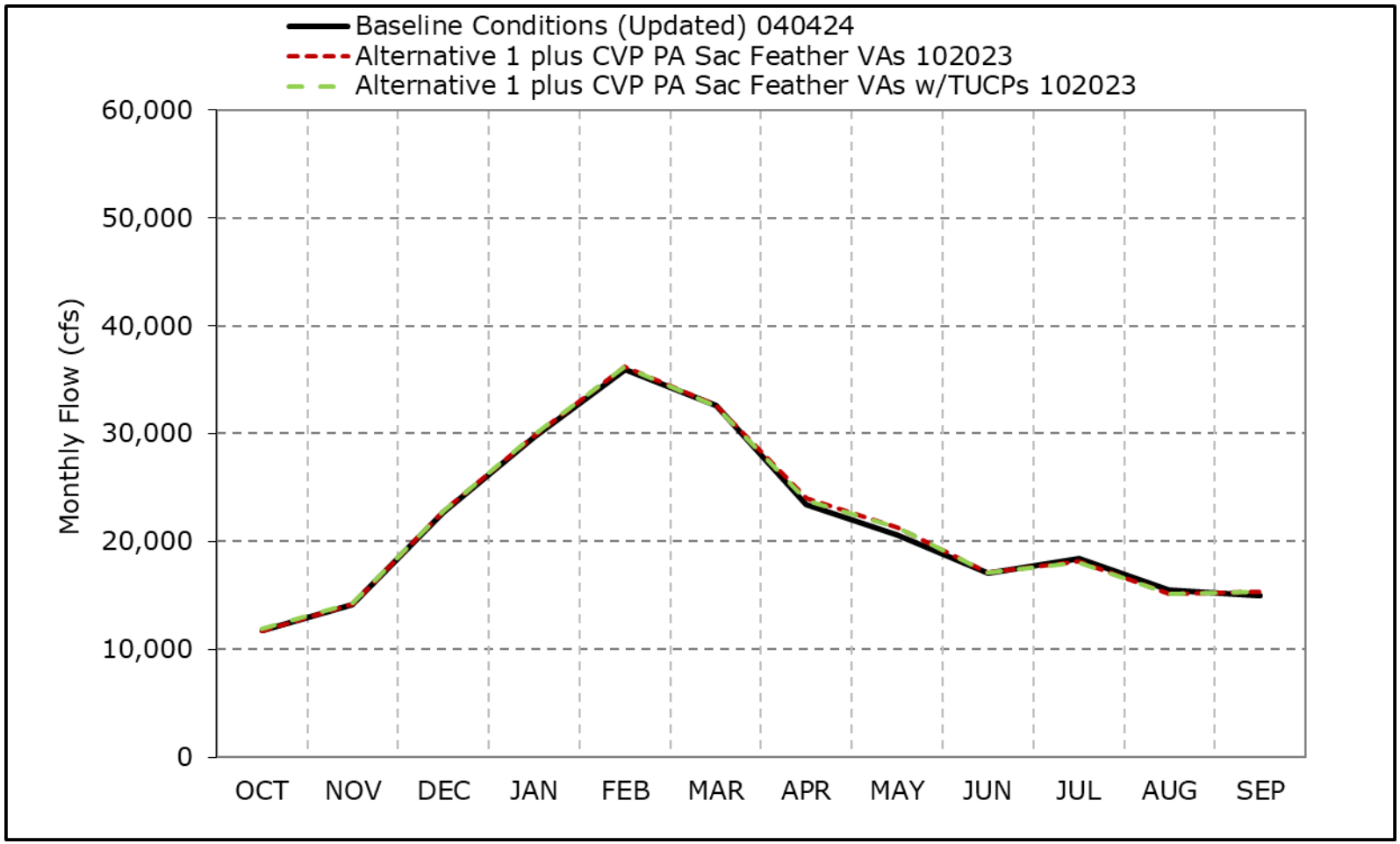
Table 4F-3-1-2c. Sacramento River Flow at Freeport, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-145	-427	966	275	-12	-42	-29	-5	-687	-461	-337	1,270
20% Exceedance	209	478	716	551	1,207	25	1,119	1,215	-28	-580	-338	829
30% Exceedance	173	113	-15	941	-111	-489	1,027	341	-5	-14	-389	712
40% Exceedance	286	-5	165	894	1,368	131	481	870	-115	-329	-472	827
50% Exceedance	-24	-67	338	176	429	132	673	824	-176	-329	-143	262
60% Exceedance	-33	-9	30	-9	110	35	1,219	1,587	-130	-443	-188	-622
70% Exceedance	524	97	-31	109	365	-5	927	1,346	-119	-407	-321	29
80% Exceedance	751	-99	112	188	499	-169	85	1,195	606	-151	-966	113
90% Exceedance	254	169	83	23	-241	-1,133	-49	777	-702	-787	-168	-122
Full Simulation Period Average[a]	172	153	180	218	288	-56	348	741	-23	-442	-412	352
Wet Water Years (30%)	90	212	468	200	177	-79	56	173	55	-42	-39	885
Above Normal Water Years (11%)	-70	128	184	482	1,048	-69	896	1,256	162	-134	-548	1,199
Below Normal Water Years (21%)	142	142	170	350	287	55	1,403	1,175	376	-419	-461	-204
Dry Water Years (22%)	61	157	46	92	-166	267	718	1,232	-29	-685	-617	154
Critical Water Years (16%)	683	67	-167	73	598	-597	-1,376	208	-813	-1,099	-669	-228

[a] Based on the 100-year simulation period.

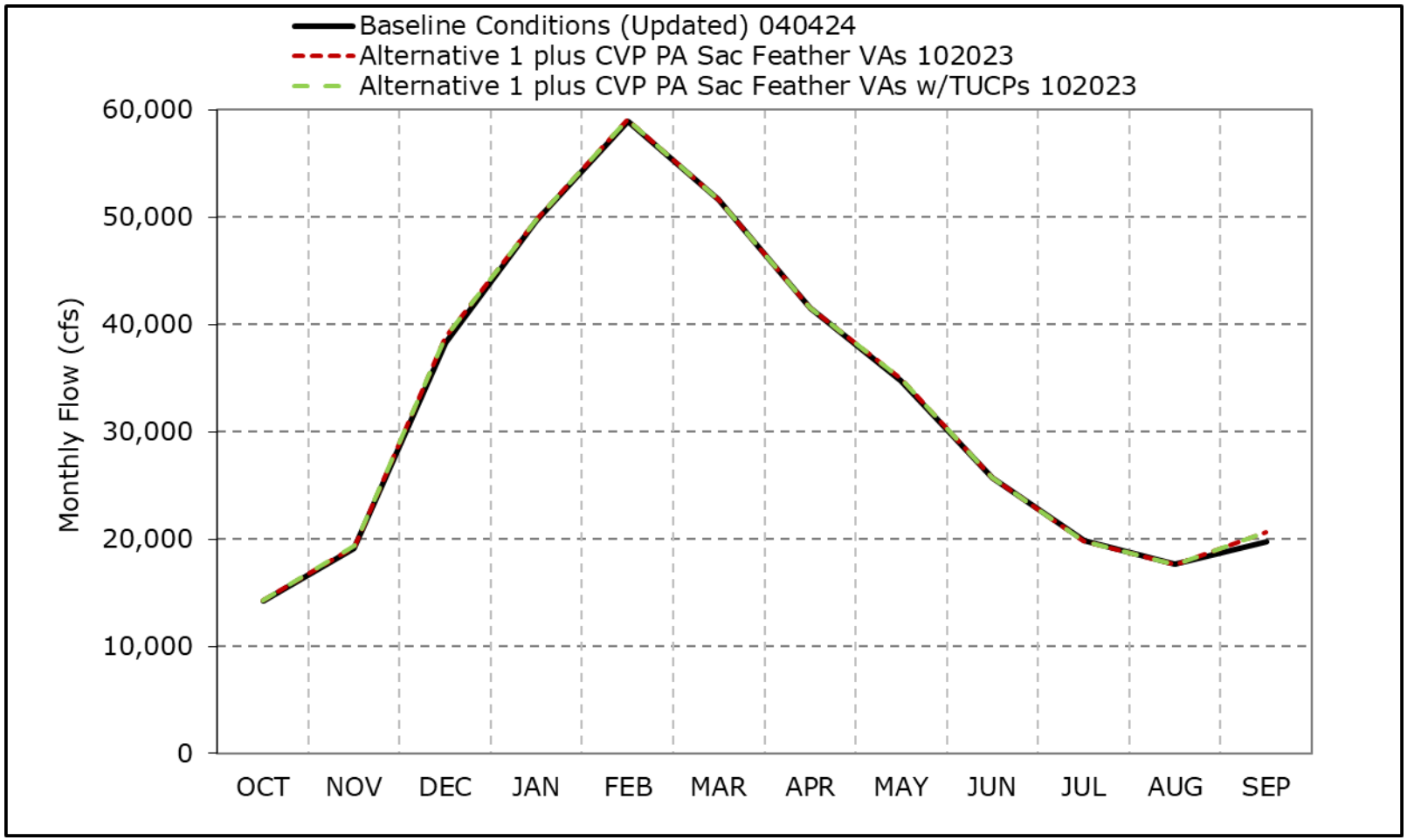
* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-1a. Sacramento River Flow at Freeport, Long-Term Average Flow



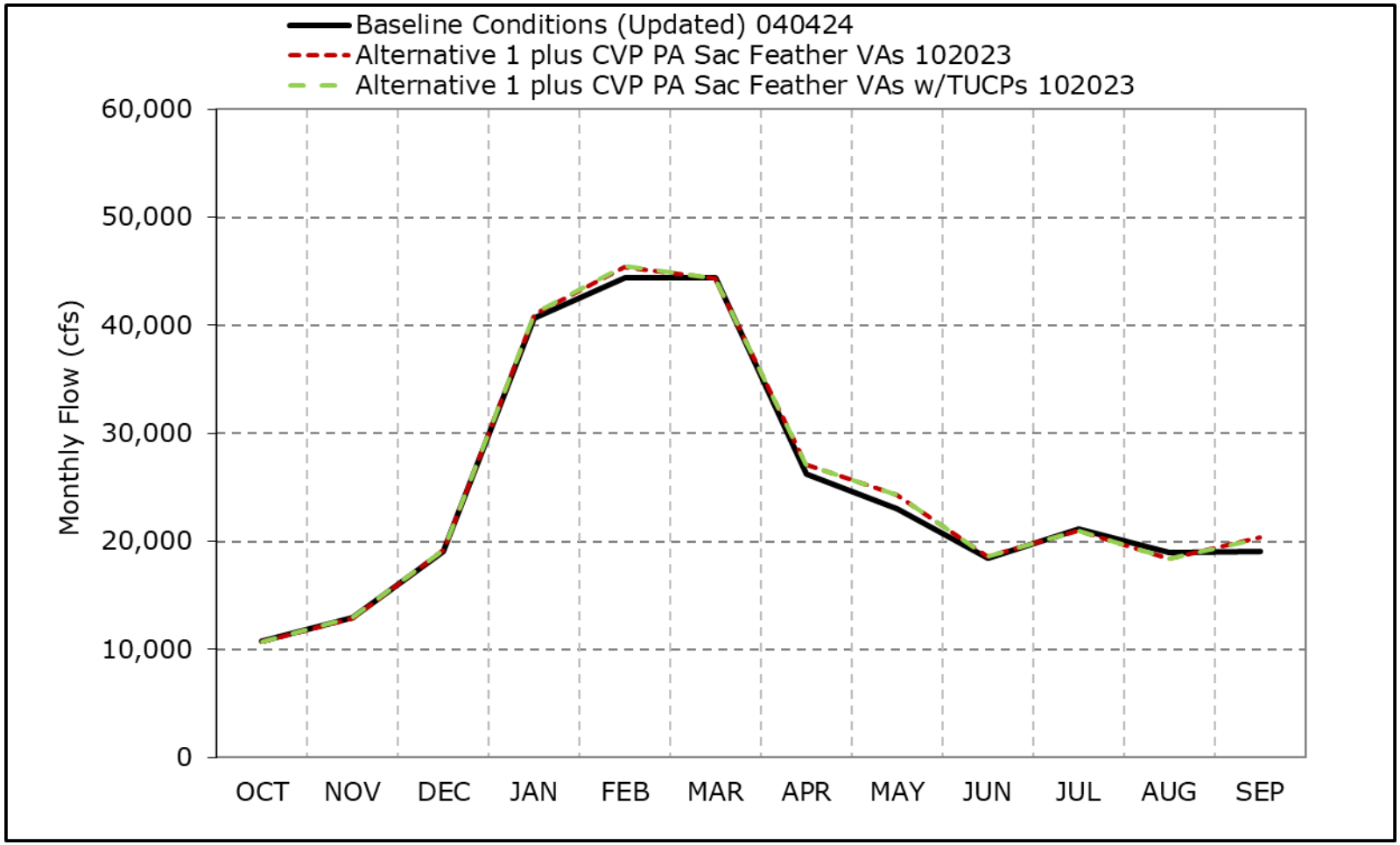
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1b. Sacramento River Flow at Freeport, Wet Year Average Flow



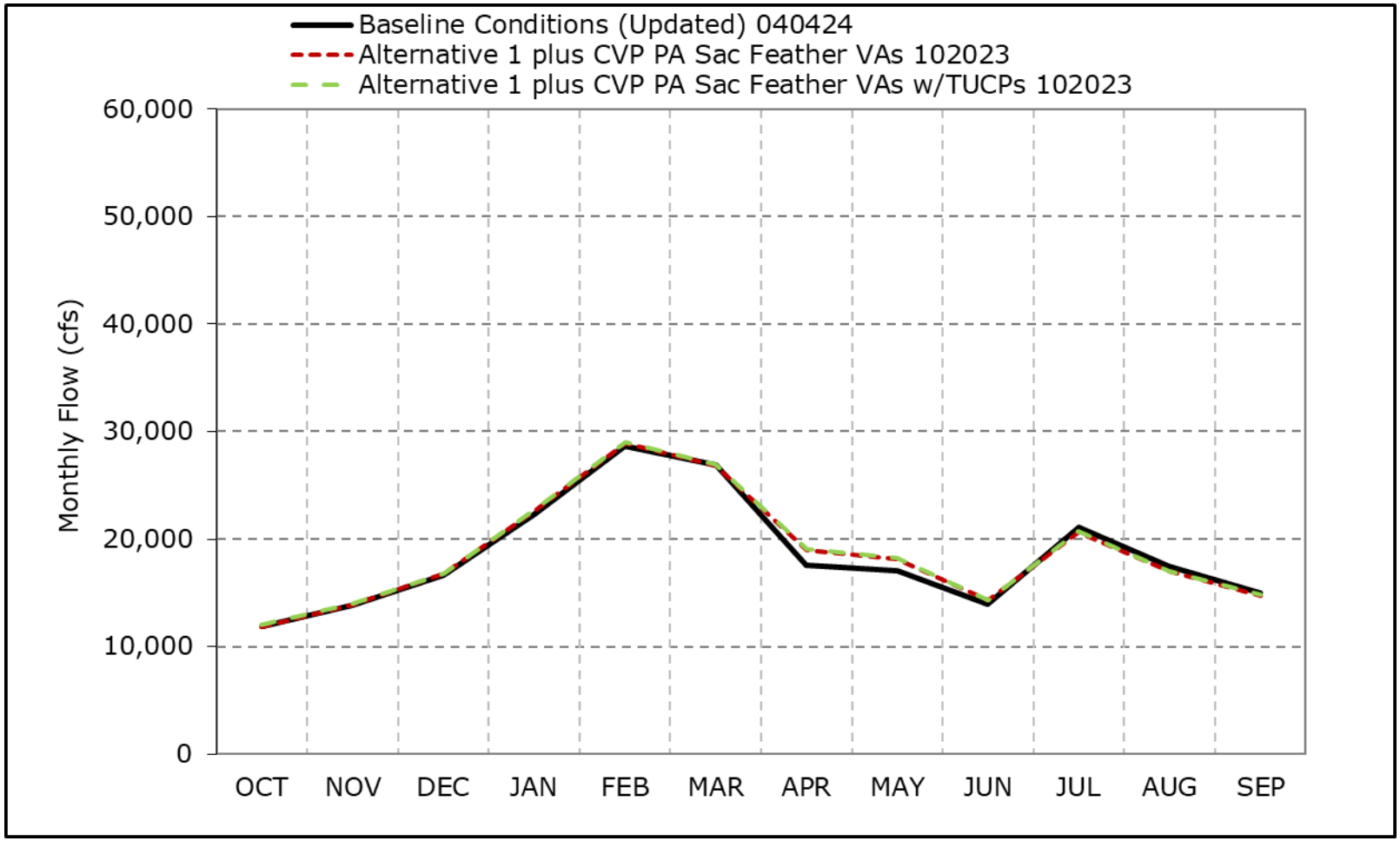
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1c. Sacramento River Flow at Freeport, Above Normal Year Average Flow



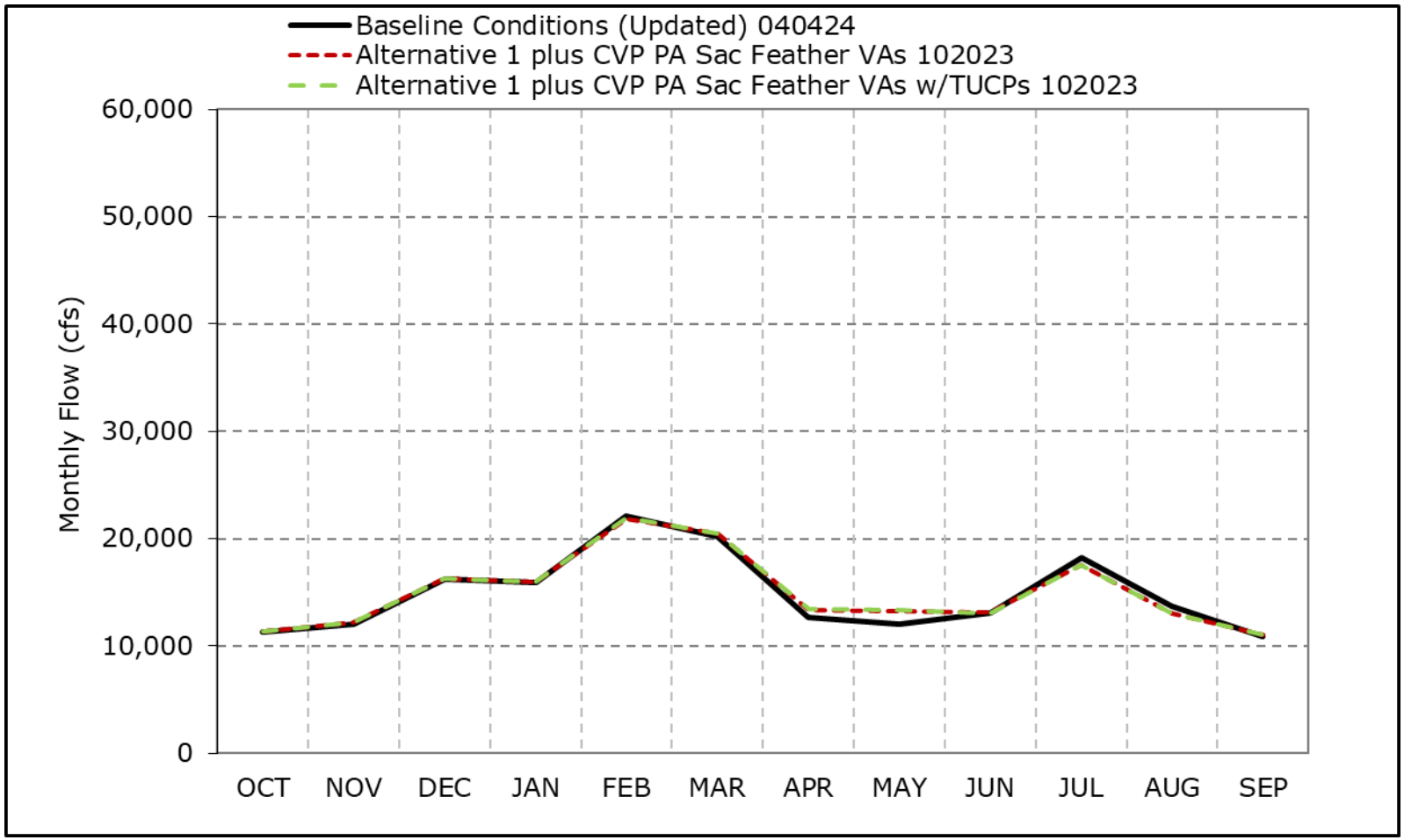
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1d. Sacramento River Flow at Freeport, Below Normal Year Average Flow



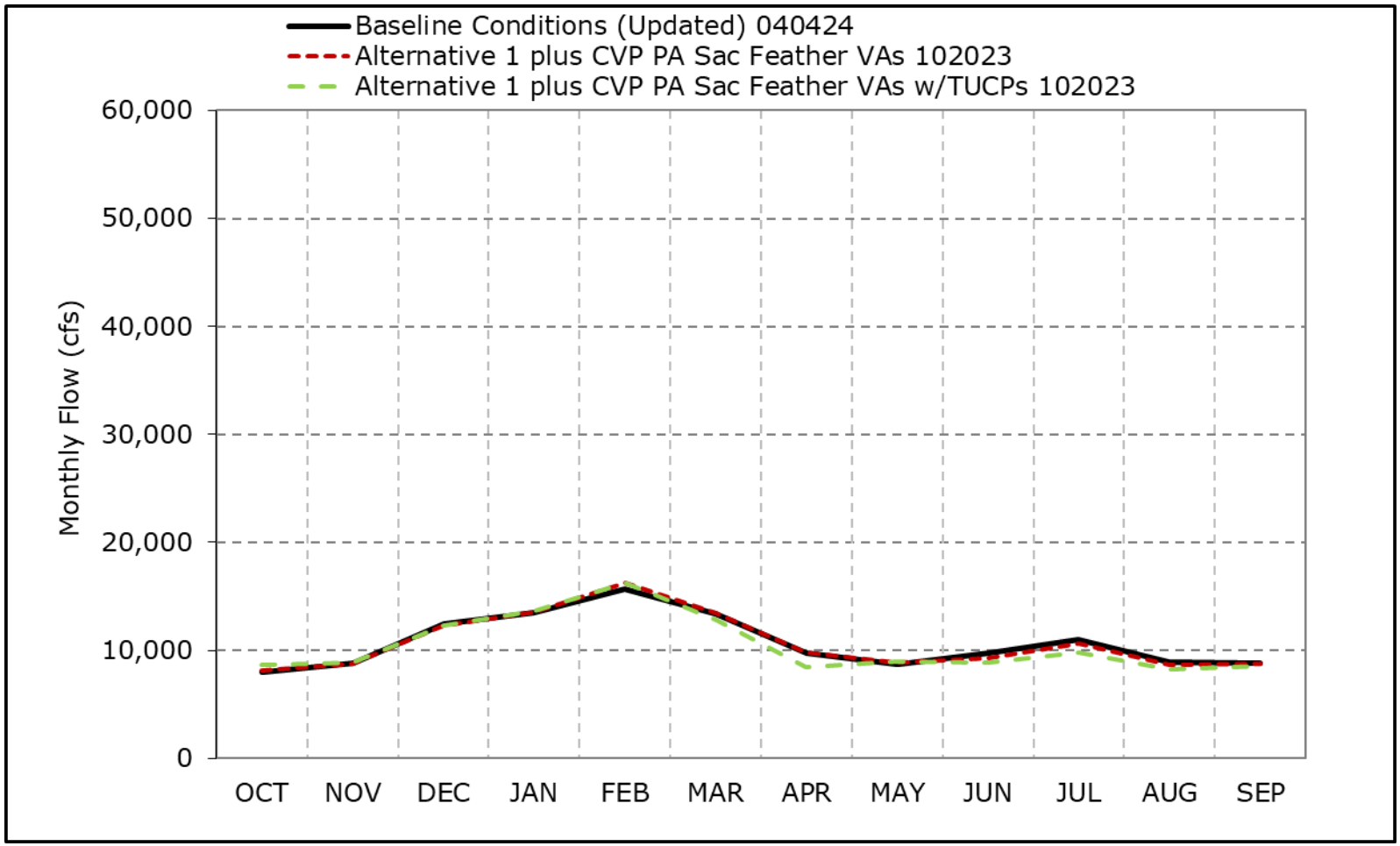
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1e. Sacramento River Flow at Freeport, Dry Year Average Flow



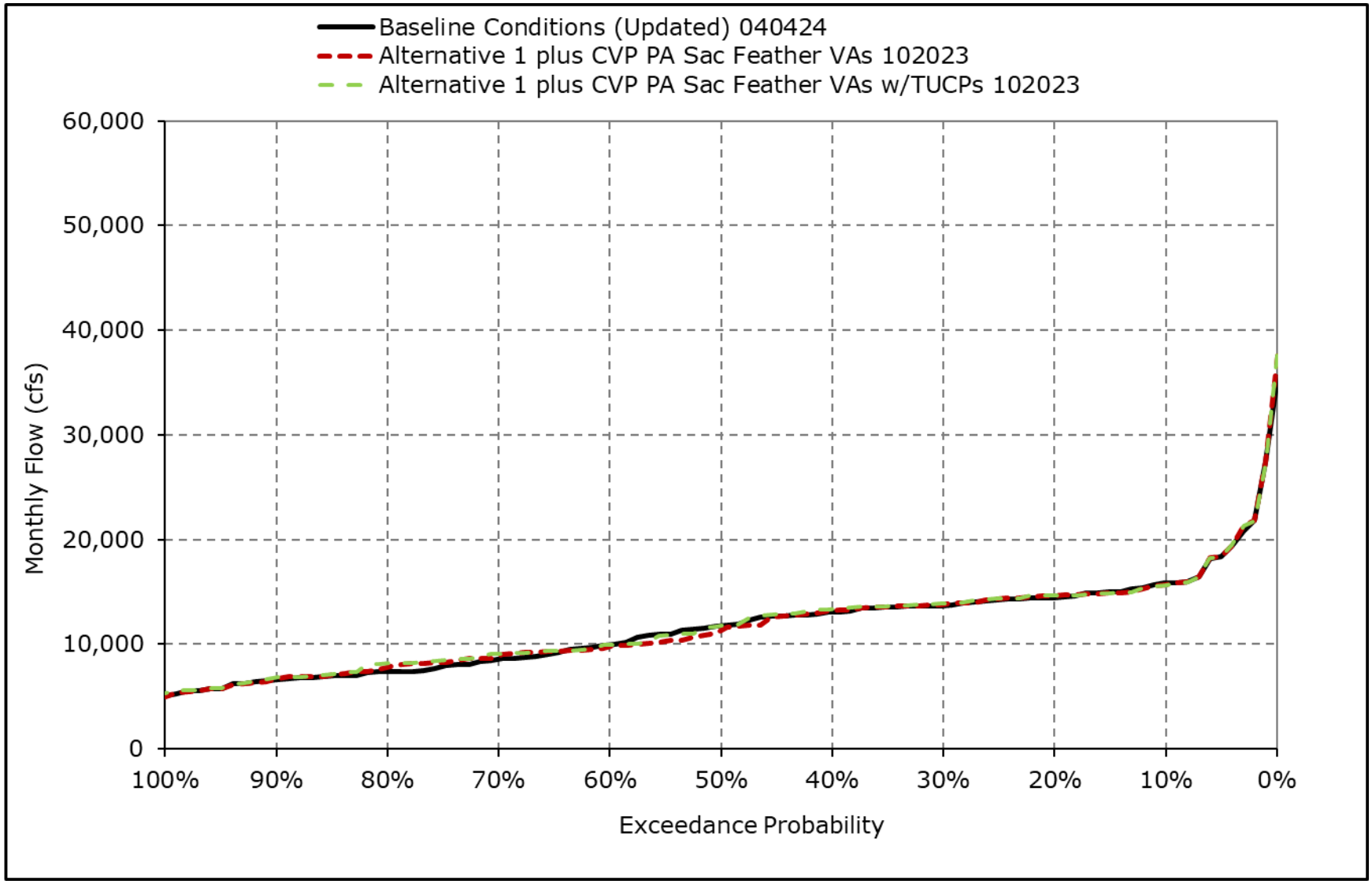
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1f. Sacramento River Flow at Freeport, Critical Year Average Flow



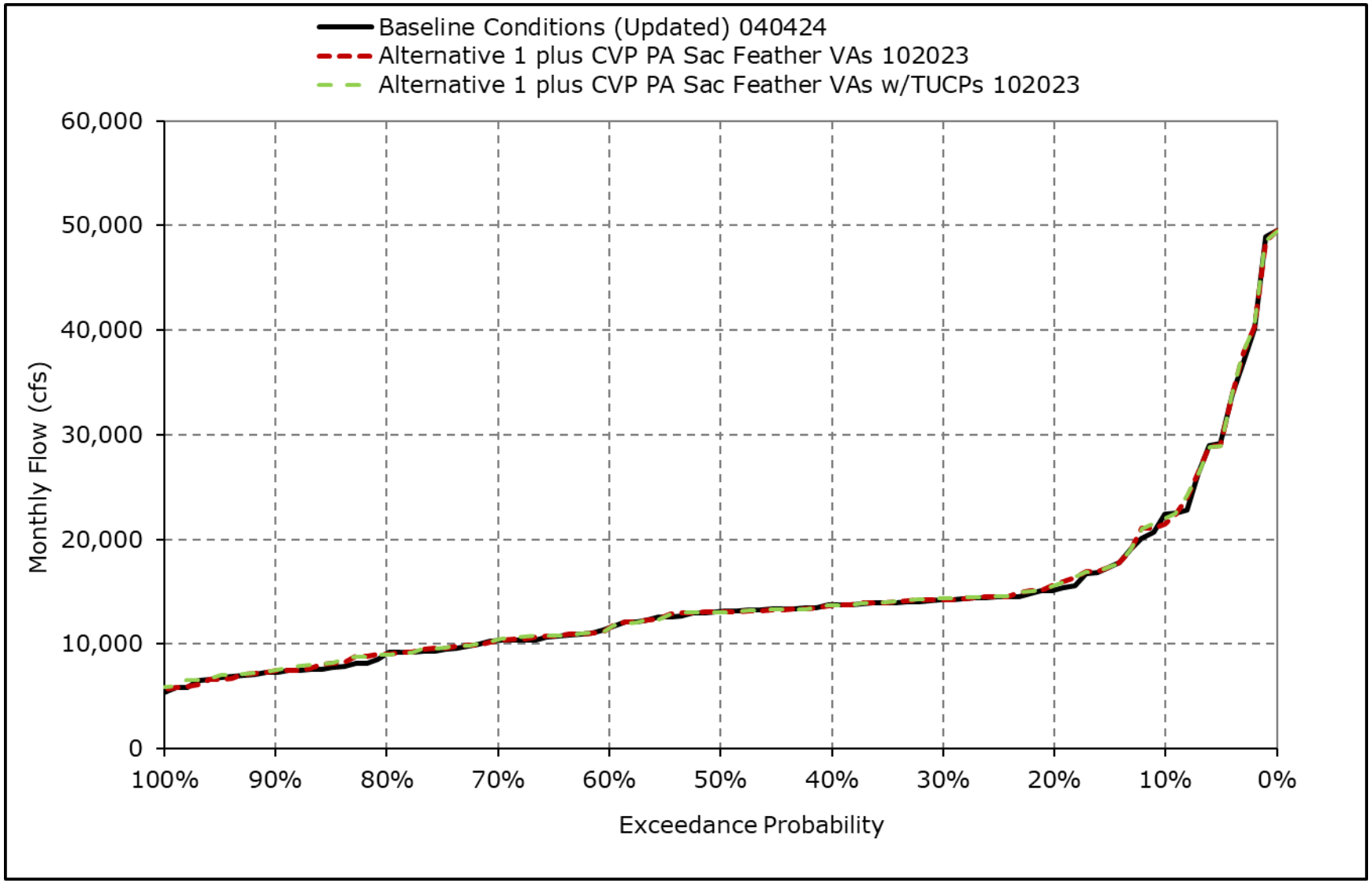
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1g. Sacramento River Flow at Freeport, October



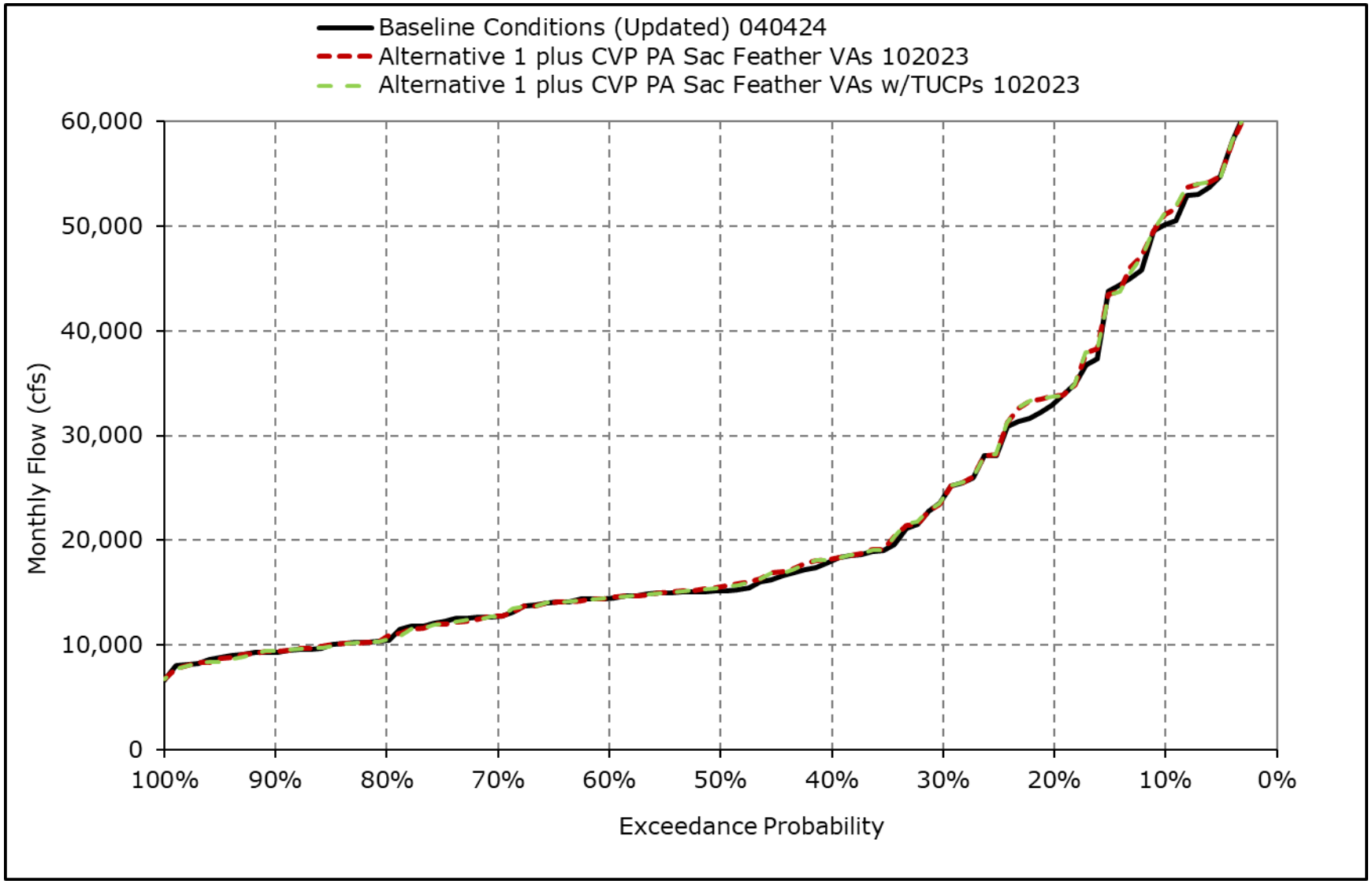
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1h. Sacramento River Flow at Freeport, November



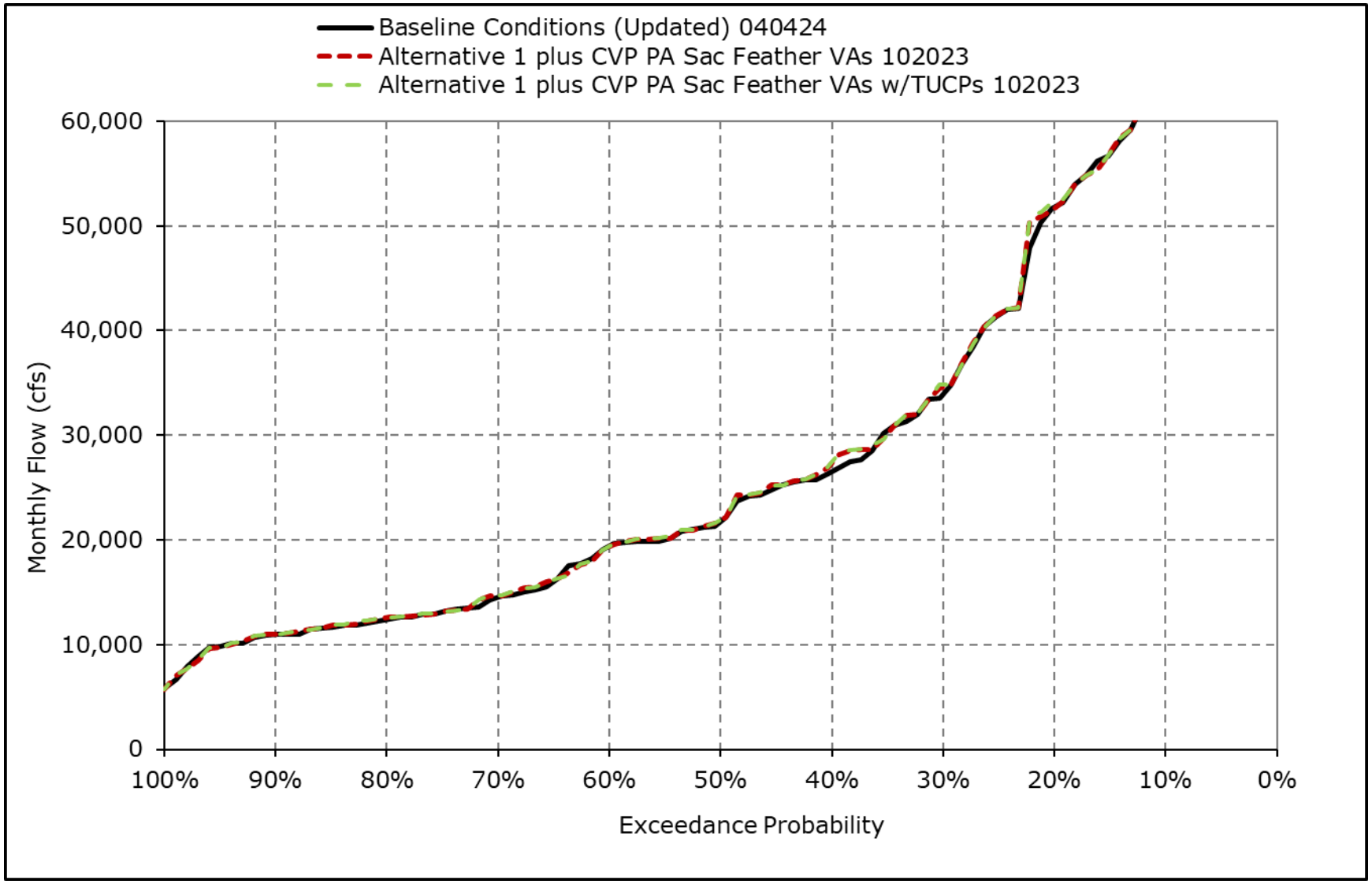
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1i. Sacramento River Flow at Freeport, December



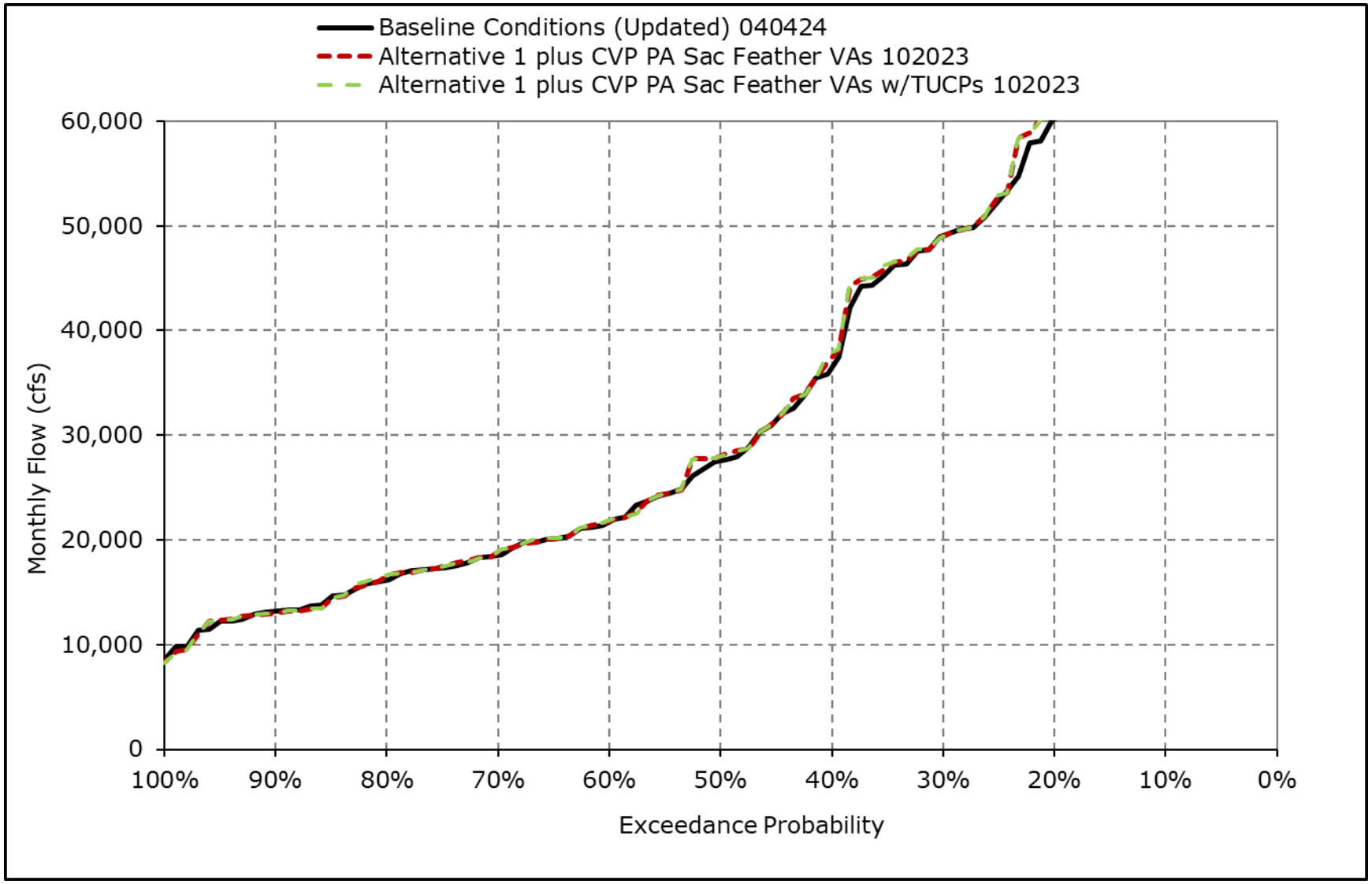
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1j. Sacramento River Flow at Freeport, January



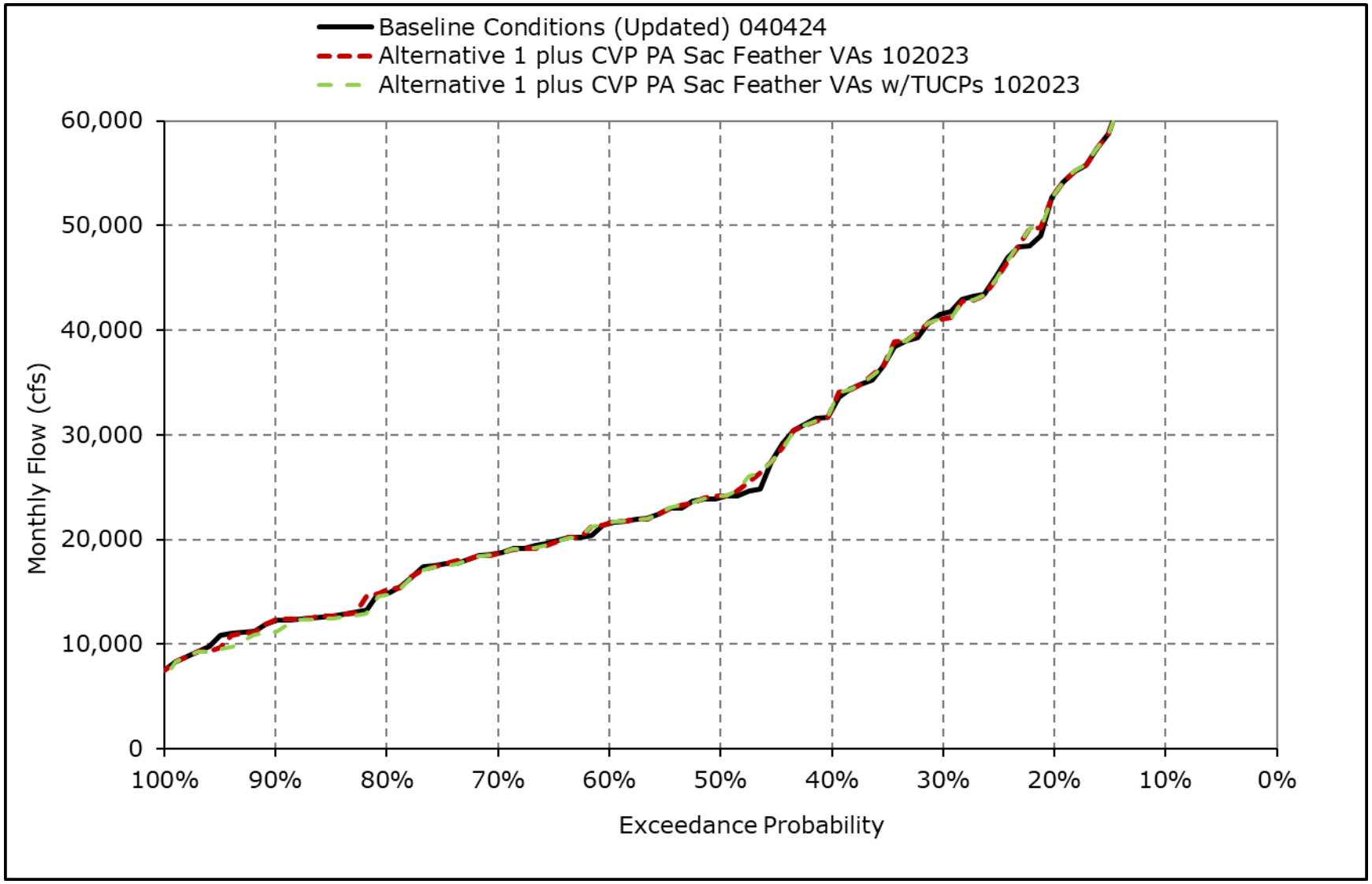
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1k. Sacramento River Flow at Freeport, February



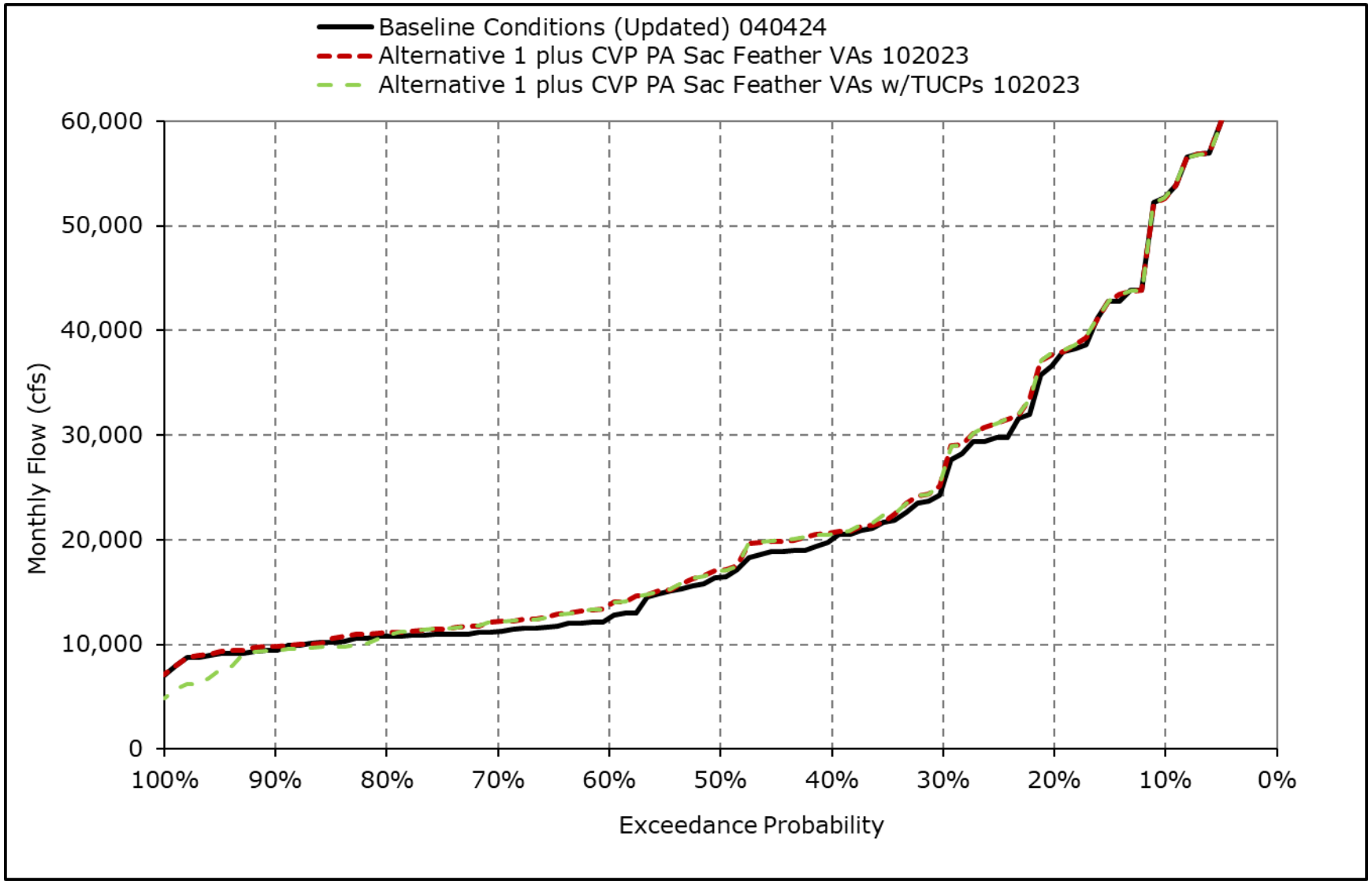
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1l. Sacramento River Flow at Freeport, March



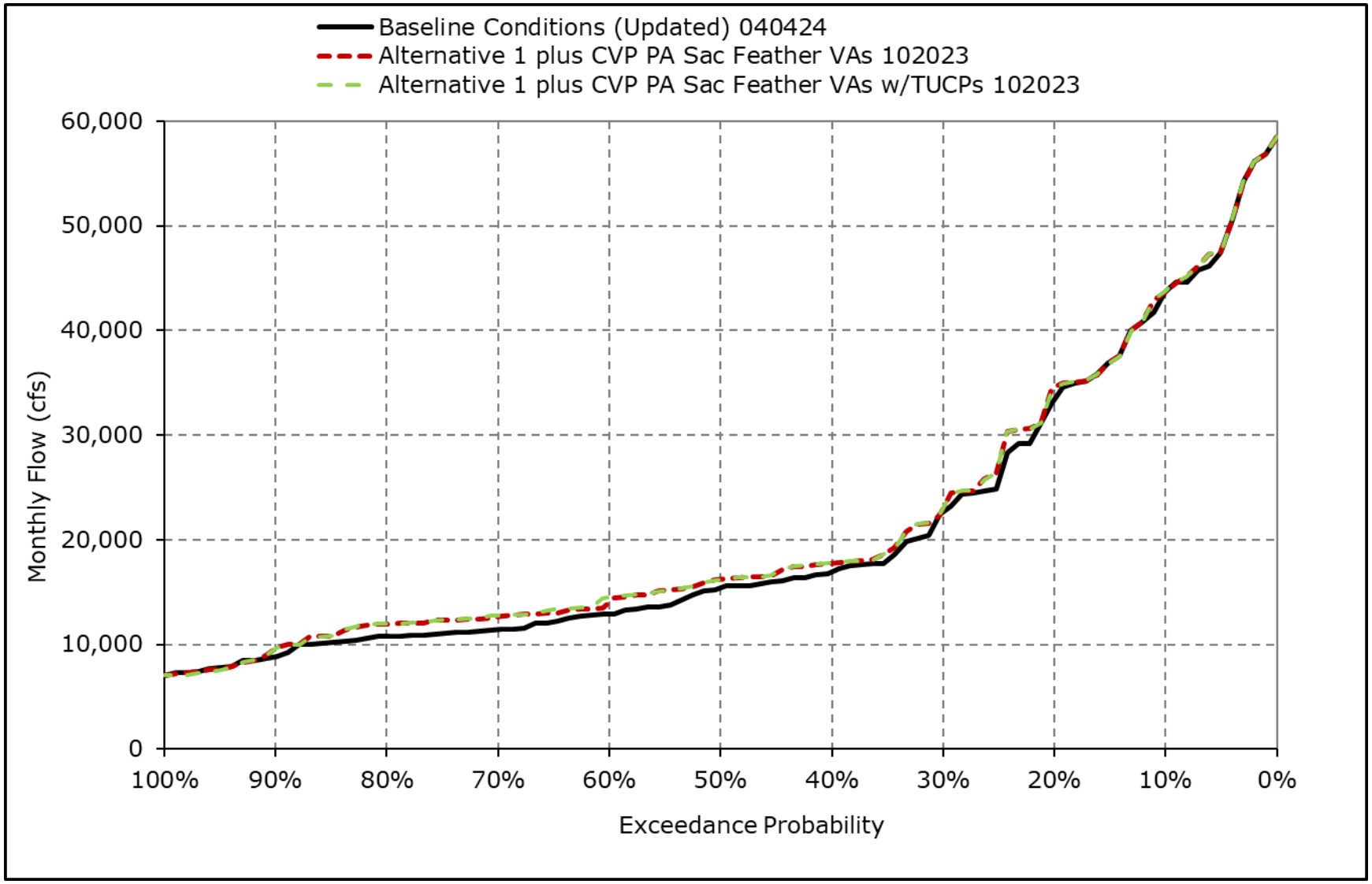
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1m. Sacramento River Flow at Freeport, April



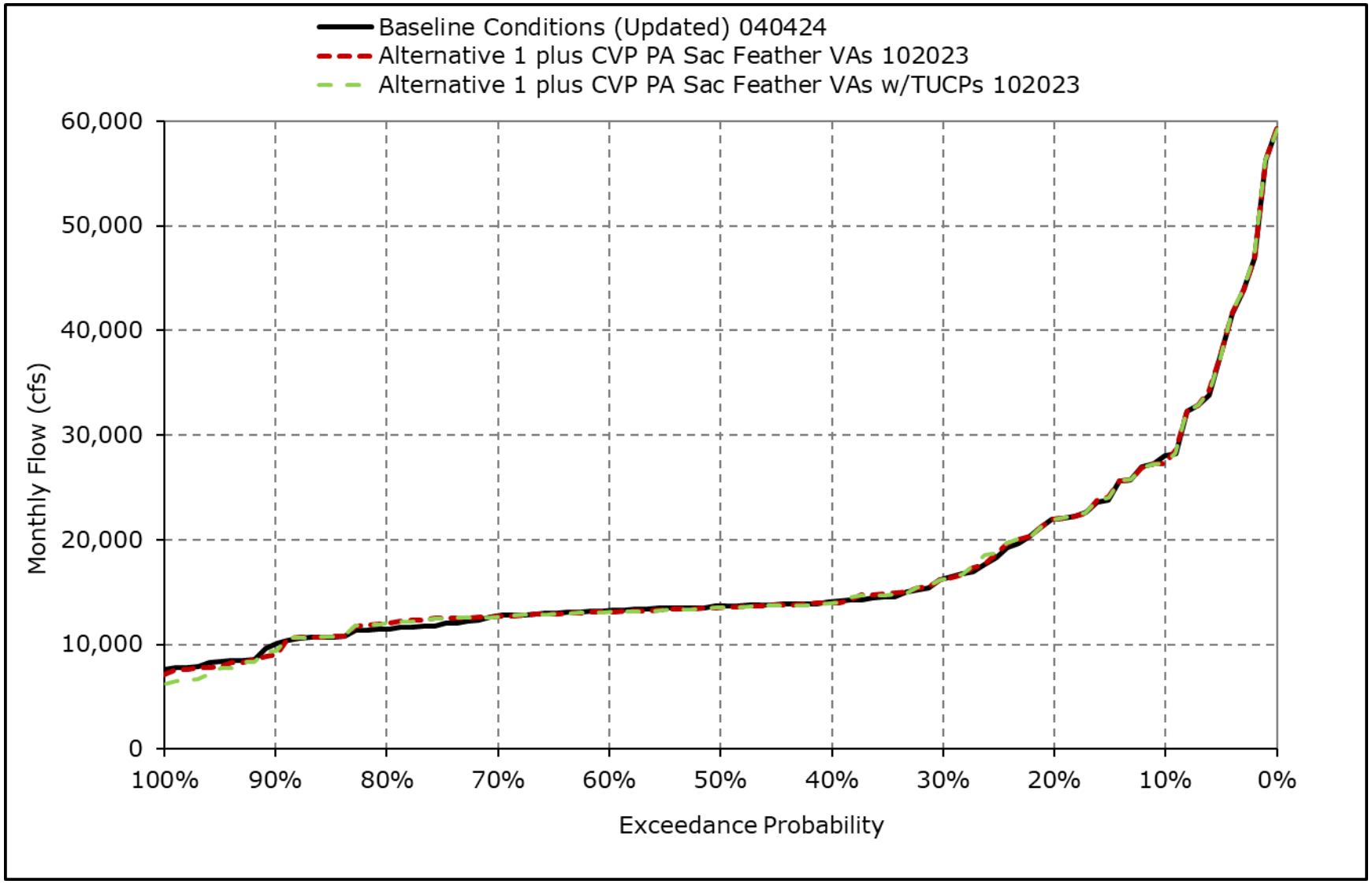
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1n. Sacramento River Flow at Freeport, May



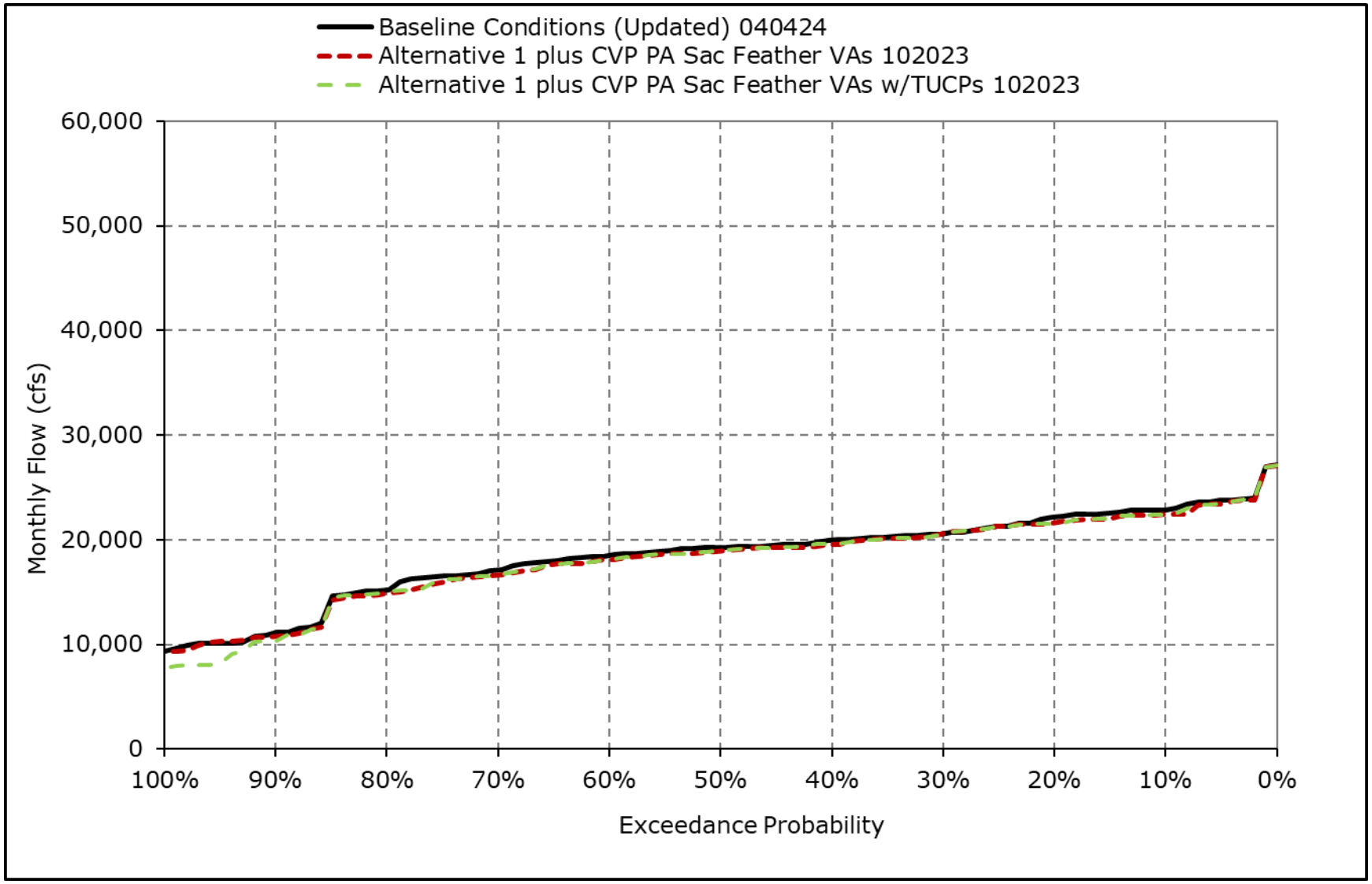
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1o. Sacramento River Flow at Freeport, June



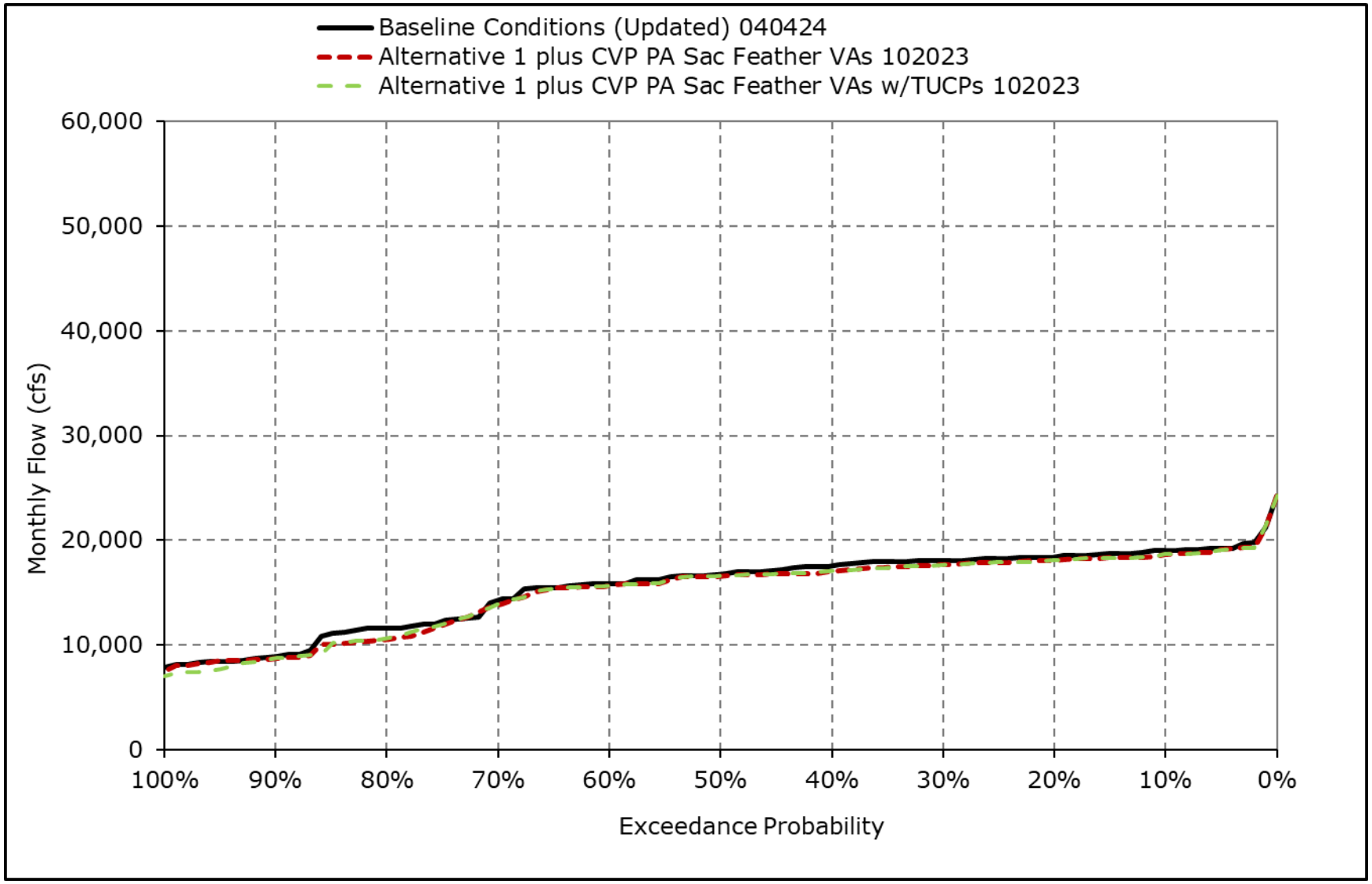
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1p. Sacramento River Flow at Freeport, July



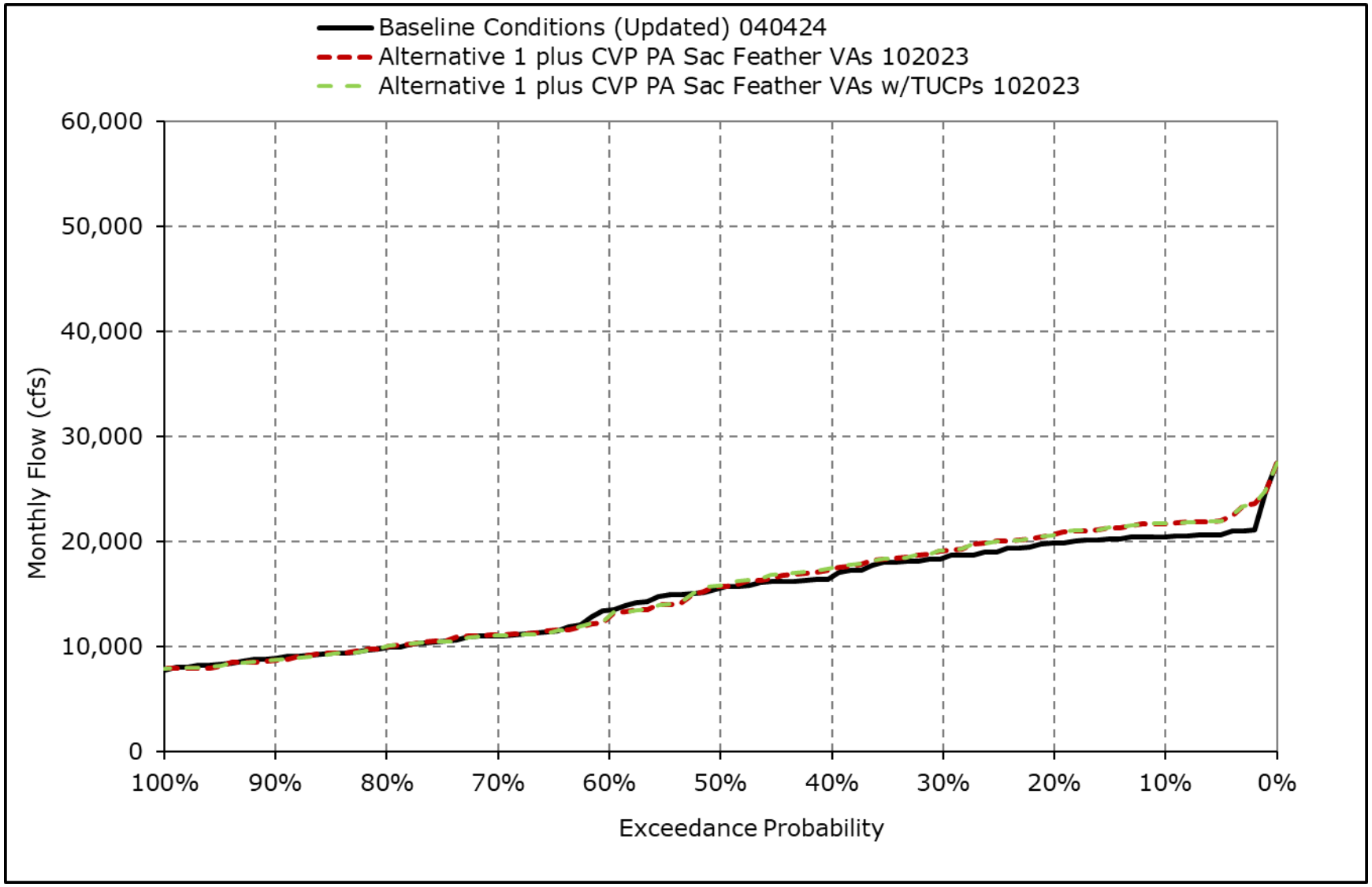
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1q. Sacramento River Flow at Freeport, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-1r. Sacramento River Flow at Freeport, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-2-1a. Georgiana Slough Flow, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,210	4,140	8,076	9,786	10,792	10,292	8,440	7,161	4,933	4,197	3,654	3,865
20% Exceedance	3,011	3,109	5,660	8,322	9,499	8,472	6,190	5,684	4,075	4,097	3,566	3,779
30% Exceedance	2,910	2,972	4,367	5,771	7,945	6,858	4,547	4,174	3,262	3,875	3,521	3,575
40% Exceedance	2,818	2,898	3,526	4,737	6,153	5,571	3,808	3,362	2,955	3,782	3,448	3,328
50% Exceedance	2,635	2,816	3,118	4,057	4,887	4,377	3,287	3,140	2,894	3,688	3,333	3,170
60% Exceedance	2,378	2,599	3,006	3,711	4,062	4,023	2,741	2,788	2,834	3,585	3,207	2,876
70% Exceedance	2,180	2,418	2,771	3,026	3,603	3,612	2,560	2,580	2,762	3,376	2,981	2,532
80% Exceedance	2,015	2,245	2,431	2,724	3,269	3,080	2,493	2,489	2,579	3,108	2,604	2,371
90% Exceedance	1,905	1,993	2,285	2,505	2,845	2,713	2,304	2,218	2,387	2,542	2,223	2,223
Full Simulation Period Average[a]	2,626	2,959	4,175	5,174	6,069	5,590	4,281	3,877	3,381	3,574	3,155	3,087
Wet Water Years (30%)	2,981	3,671	6,398	8,001	9,321	8,286	6,850	5,881	4,599	3,766	3,460	3,761
Above Normal Water Years (11%)	2,494	2,786	3,667	6,735	7,272	7,259	4,685	4,223	3,575	3,956	3,650	3,671
Below Normal Water Years (21%)	2,655	2,916	3,319	4,124	5,044	4,775	3,461	3,373	2,930	3,947	3,436	3,092
Dry Water Years (22%)	2,564	2,667	3,267	3,210	4,103	3,832	2,761	2,672	2,815	3,537	2,898	2,509
Critical Water Years (16%)	2,102	2,202	2,727	2,880	3,195	2,876	2,352	2,200	2,335	2,509	2,228	2,209

Table 4F-3-2-1b. Georgiana Slough Flow, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,189	4,009	8,221	9,820	10,790	10,285	8,435	7,159	4,840	4,132	3,599	4,040
20% Exceedance	3,044	3,176	5,754	8,295	9,645	8,473	6,309	5,856	4,071	4,019	3,523	3,894
30% Exceedance	2,923	2,977	4,363	5,870	7,923	6,789	4,693	4,217	3,259	3,875	3,466	3,676
40% Exceedance	2,837	2,897	3,548	4,857	6,291	5,592	3,899	3,475	2,938	3,731	3,371	3,422
50% Exceedance	2,570	2,811	3,163	4,076	4,949	4,395	3,384	3,257	2,873	3,641	3,312	3,196
60% Exceedance	2,352	2,596	3,008	3,709	4,072	4,027	2,914	2,951	2,820	3,524	3,178	2,787
70% Exceedance	2,237	2,420	2,772	3,041	3,648	3,611	2,690	2,753	2,757	3,314	2,923	2,539
80% Exceedance	2,072	2,230	2,489	2,743	3,321	3,121	2,549	2,657	2,666	3,062	2,455	2,385
90% Exceedance	1,911	2,018	2,295	2,516	2,811	2,719	2,356	2,325	2,238	2,484	2,196	2,202
Full Simulation Period Average[a]	2,630	2,972	4,202	5,199	6,103	5,595	4,359	3,977	3,385	3,528	3,102	3,135
Wet Water Years (30%)	2,989	3,696	6,466	8,028	9,344	8,274	6,857	5,905	4,606	3,761	3,454	3,886
Above Normal Water Years (11%)	2,479	2,791	3,692	6,777	7,411	7,248	4,811	4,398	3,588	3,932	3,572	3,841
Below Normal Water Years (21%)	2,647	2,925	3,348	4,167	5,069	4,779	3,656	3,536	2,982	3,884	3,368	3,046
Dry Water Years (22%)	2,571	2,686	3,270	3,219	4,073	3,874	2,855	2,843	2,812	3,438	2,800	2,526
Critical Water Years (16%)	2,118	2,193	2,711	2,888	3,277	2,872	2,357	2,213	2,274	2,470	2,187	2,198

Table 4F-3-2-1c. Georgiana Slough Flow, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-21	-131	146	33	-3	-7	-5	-2	-93	-65	-55	175
20% Exceedance	32	67	94	-27	146	1	120	172	-4	-78	-43	115
30% Exceedance	13	5	-3	99	-22	-68	146	43	-3	-1	-55	101
40% Exceedance	20	-1	23	120	138	21	92	113	-17	-51	-77	93
50% Exceedance	-65	-5	45	19	62	18	97	117	-21	-46	-20	26
60% Exceedance	-26	-3	2	-1	10	5	172	163	-15	-62	-28	-89
70% Exceedance	57	2	1	15	45	-1	130	173	-5	-62	-58	7
80% Exceedance	57	-15	58	18	52	41	56	168	86	-46	-149	14
90% Exceedance	6	25	11	11	-35	6	52	107	-149	-58	-27	-21
Full Simulation Period Average[a]	3	13	27	25	34	5	78	100	4	-46	-53	48
Wet Water Years (30%)	9	25	68	27	24	-12	7	23	7	-6	-6	124
Above Normal Water Years (11%)	-15	5	24	42	139	-11	127	175	13	-25	-78	170
Below Normal Water Years (21%)	-7	9	29	43	25	4	195	163	52	-63	-67	-46
Dry Water Years (22%)	6	19	3	10	-30	42	94	172	-3	-99	-98	16
Critical Water Years (16%)	16	-9	-16	8	82	-4	5	13	-60	-40	-41	-10

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-2-2a. Georgiana Slough Flow, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,210	4,140	8,076	9,786	10,792	10,292	8,440	7,161	4,933	4,197	3,654	3,865
20% Exceedance	3,011	3,109	5,660	8,322	9,499	8,472	6,190	5,684	4,075	4,097	3,566	3,779
30% Exceedance	2,910	2,972	4,367	5,771	7,945	6,858	4,547	4,174	3,262	3,875	3,521	3,575
40% Exceedance	2,818	2,898	3,526	4,737	6,153	5,571	3,808	3,362	2,955	3,782	3,448	3,328
50% Exceedance	2,635	2,816	3,118	4,057	4,887	4,377	3,287	3,140	2,894	3,688	3,333	3,170
60% Exceedance	2,378	2,599	3,006	3,711	4,062	4,023	2,741	2,788	2,834	3,585	3,207	2,876
70% Exceedance	2,180	2,418	2,771	3,026	3,603	3,612	2,560	2,580	2,762	3,376	2,981	2,532
80% Exceedance	2,015	2,245	2,431	2,724	3,269	3,080	2,493	2,489	2,579	3,108	2,604	2,371
90% Exceedance	1,905	1,993	2,285	2,505	2,845	2,713	2,304	2,218	2,387	2,542	2,223	2,223
Full Simulation Period Average[a]	2,626	2,959	4,175	5,174	6,069	5,590	4,281	3,877	3,381	3,574	3,155	3,087
Wet Water Years (30%)	2,981	3,671	6,398	8,001	9,321	8,286	6,850	5,881	4,599	3,766	3,460	3,761
Above Normal Water Years (11%)	2,494	2,786	3,667	6,735	7,272	7,259	4,685	4,223	3,575	3,956	3,650	3,671
Below Normal Water Years (21%)	2,655	2,916	3,319	4,124	5,044	4,775	3,461	3,373	2,930	3,947	3,436	3,092
Dry Water Years (22%)	2,564	2,667	3,267	3,210	4,103	3,832	2,761	2,672	2,815	3,537	2,898	2,509
Critical Water Years (16%)	2,102	2,202	2,727	2,880	3,195	2,876	2,352	2,200	2,335	2,509	2,228	2,209

Table 4F-3-2-2b. Georgiana Slough Flow, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,190	4,088	8,223	9,819	10,790	10,286	8,435	7,160	4,835	4,132	3,605	4,045
20% Exceedance	3,043	3,176	5,755	8,381	9,680	8,476	6,341	5,856	4,071	4,015	3,521	3,896
30% Exceedance	2,936	2,991	4,365	5,908	7,924	6,791	4,692	4,221	3,261	3,875	3,466	3,676
40% Exceedance	2,858	2,897	3,551	4,859	6,347	5,592	3,881	3,487	2,938	3,736	3,381	3,445
50% Exceedance	2,632	2,812	3,163	4,076	4,953	4,397	3,384	3,257	2,868	3,642	3,313	3,208
60% Exceedance	2,372	2,597	3,008	3,709	4,073	4,028	2,913	3,014	2,817	3,522	3,180	2,786
70% Exceedance	2,258	2,439	2,770	3,041	3,649	3,612	2,690	2,771	2,745	3,319	2,937	2,535
80% Exceedance	2,124	2,229	2,460	2,743	3,333	3,061	2,504	2,658	2,666	3,087	2,468	2,386
90% Exceedance	1,941	2,019	2,296	2,516	2,814	2,549	2,299	2,328	2,288	2,430	2,198	2,207
Full Simulation Period Average[a]	2,651	2,981	4,200	5,205	6,110	5,582	4,330	3,982	3,378	3,511	3,097	3,137
Wet Water Years (30%)	2,993	3,701	6,465	8,029	9,346	8,275	6,858	5,906	4,607	3,760	3,454	3,887
Above Normal Water Years (11%)	2,484	2,805	3,694	6,803	7,420	7,249	4,812	4,401	3,598	3,938	3,573	3,840
Below Normal Water Years (21%)	2,675	2,936	3,343	4,174	5,085	4,783	3,660	3,539	2,983	3,888	3,371	3,063
Dry Water Years (22%)	2,573	2,689	3,273	3,223	4,079	3,870	2,863	2,846	2,811	3,440	2,811	2,531
Critical Water Years (16%)	2,199	2,211	2,703	2,891	3,280	2,792	2,157	2,229	2,220	2,354	2,133	2,176

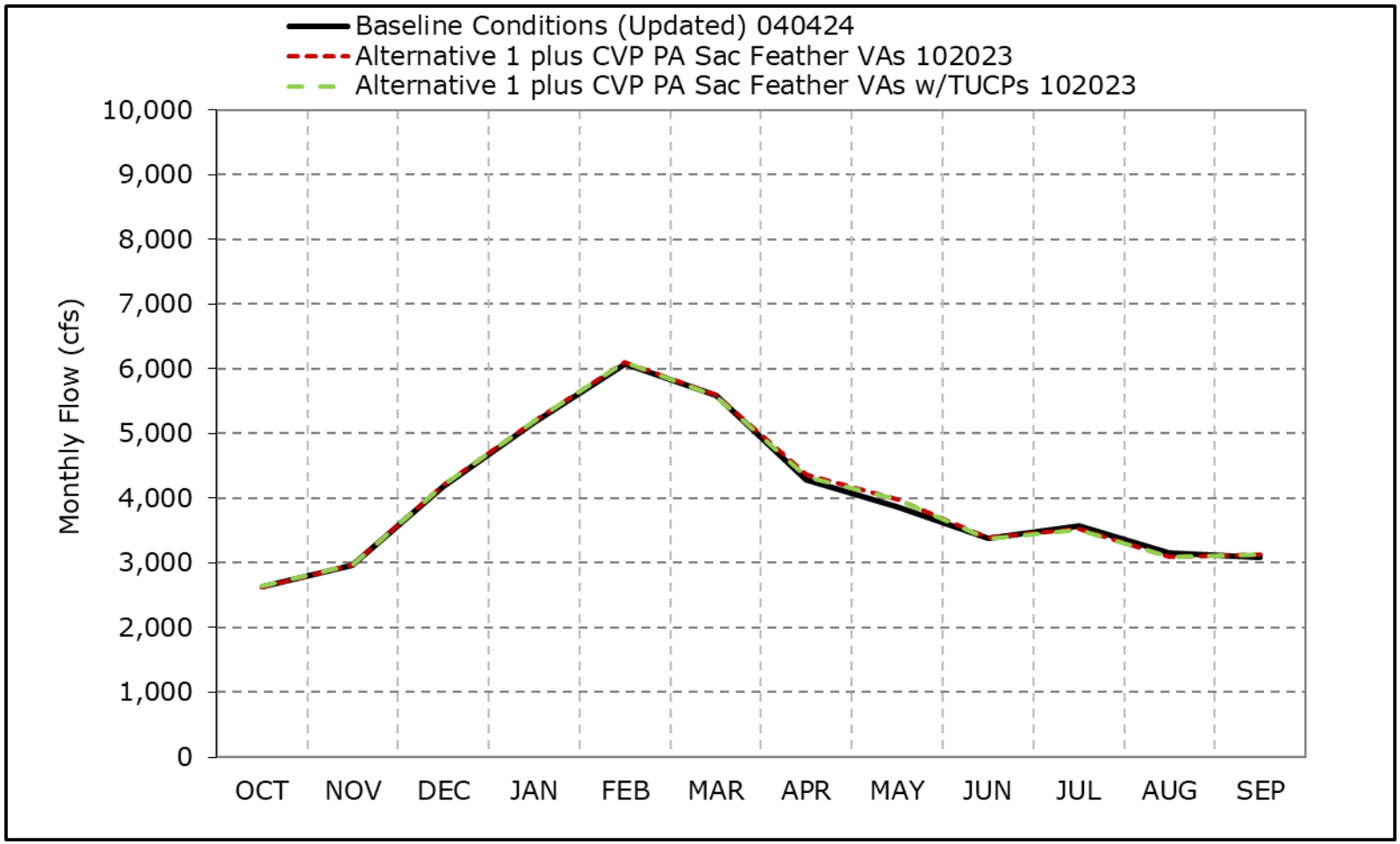
Table 4F-3-2-2c. Georgiana Slough Flow, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-20	-52	148	32	-2	-6	-4	-1	-98	-65	-49	179
20% Exceedance	32	67	94	59	180	4	152	172	-4	-81	-46	117
30% Exceedance	26	19	-2	136	-22	-67	145	47	-1	-1	-55	101
40% Exceedance	41	-1	26	122	194	21	73	125	-17	-47	-67	116
50% Exceedance	-3	-5	44	19	66	20	97	117	-25	-46	-20	39
60% Exceedance	-6	-2	2	-1	11	5	172	226	-17	-63	-27	-90
70% Exceedance	78	21	-1	16	46	-1	130	191	-18	-57	-44	3
80% Exceedance	109	-16	28	19	64	-20	12	168	87	-21	-136	14
90% Exceedance	36	26	11	11	-31	-163	-5	110	-98	-113	-26	-16
Full Simulation Period Average[a]	24	22	25	31	41	-8	49	105	-3	-63	-58	50
Wet Water Years (30%)	13	30	66	28	25	-11	8	24	8	-6	-6	125
Above Normal Water Years (11%)	-10	18	26	68	148	-10	127	178	23	-19	-78	170
Below Normal Water Years (21%)	20	20	24	49	41	8	199	166	53	-59	-65	-29
Dry Water Years (22%)	9	22	7	13	-23	38	102	174	-4	-97	-87	22
Critical Water Years (16%)	97	9	-24	10	85	-84	-195	29	-115	-155	-95	-32

[a] Based on the 100-year simulation period.

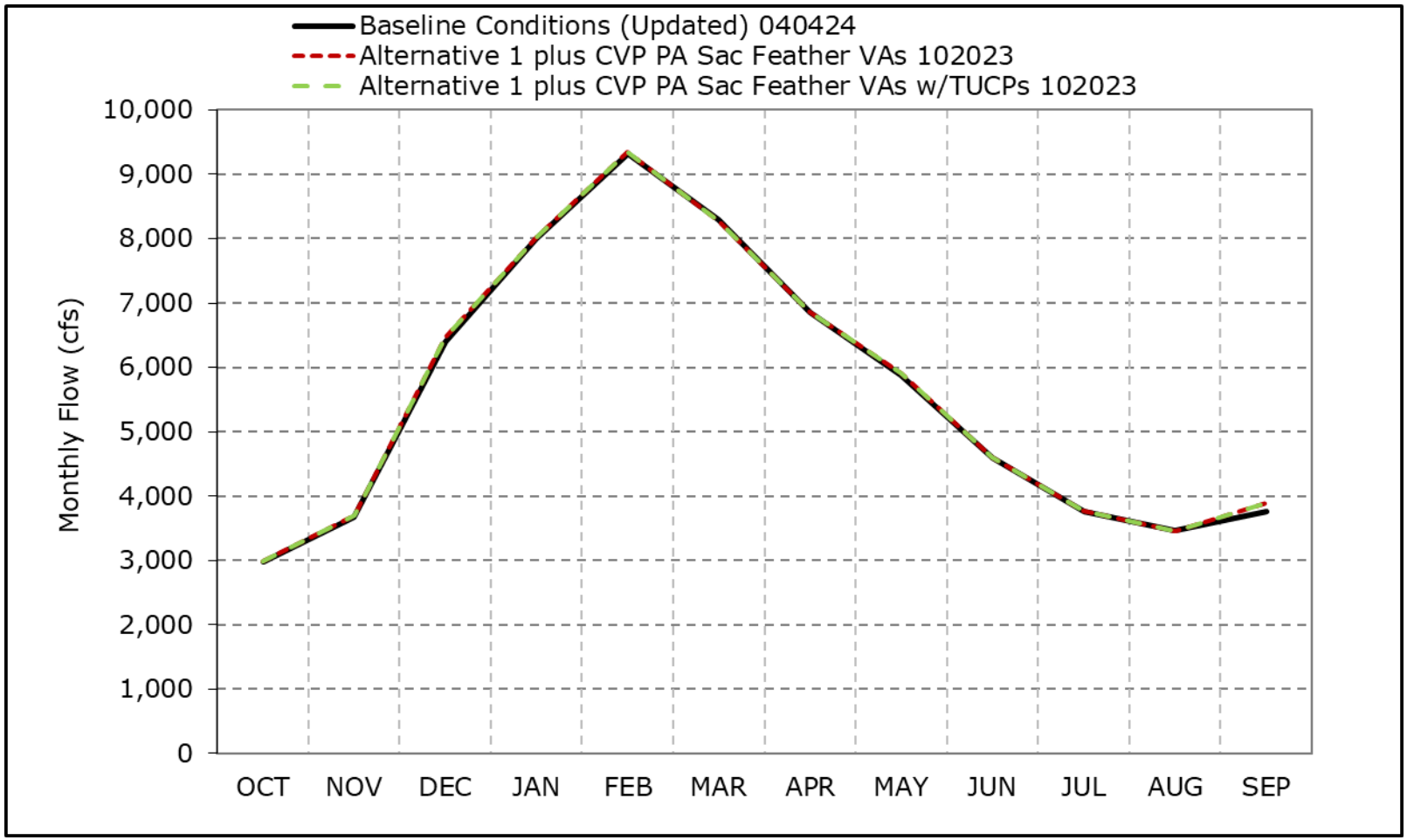
* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-2a. Georgiana Slough Flow, Long-Term Average Flow



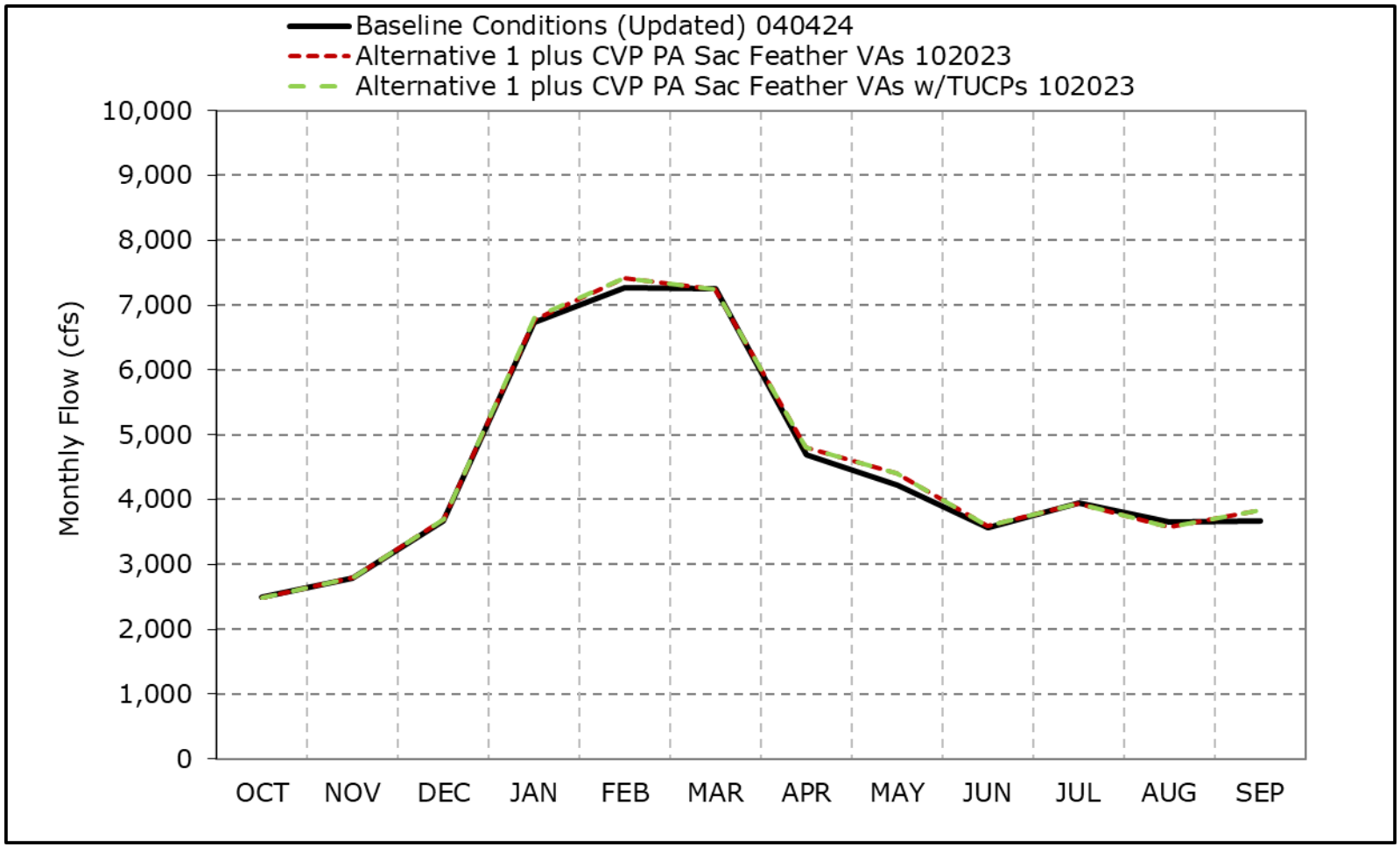
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2b. Georgiana Slough Flow, Wet Year Average Flow



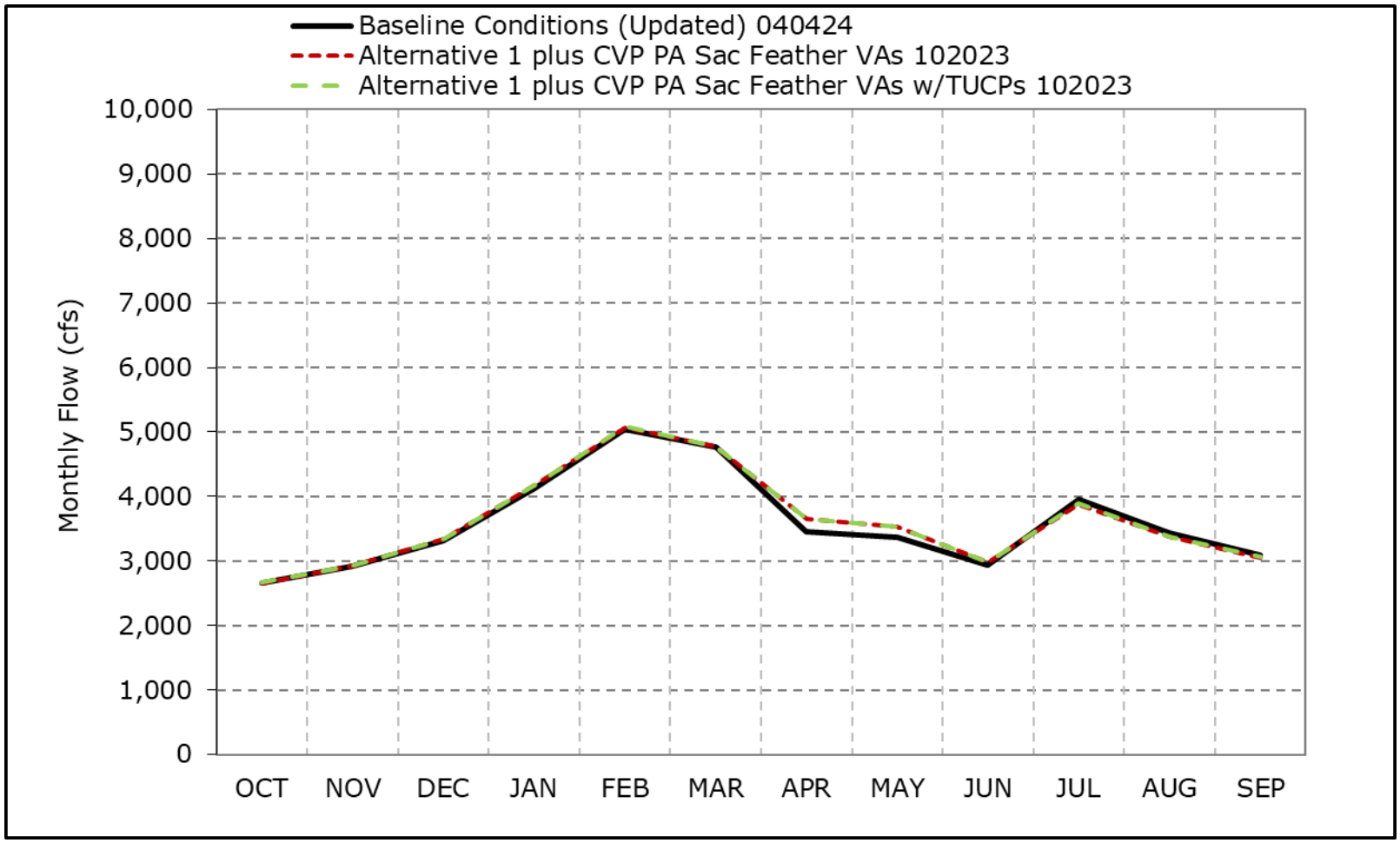
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2c. Georgiana Slough Flow, Above Normal Year Average Flow



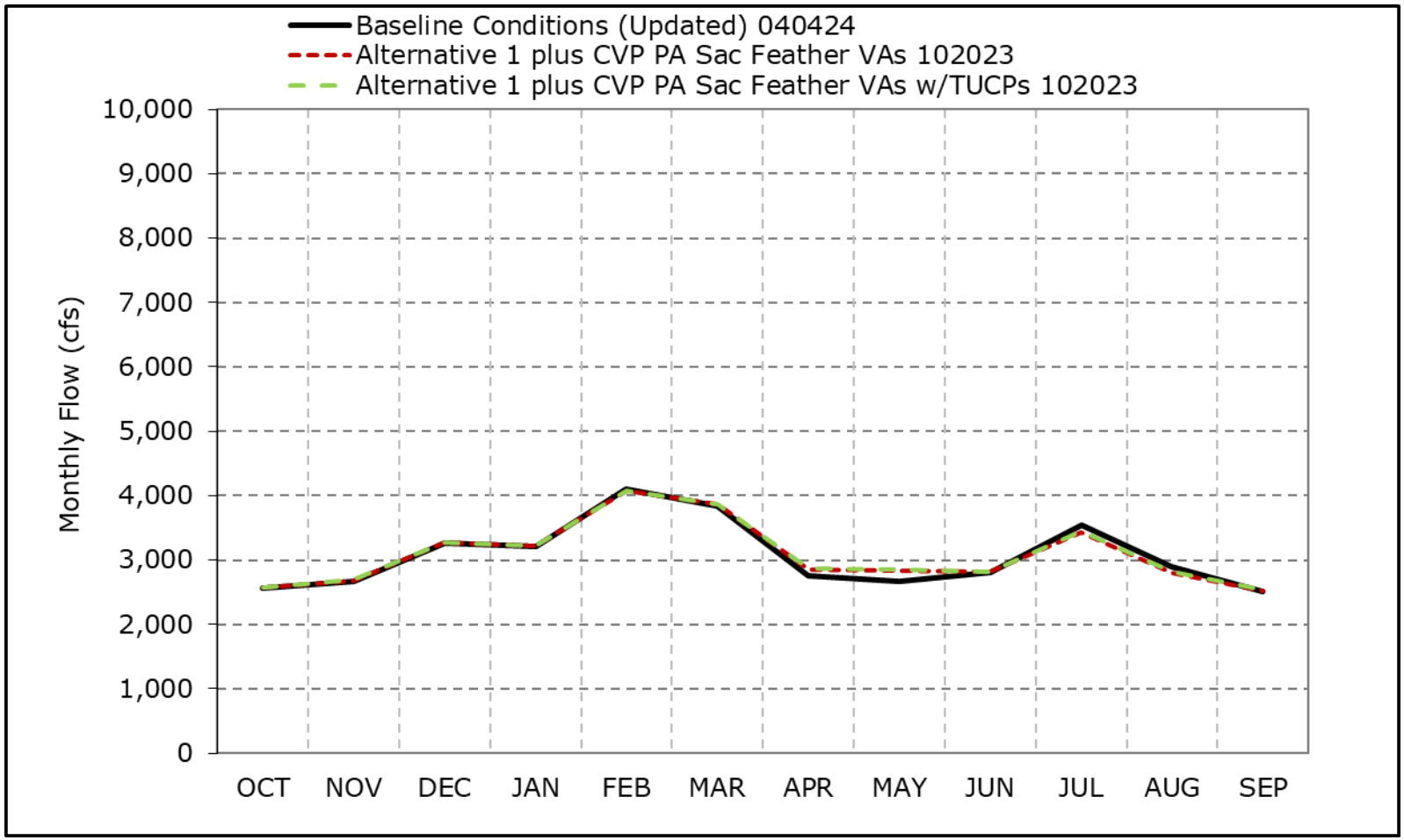
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2d. Georgiana Slough Flow, Below Normal Year Average Flow



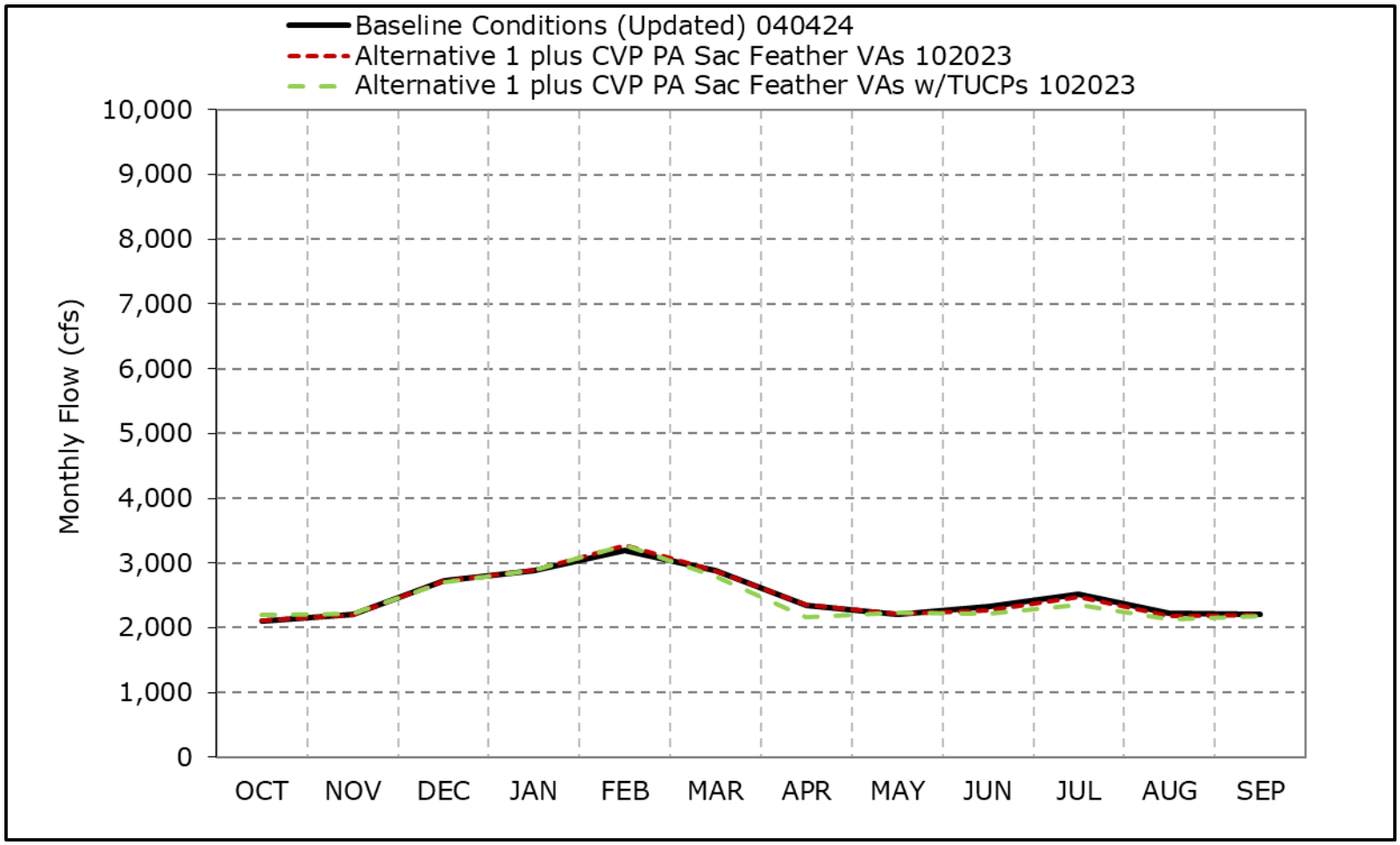
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2e. Georgiana Slough Flow, Dry Year Average Flow



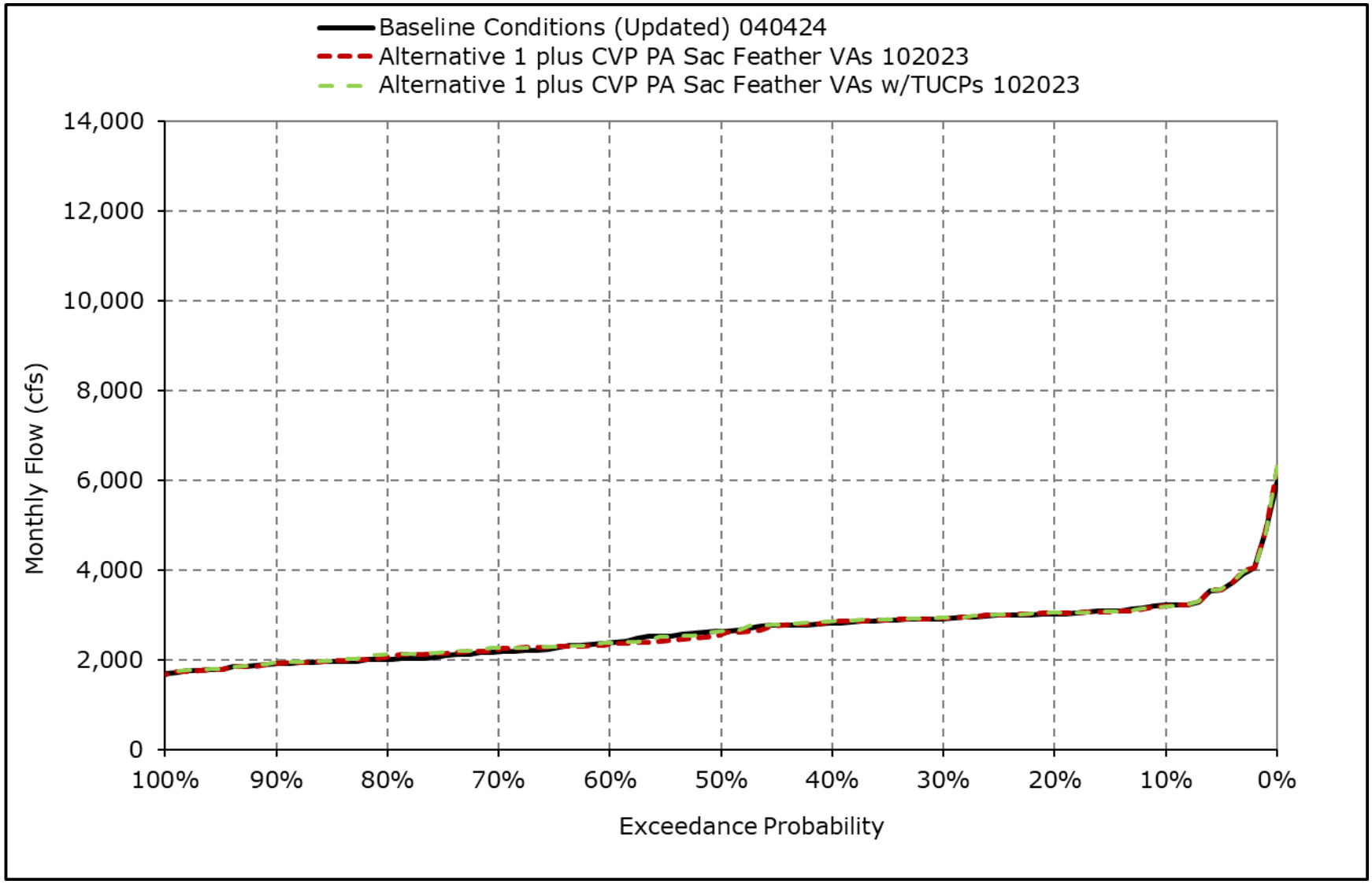
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2f. Georgiana Slough Flow, Critical Year Average Flow



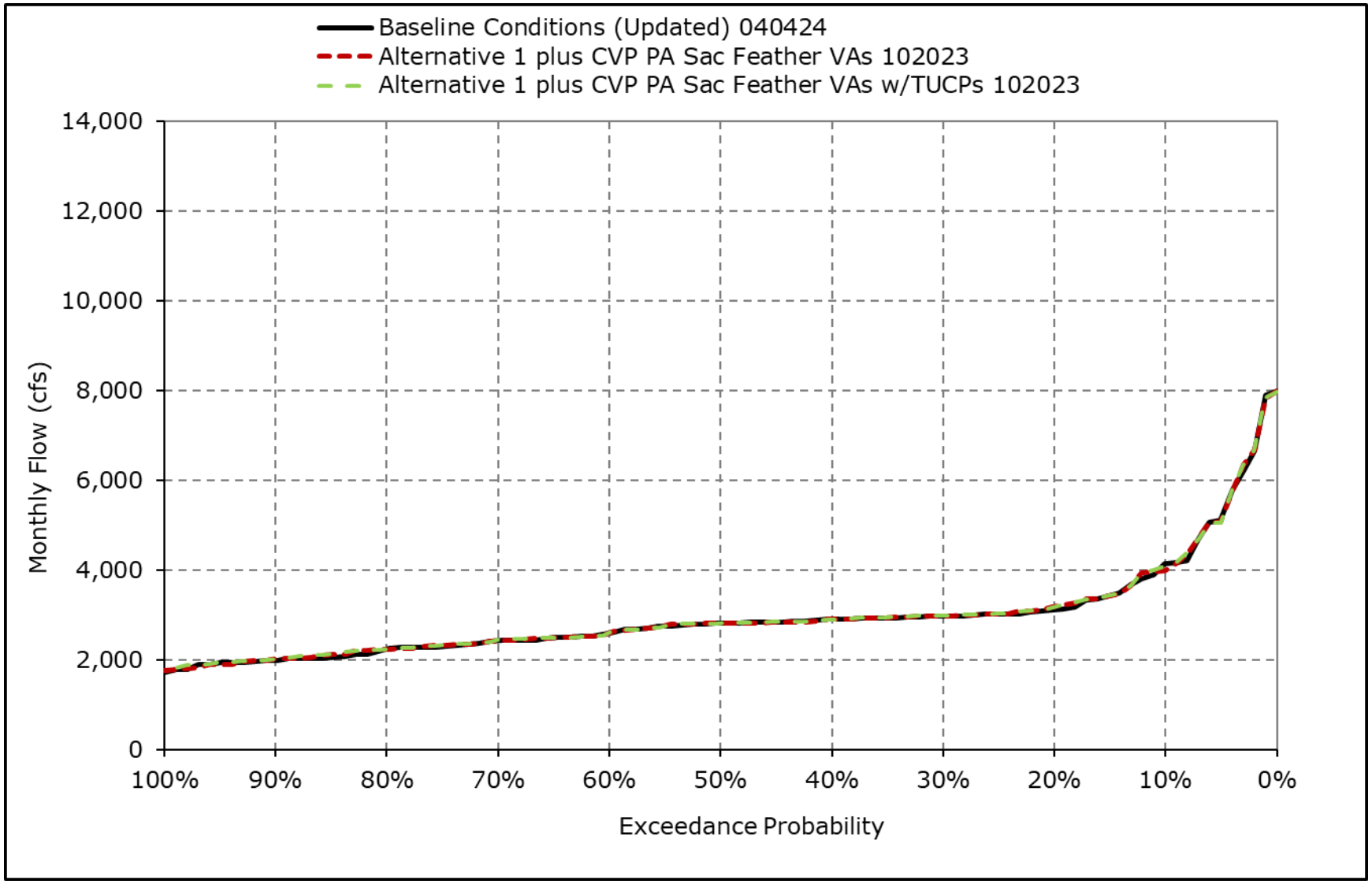
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2g. Georgiana Slough Flow, October



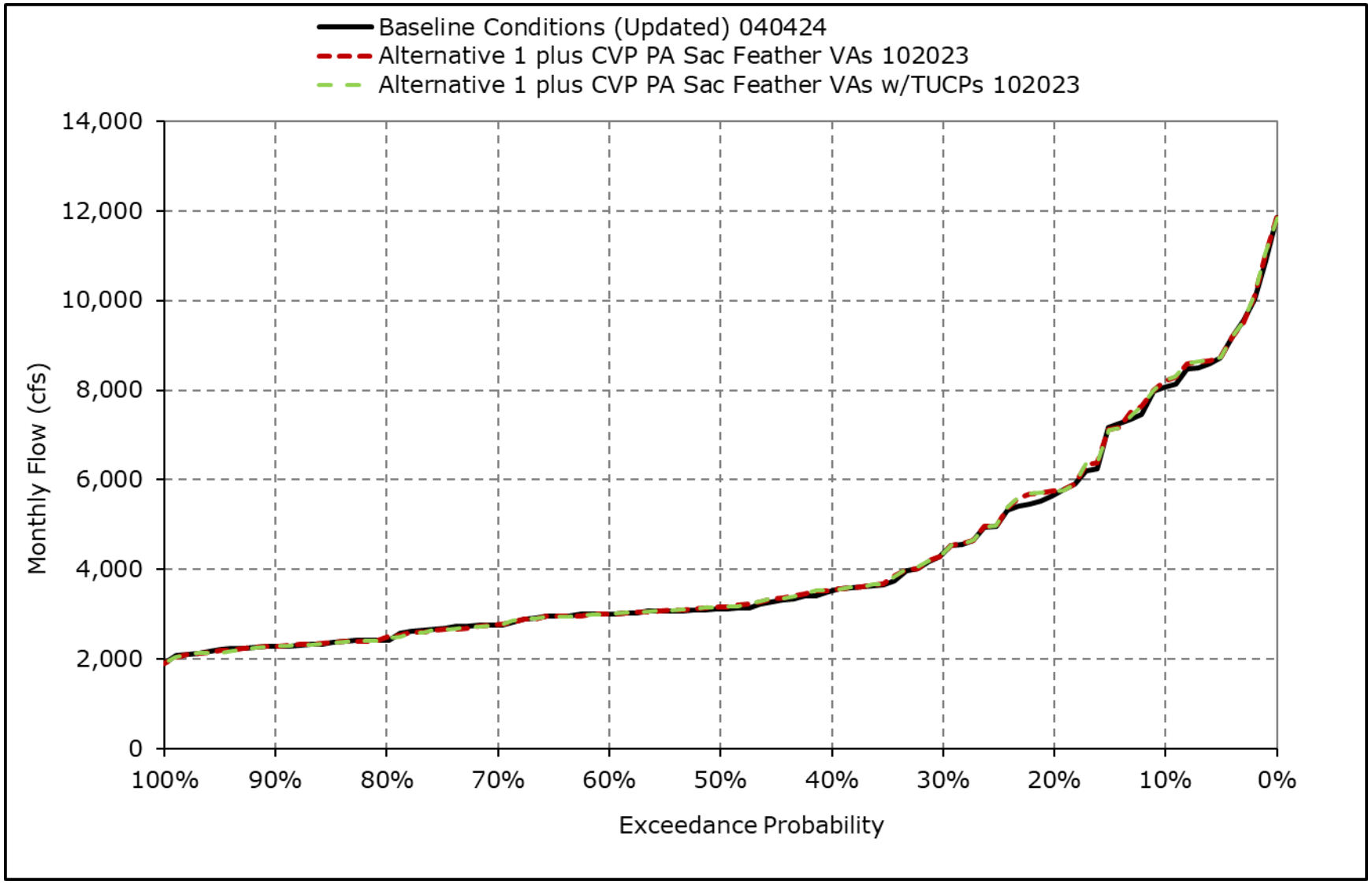
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2h. Georgiana Slough Flow, November



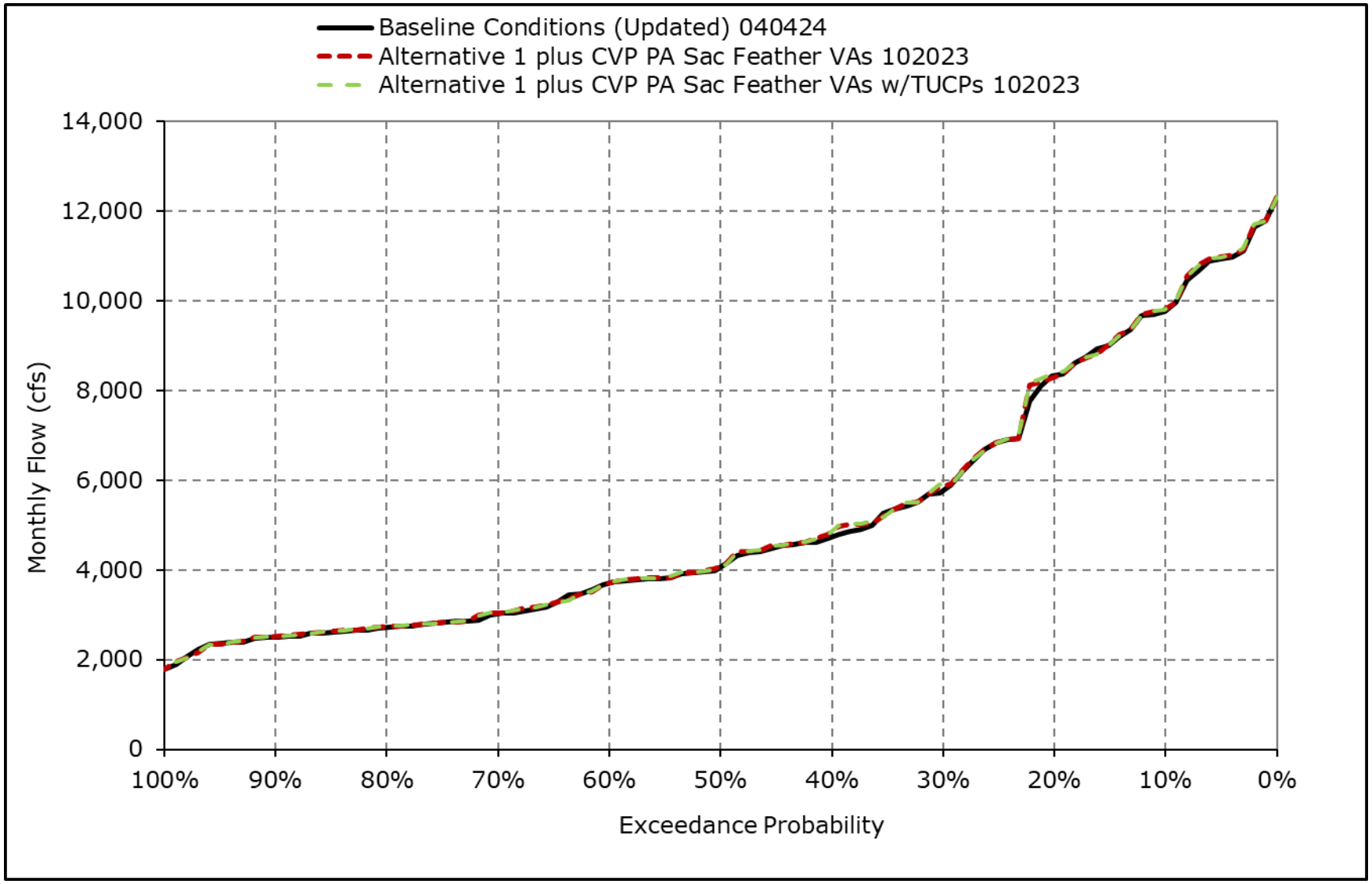
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2i. Georgiana Slough Flow, December



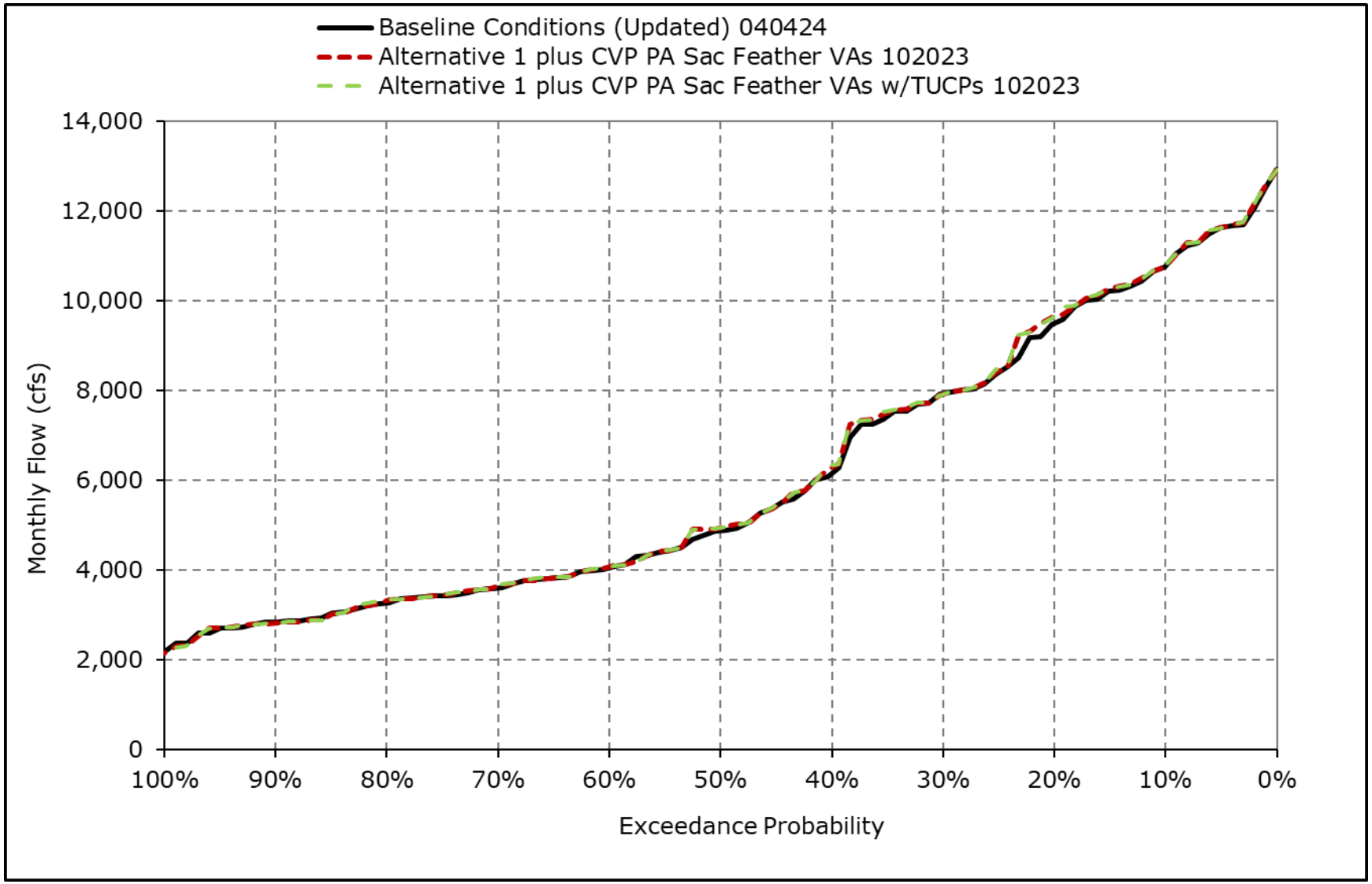
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2j. Georgiana Slough Flow, January



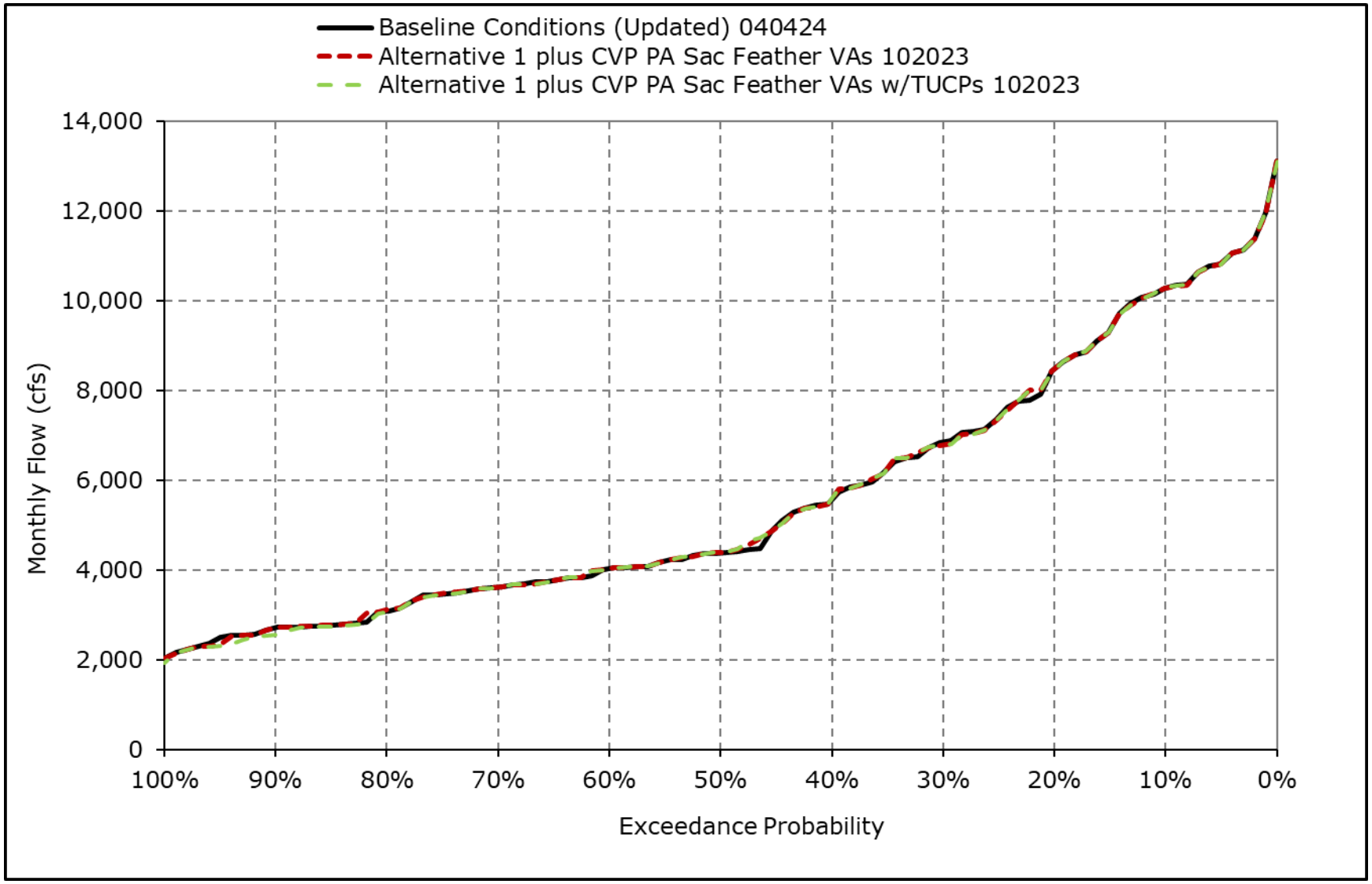
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2k. Georgiana Slough Flow, February



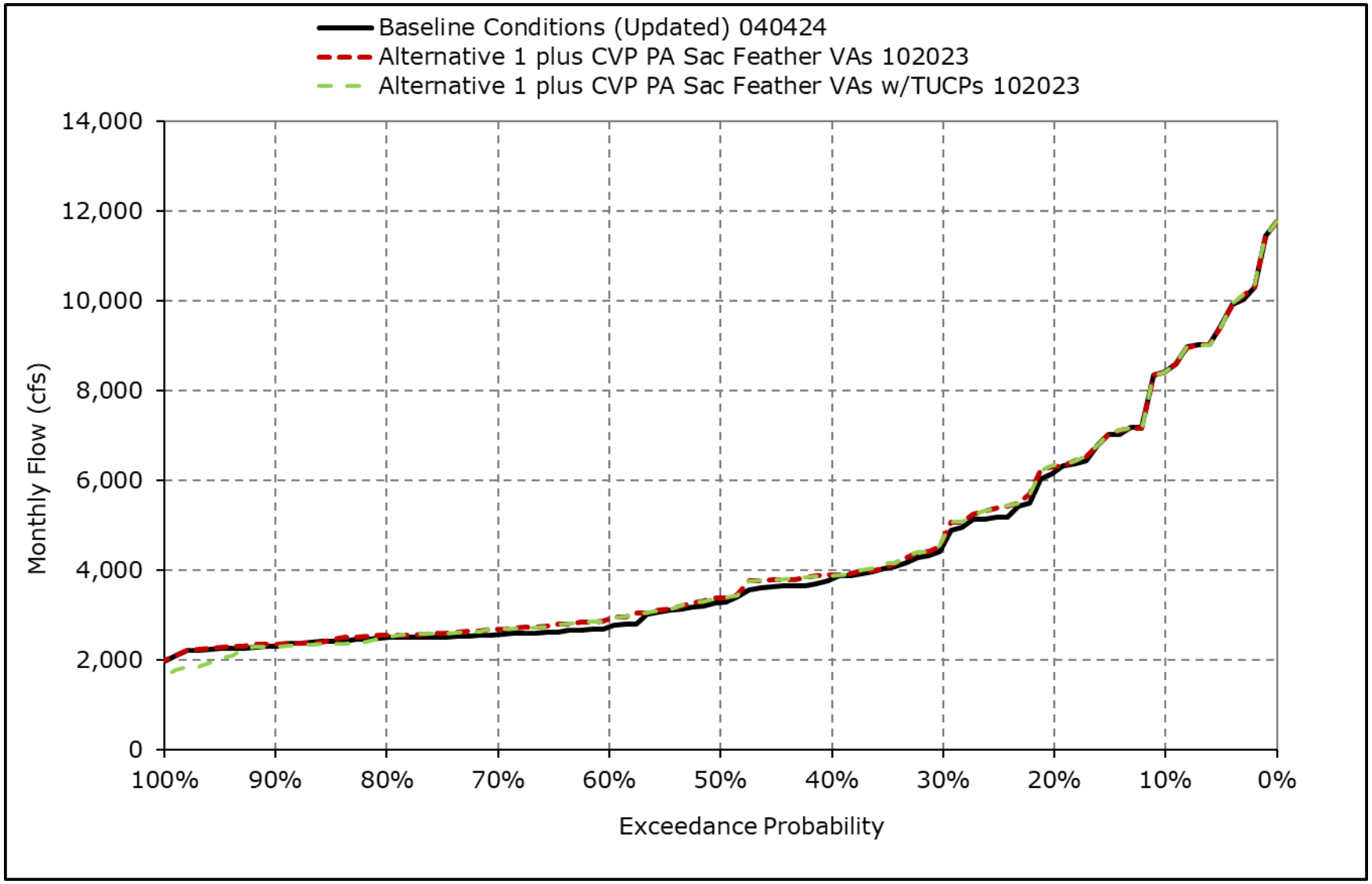
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2l. Georgiana Slough Flow, March



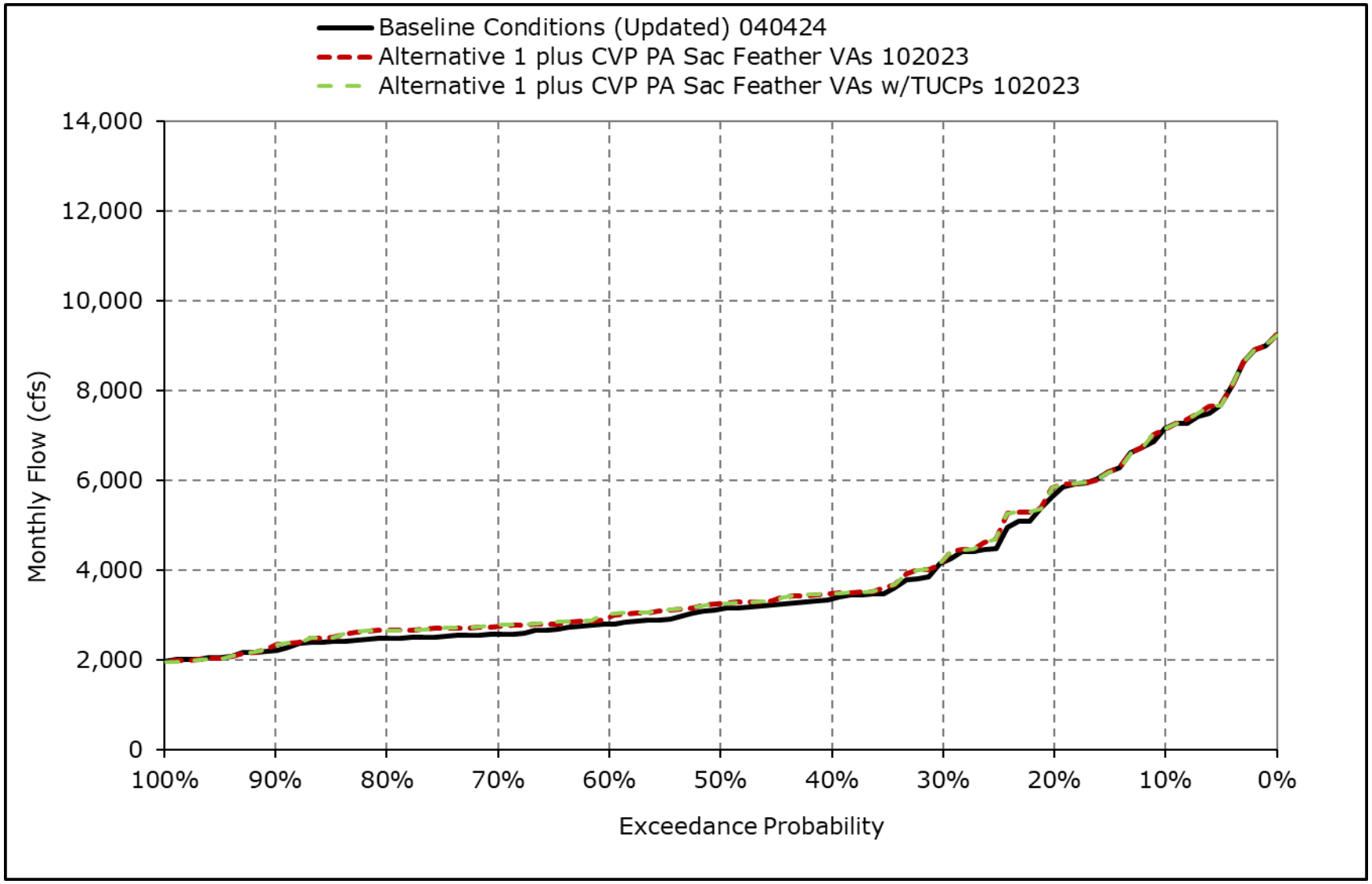
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2m. Georgiana Slough Flow, April



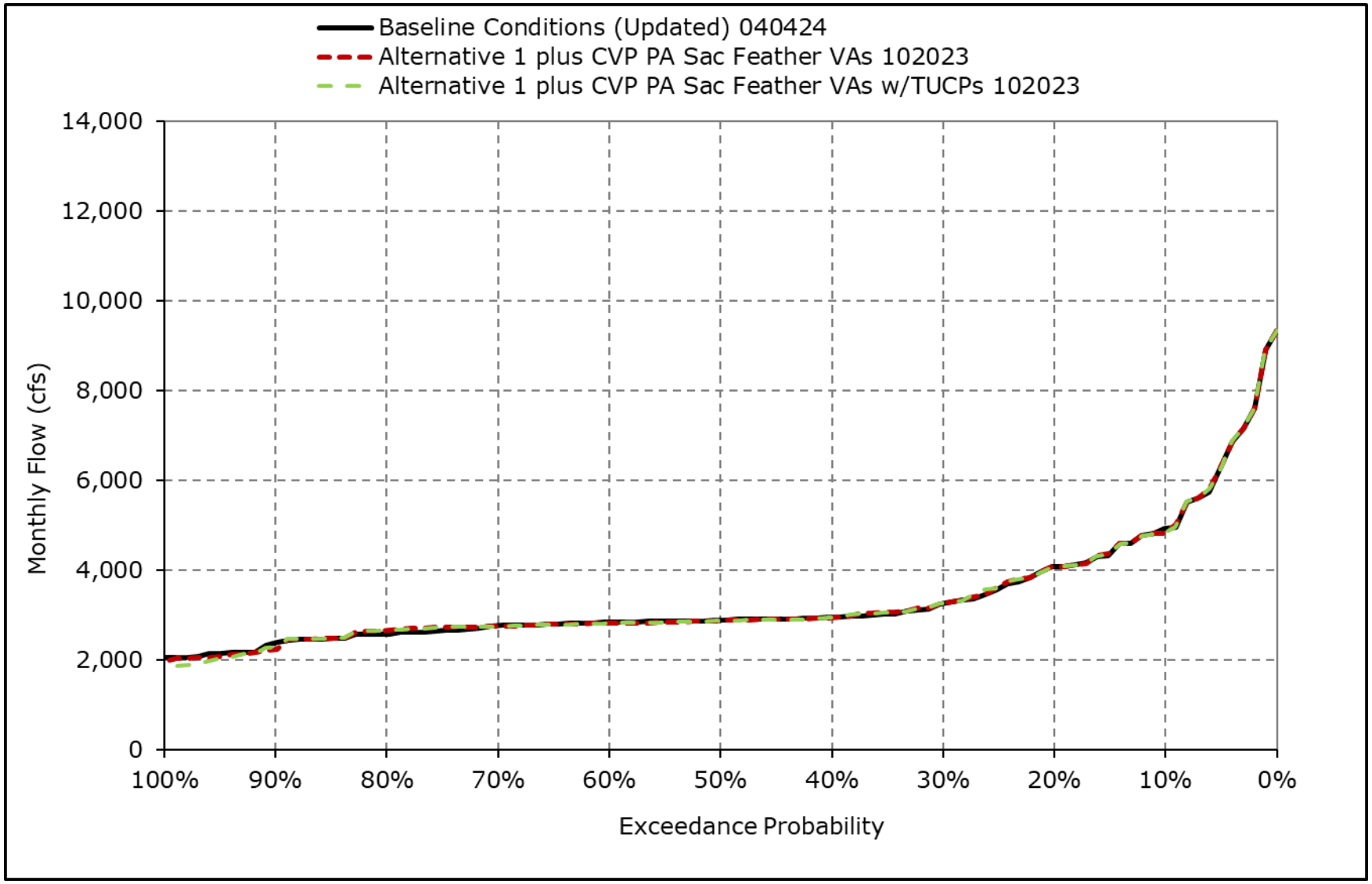
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2n. Georgiana Slough Flow, May



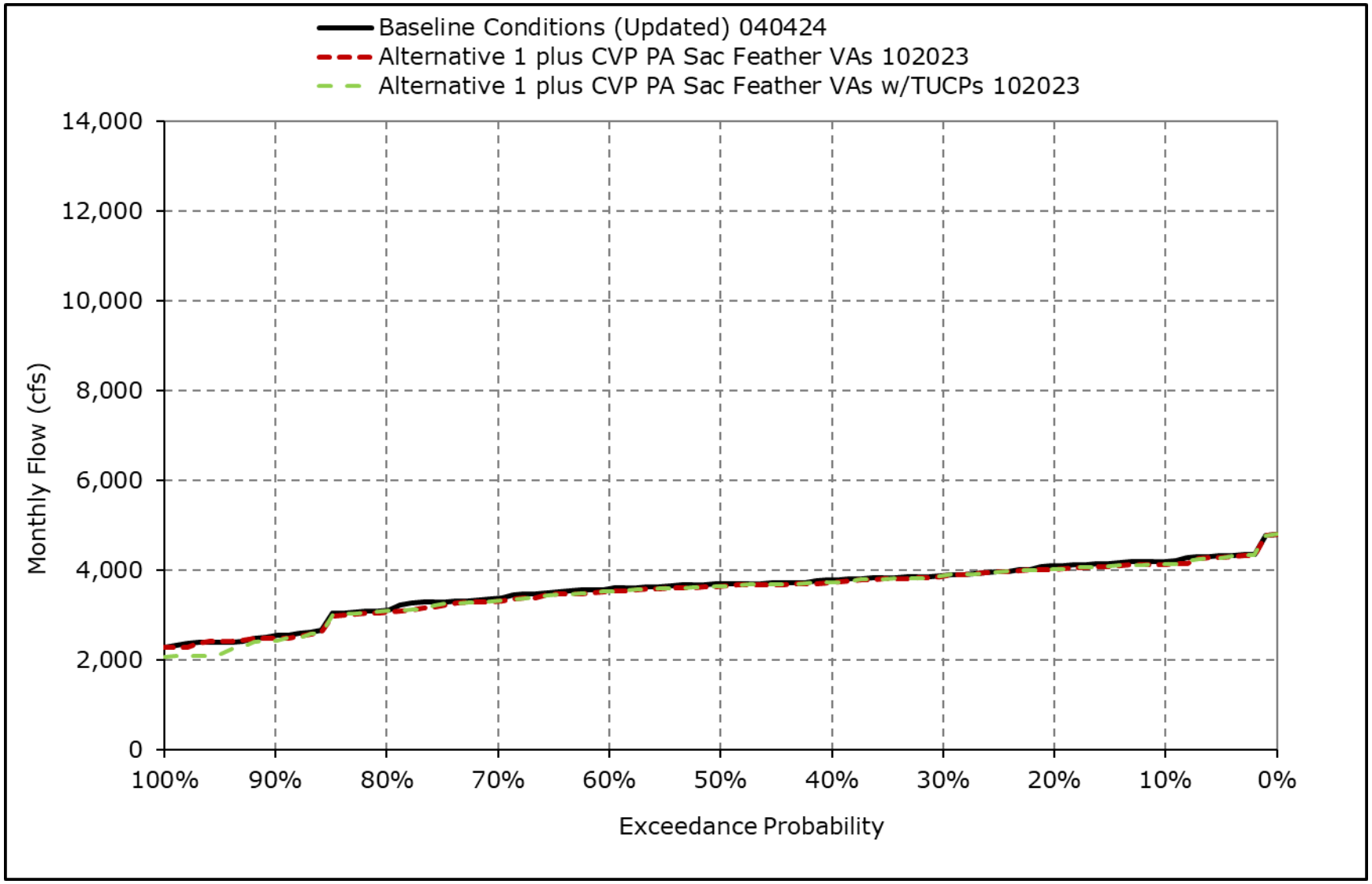
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2o. Georgiana Slough Flow, June



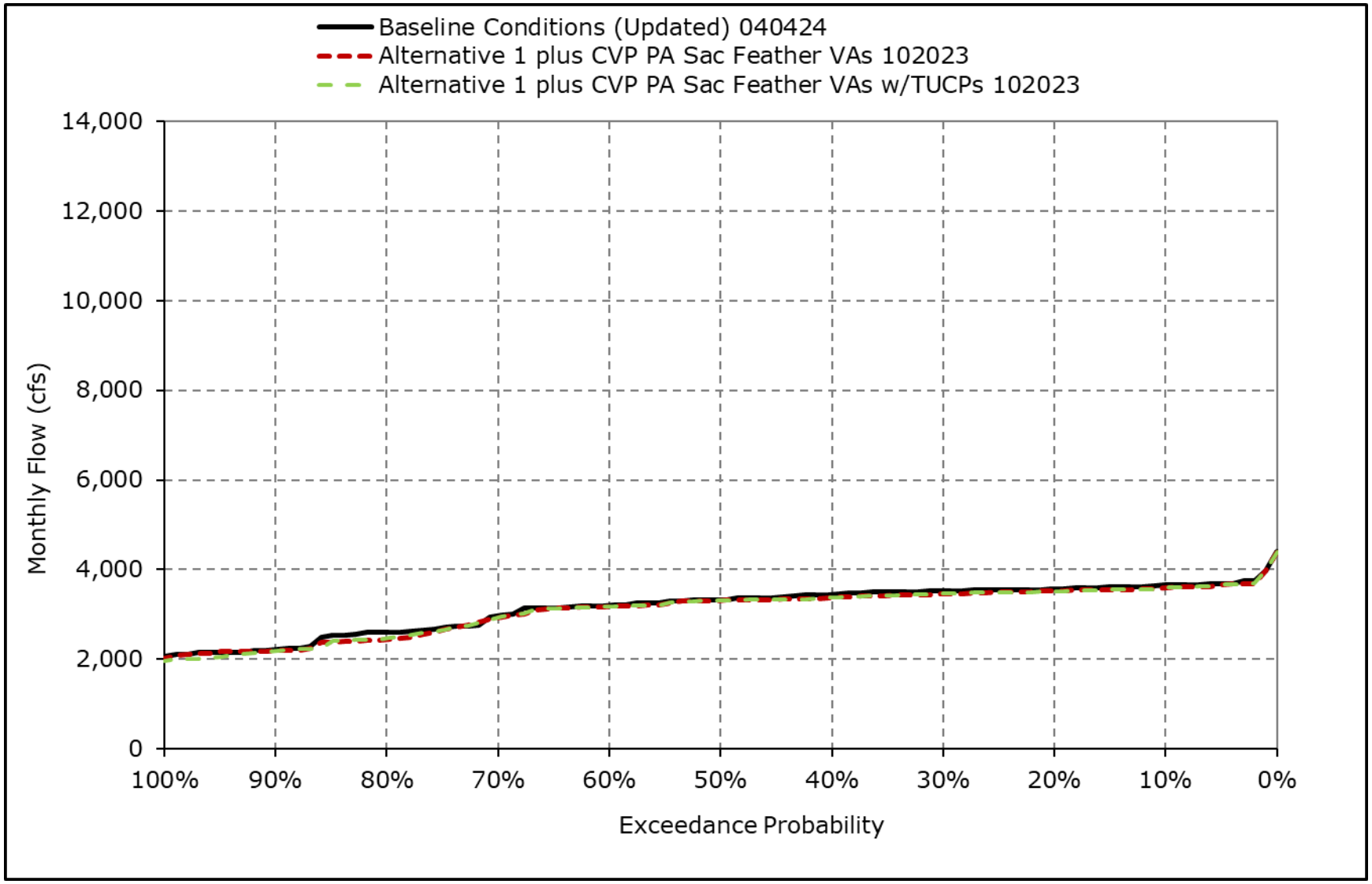
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2p. Georgiana Slough Flow, July



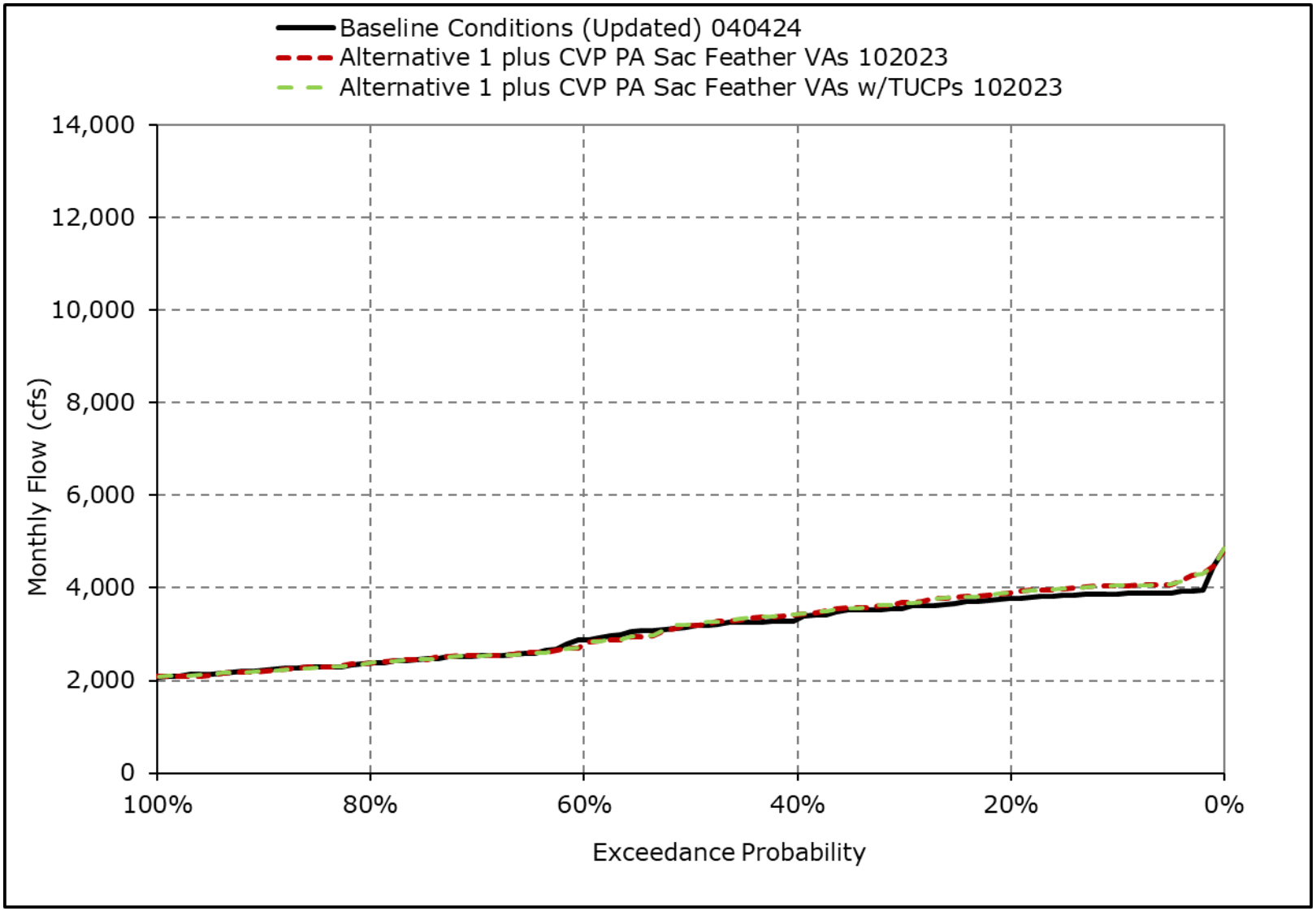
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2q. Georgiana Slough Flow, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-2r. Georgiana Slough Flow, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-3-1a. Yolo Bypass Flow, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	199	884	11,566	30,800	46,555	23,646	3,221	1,121	504	285	216	284
20% Exceedance	120	373	6,385	12,551	15,705	7,550	1,799	602	357	267	200	265
30% Exceedance	108	278	1,572	4,987	9,565	4,188	1,029	514	293	260	196	257
40% Exceedance	88	188	882	2,776	6,113	2,713	677	427	257	254	193	250
50% Exceedance	81	136	444	1,741	2,678	1,345	377	311	249	250	190	241
60% Exceedance	70	120	273	856	1,737	689	272	270	243	245	188	226
70% Exceedance	61	104	165	408	681	498	248	244	236	239	183	205
80% Exceedance	54	88	113	229	393	273	231	229	224	232	179	199
90% Exceedance	45	76	93	133	208	130	208	193	210	217	166	176
Full Simulation Period Average[a]	164	675	4,175	10,086	14,260	8,301	2,142	636	323	252	192	239
Wet Water Years (30%)	320	1,654	11,131	27,303	36,759	22,184	5,939	1,181	509	297	225	280
Above Normal Water Years (11%)	122	290	2,044	10,748	14,283	9,160	1,100	635	281	245	188	235
Below Normal Water Years (21%)	111	405	1,249	2,016	4,987	1,887	606	571	270	215	173	230
Dry Water Years (22%)	95	184	1,030	777	2,134	845	347	273	222	245	184	228
Critical Water Years (16%)	65	134	764	743	902	352	223	199	215	230	169	188

Table 4F-3-3-1b. Yolo Bypass Flow, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	181	1,371	12,328	30,458	46,447	23,524	3,186	1,119	504	284	214	283
20% Exceedance	117	372	5,939	12,430	15,991	7,770	1,783	595	360	267	202	264
30% Exceedance	107	277	1,572	4,988	9,551	4,249	1,028	515	292	262	196	257
40% Exceedance	88	187	883	2,472	5,998	2,692	676	423	260	255	192	246
50% Exceedance	80	135	465	1,591	2,507	1,321	373	312	250	251	190	239
60% Exceedance	69	115	274	854	1,729	708	271	269	243	246	187	227
70% Exceedance	61	103	160	402	679	490	249	243	237	243	181	212
80% Exceedance	52	88	112	230	409	292	231	228	225	234	178	200
90% Exceedance	42	78	92	131	204	128	207	196	212	219	166	181
Full Simulation Period Average[a]	170	695	4,200	10,135	14,220	8,278	2,136	633	325	255	192	239
Wet Water Years (30%)	358	1,723	11,234	27,566	36,713	22,021	5,924	1,183	509	296	226	280
Above Normal Water Years (11%)	79	285	2,063	10,766	14,323	9,340	1,092	637	283	245	188	235
Below Normal Water Years (21%)	111	403	1,250	1,892	4,962	1,874	602	556	270	219	179	234
Dry Water Years (22%)	93	184	1,082	775	2,085	885	346	273	228	253	180	230
Critical Water Years (16%)	64	133	639	706	811	353	222	197	215	231	165	186

Table 4F-3-3-1c. Yolo Bypass Flow, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-18	487	762	-343	-108	-123	-35	-2	0	0	-1	0
20% Exceedance	-3	-1	-445	-120	286	220	-16	-7	4	0	2	-1
30% Exceedance	-1	-1	0	1	-14	61	-1	1	0	1	0	0
40% Exceedance	0	-1	1	-304	-115	-21	-1	-3	3	1	-1	-3
50% Exceedance	-1	-1	21	-150	-171	-23	-4	0	1	1	-1	-1
60% Exceedance	-2	-5	1	-2	-8	19	-1	0	0	0	-1	1
70% Exceedance	0	-1	-5	-6	-3	-7	1	-1	1	4	-1	7
80% Exceedance	-2	0	-1	1	16	19	0	-1	1	2	-2	1
90% Exceedance	-3	2	-1	-2	-4	-2	0	3	2	2	0	4
Full Simulation Period Average[a]	6	20	25	49	-40	-23	-6	-2	2	3	0	1
Wet Water Years (30%)	38	70	103	264	-46	-163	-15	3	0	-1	0	-1
Above Normal Water Years (11%)	-43	-4	19	19	40	180	-8	2	2	0	0	0
Below Normal Water Years (21%)	0	-2	0	-124	-24	-13	-3	-15	0	5	6	4
Dry Water Years (22%)	-2	1	52	-2	-50	39	-1	0	6	8	-4	3
Critical Water Years (16%)	-1	-1	-125	-37	-91	1	-1	-2	0	1	-4	-2

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.

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

* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-3-2a. Yolo Bypass Flow, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	199	884	11,566	30,800	46,555	23,646	3,221	1,121	504	285	216	284
20% Exceedance	120	373	6,385	12,551	15,705	7,550	1,799	602	357	267	200	265
30% Exceedance	108	278	1,572	4,987	9,565	4,188	1,029	514	293	260	196	257
40% Exceedance	88	188	882	2,776	6,113	2,713	677	427	257	254	193	250
50% Exceedance	81	136	444	1,741	2,678	1,345	377	311	249	250	190	241
60% Exceedance	70	120	273	856	1,737	689	272	270	243	245	188	226
70% Exceedance	61	104	165	408	681	498	248	244	236	239	183	205
80% Exceedance	54	88	113	229	393	273	231	229	224	232	179	199
90% Exceedance	45	76	93	133	208	130	208	193	210	217	166	176
Full Simulation Period Average[a]	164	675	4,175	10,086	14,260	8,301	2,142	636	323	252	192	239
Wet Water Years (30%)	320	1,654	11,131	27,303	36,759	22,184	5,939	1,181	509	297	225	280
Above Normal Water Years (11%)	122	290	2,044	10,748	14,283	9,160	1,100	635	281	245	188	235
Below Normal Water Years (21%)	111	405	1,249	2,016	4,987	1,887	606	571	270	215	173	230
Dry Water Years (22%)	95	184	1,030	777	2,134	845	347	273	222	245	184	228
Critical Water Years (16%)	65	134	764	743	902	352	223	199	215	230	169	188

Table 4F-3-3-2b. Yolo Bypass Flow, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	181	1,371	12,332	30,775	46,477	23,529	3,208	1,120	504	284	216	284
20% Exceedance	117	372	5,931	12,434	15,990	7,797	1,786	595	360	267	203	264
30% Exceedance	107	275	1,582	4,990	9,604	4,246	1,028	514	292	262	197	257
40% Exceedance	88	187	886	2,472	6,020	2,692	676	424	259	254	193	246
50% Exceedance	81	135	467	1,592	2,507	1,322	375	312	250	250	190	239
60% Exceedance	69	117	272	856	1,730	708	271	268	242	246	188	227
70% Exceedance	61	103	160	402	678	491	243	244	236	242	182	213
80% Exceedance	52	88	112	227	413	268	225	228	224	233	179	200
90% Exceedance	42	78	92	135	204	128	198	188	199	218	165	181
Full Simulation Period Average[a]	170	695	4,188	10,163	14,236	8,281	2,132	633	323	253	193	240
Wet Water Years (30%)	358	1,724	11,193	27,581	36,712	22,027	5,927	1,184	509	296	226	280
Above Normal Water Years (11%)	79	285	2,064	10,978	14,365	9,349	1,092	632	282	245	188	235
Below Normal Water Years (21%)	110	404	1,250	1,893	4,987	1,877	603	556	270	219	179	234
Dry Water Years (22%)	92	184	1,083	775	2,113	882	346	273	228	253	180	230
Critical Water Years (16%)	64	134	641	708	814	350	192	196	204	220	170	189

Table 4F-3-3-2c. Yolo Bypass Flow, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-18	487	766	-25	-78	-117	-12	-1	-1	0	1	0
20% Exceedance	-3	-1	-454	-117	285	247	-13	-7	3	0	3	-1
30% Exceedance	-1	-3	10	3	39	58	-2	0	0	1	1	0
40% Exceedance	0	-1	3	-304	-92	-21	-1	-3	2	0	0	-4
50% Exceedance	0	-1	23	-149	-171	-23	-2	0	0	0	0	-2
60% Exceedance	-2	-2	0	0	-7	19	-1	-2	-1	0	0	1
70% Exceedance	0	-1	-5	-6	-3	-7	-5	-1	0	3	-1	8
80% Exceedance	-2	0	-1	-2	20	-5	-6	-1	0	1	0	1
90% Exceedance	-3	2	-1	2	-4	-2	-10	-5	-11	0	-1	4
Full Simulation Period Average[a]	6	21	13	77	-23	-21	-10	-3	0	1	1	1
Wet Water Years (30%)	38	71	62	279	-46	-157	-13	4	0	0	0	-1
Above Normal Water Years (11%)	-43	-4	20	231	83	189	-8	-3	1	0	0	-1
Below Normal Water Years (21%)	0	-1	1	-123	1	-10	-2	-14	0	5	7	4
Dry Water Years (22%)	-3	0	53	-1	-21	36	-1	0	6	8	-5	2
Critical Water Years (16%)	-1	0	-122	-35	-88	-2	-30	-3	-11	-10	1	1

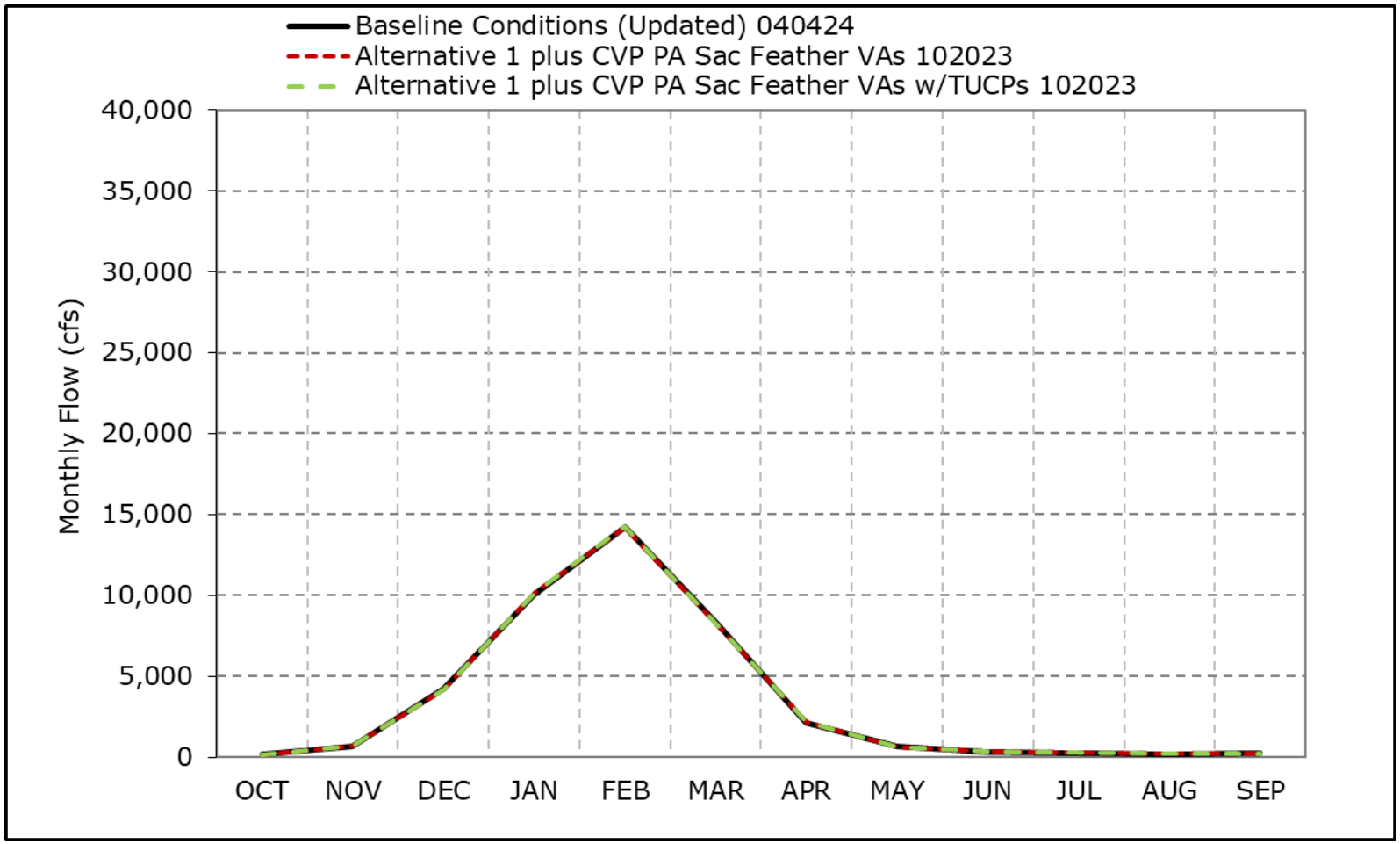
[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.

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

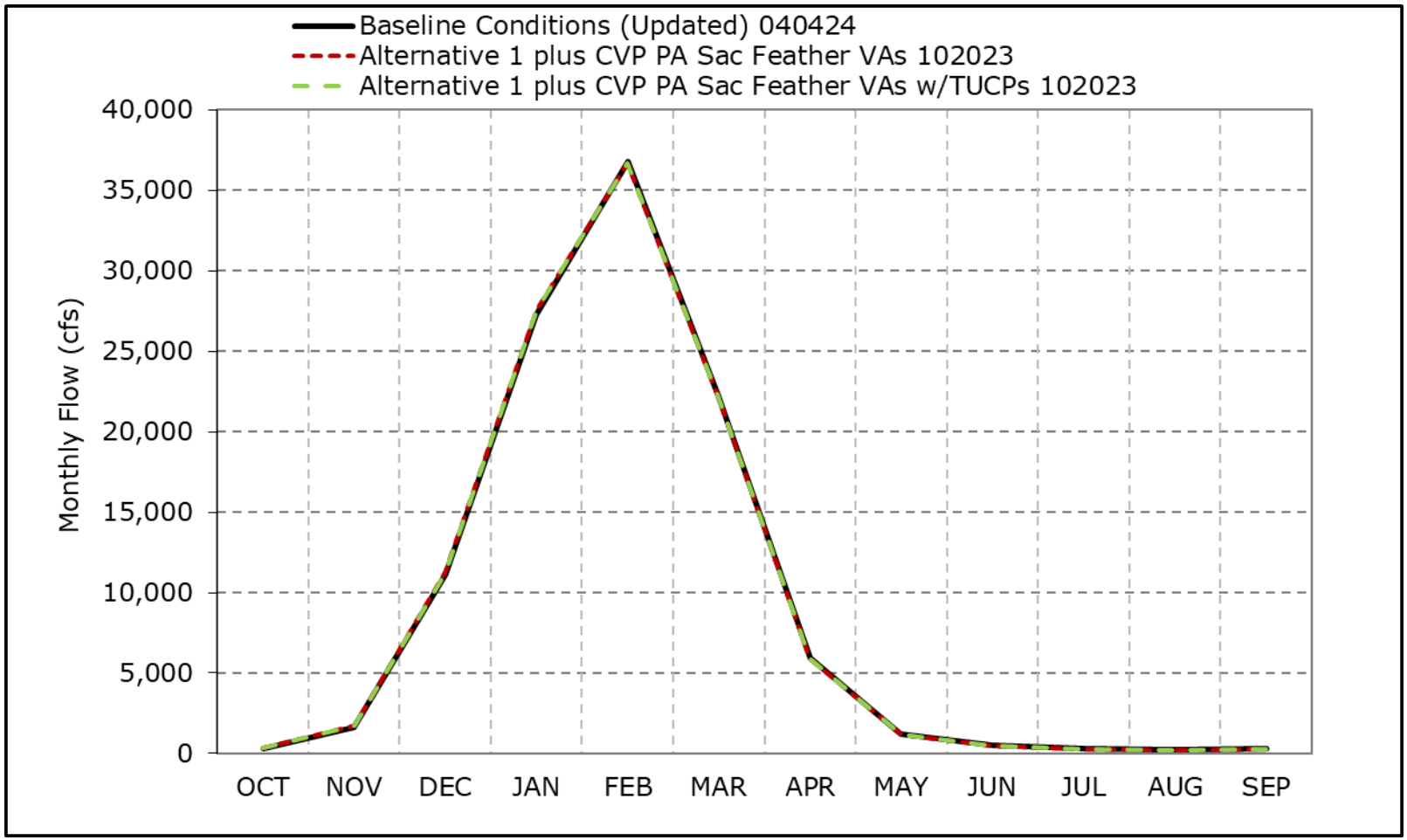
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-3a. Yolo Bypass Flow, Long-Term Average Flow



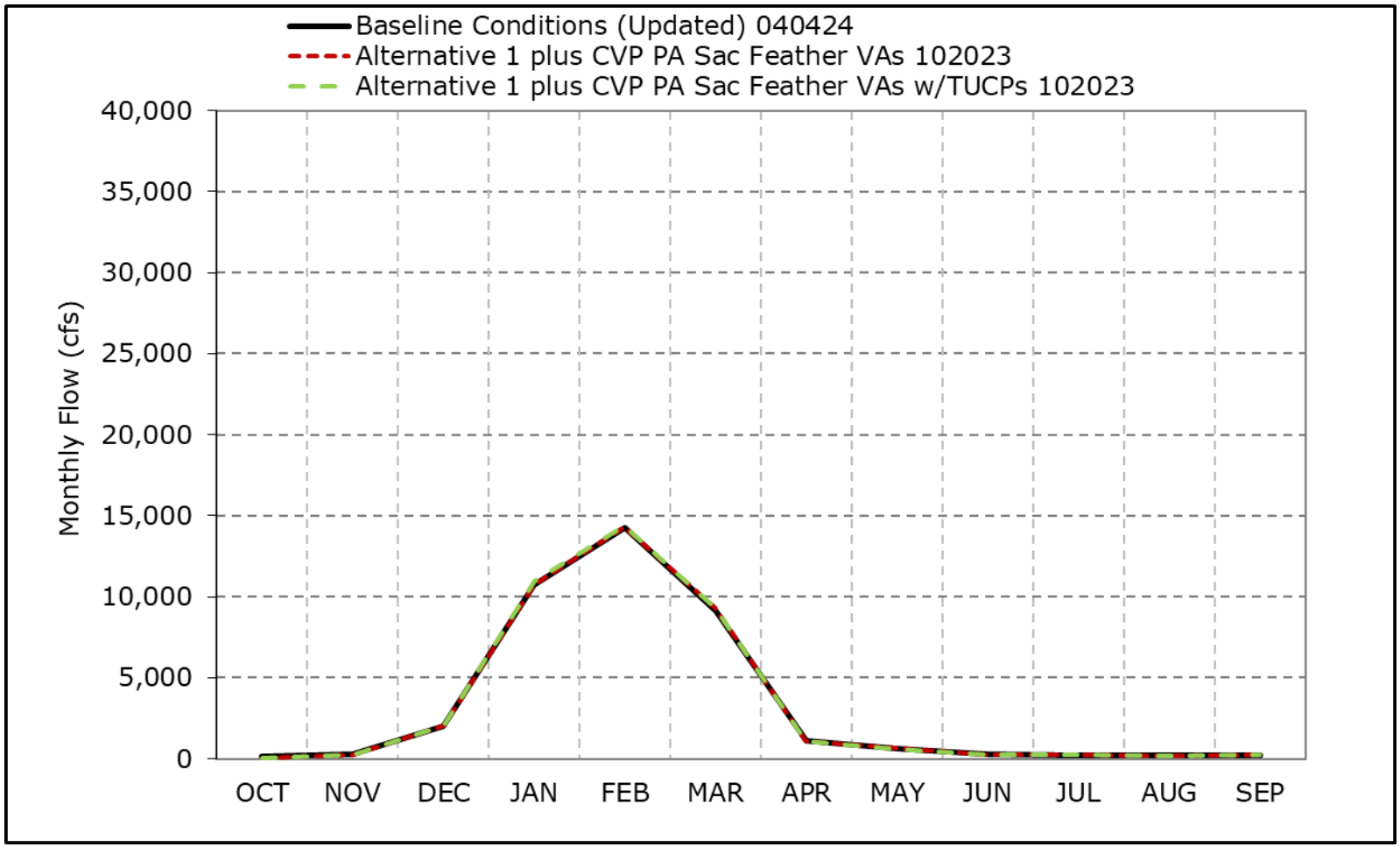
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3b. Yolo Bypass Flow, Wet Year Average Flow



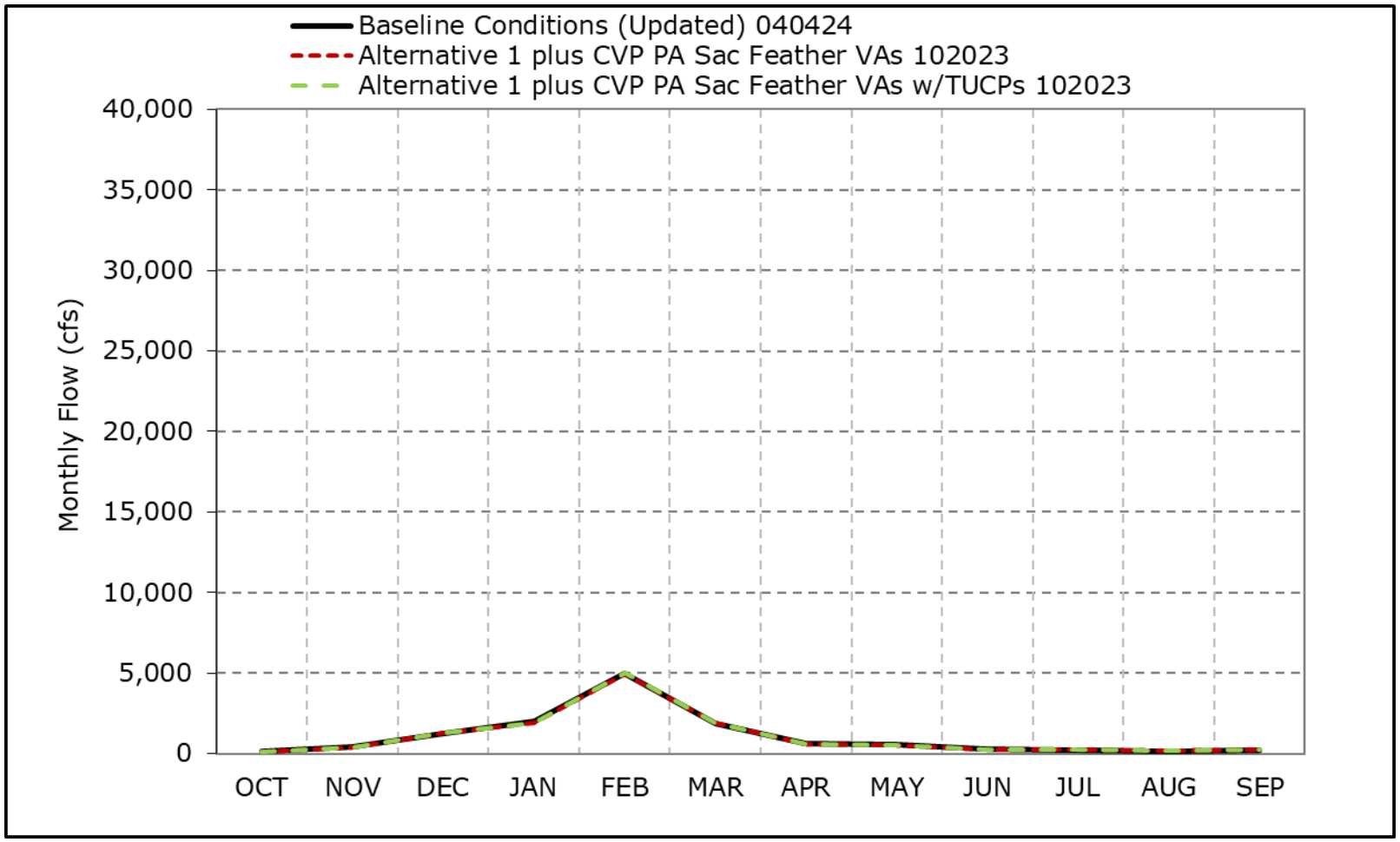
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3c. Yolo Bypass Flow, Above Normal Year Average Flow



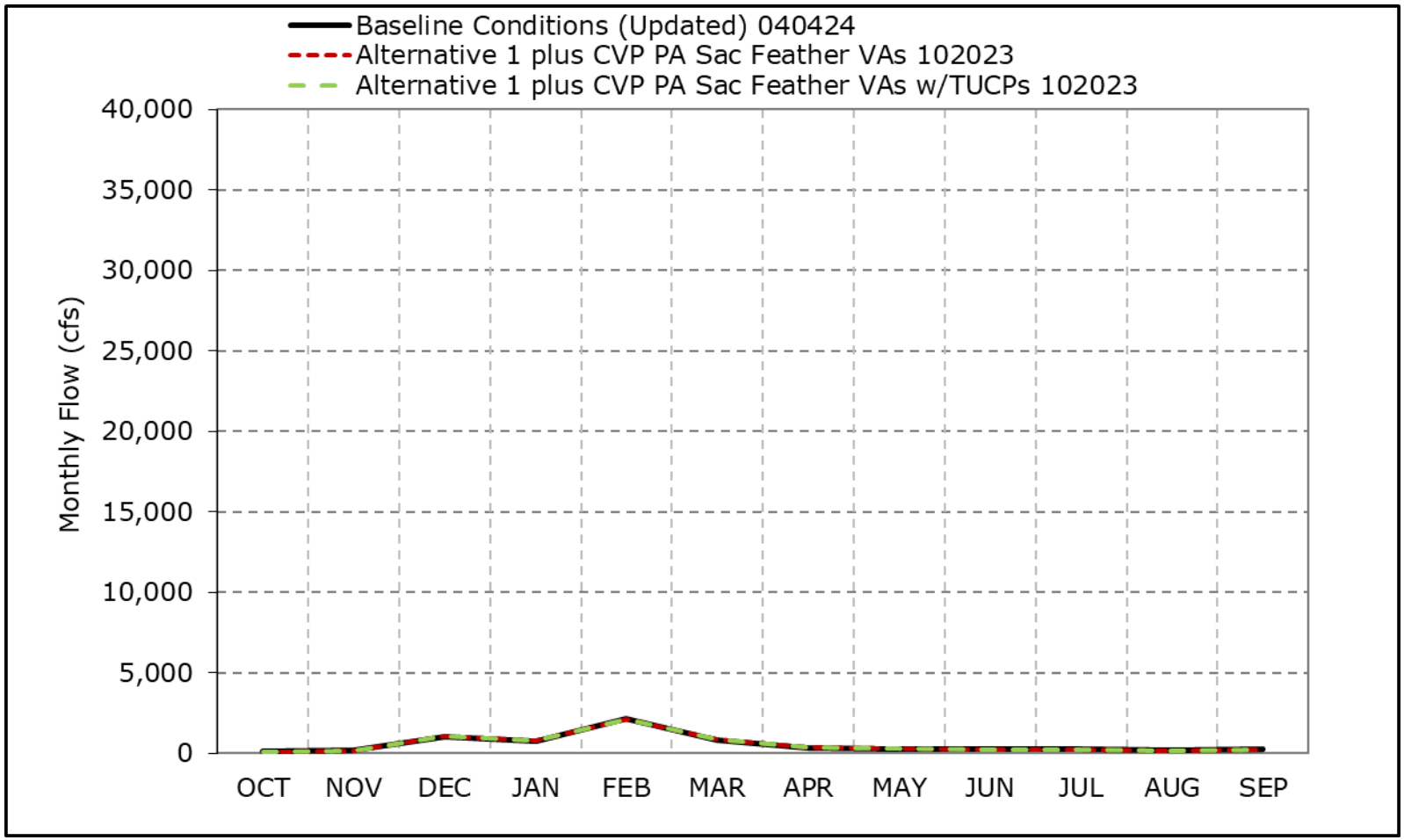
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3d. Yolo Bypass Flow, Below Normal Year Average Flow



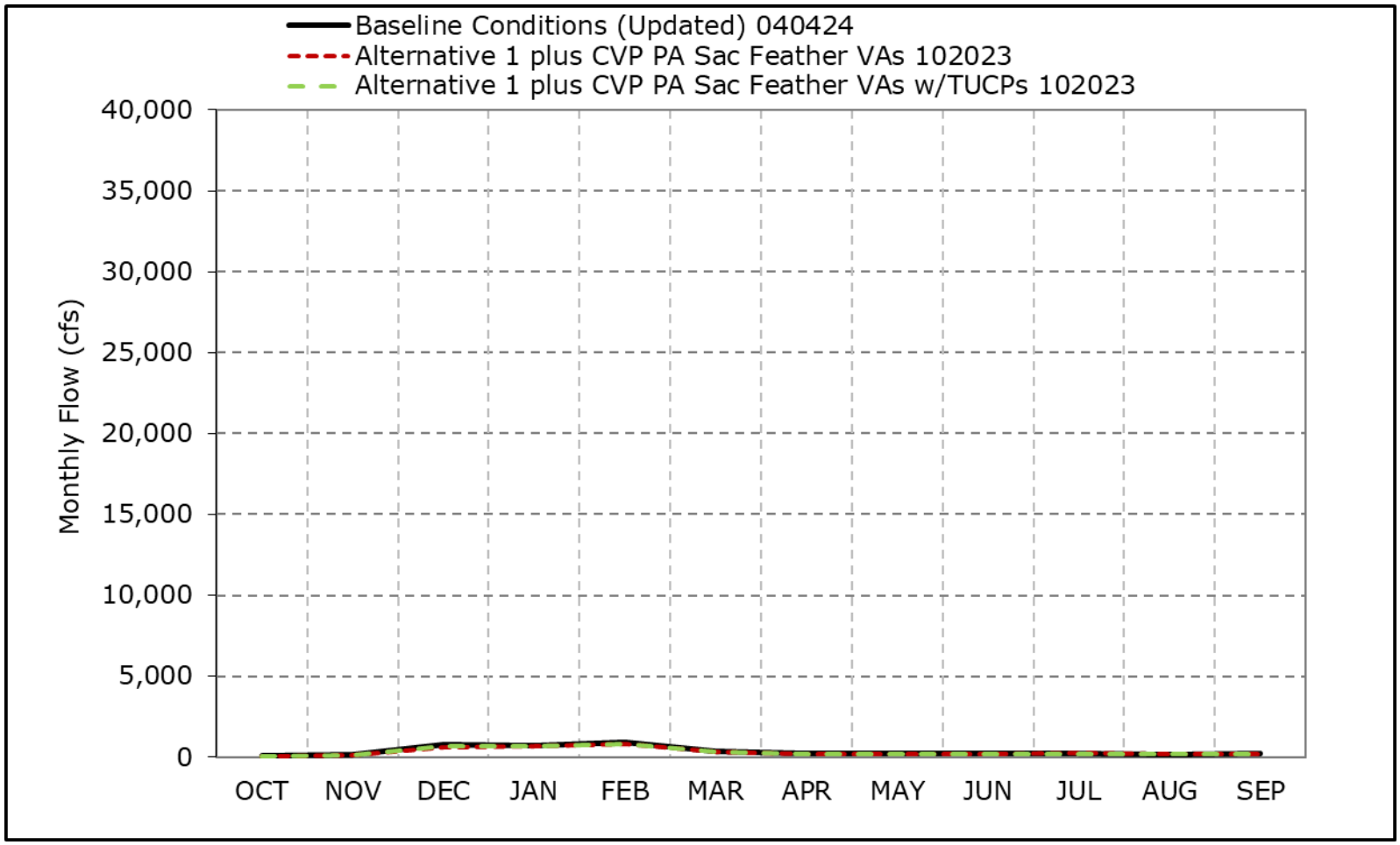
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3e. Yolo Bypass Flow, Dry Year Average Flow



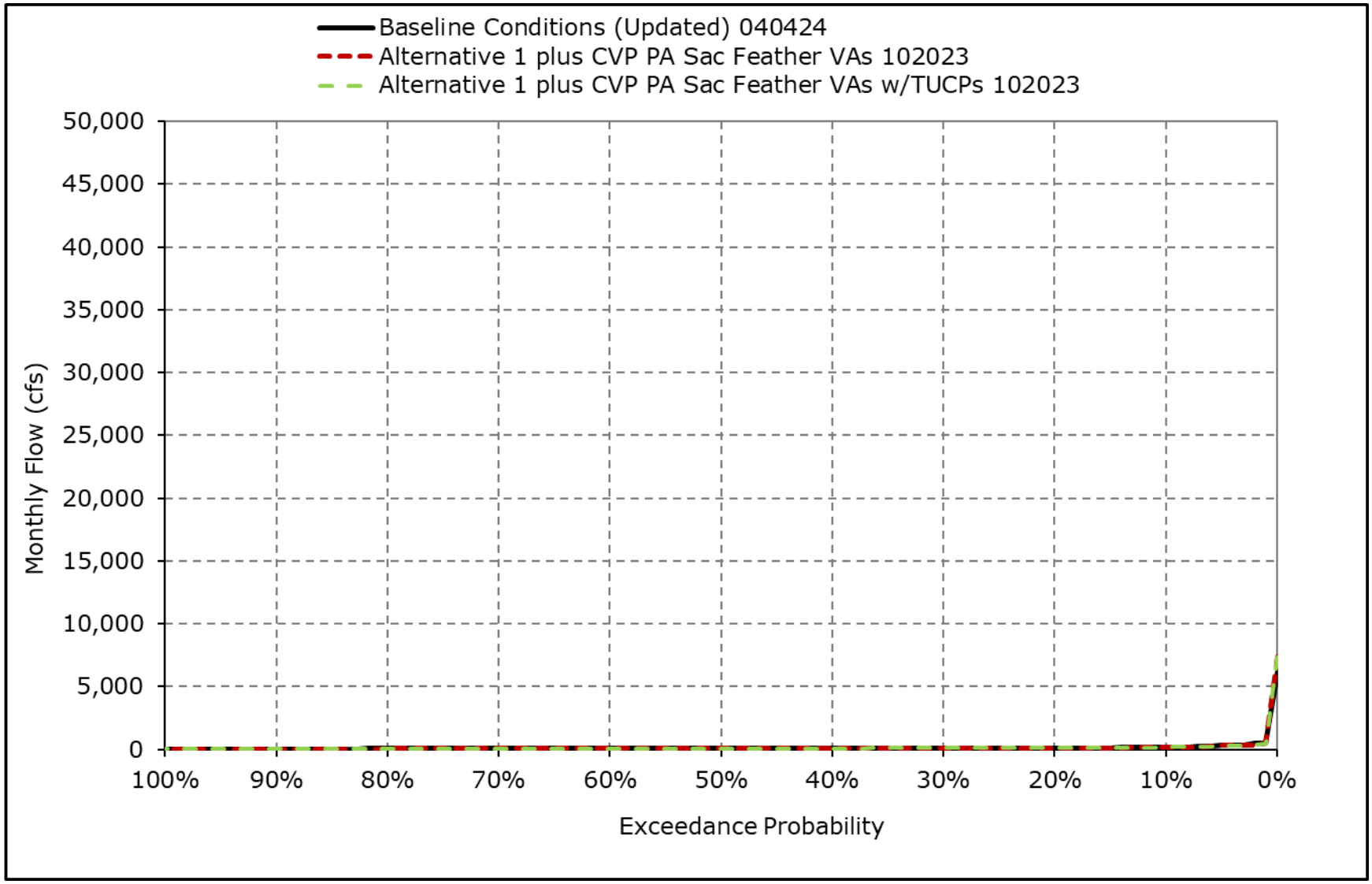
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3f. Yolo Bypass Flow, Critical Year Average Flow



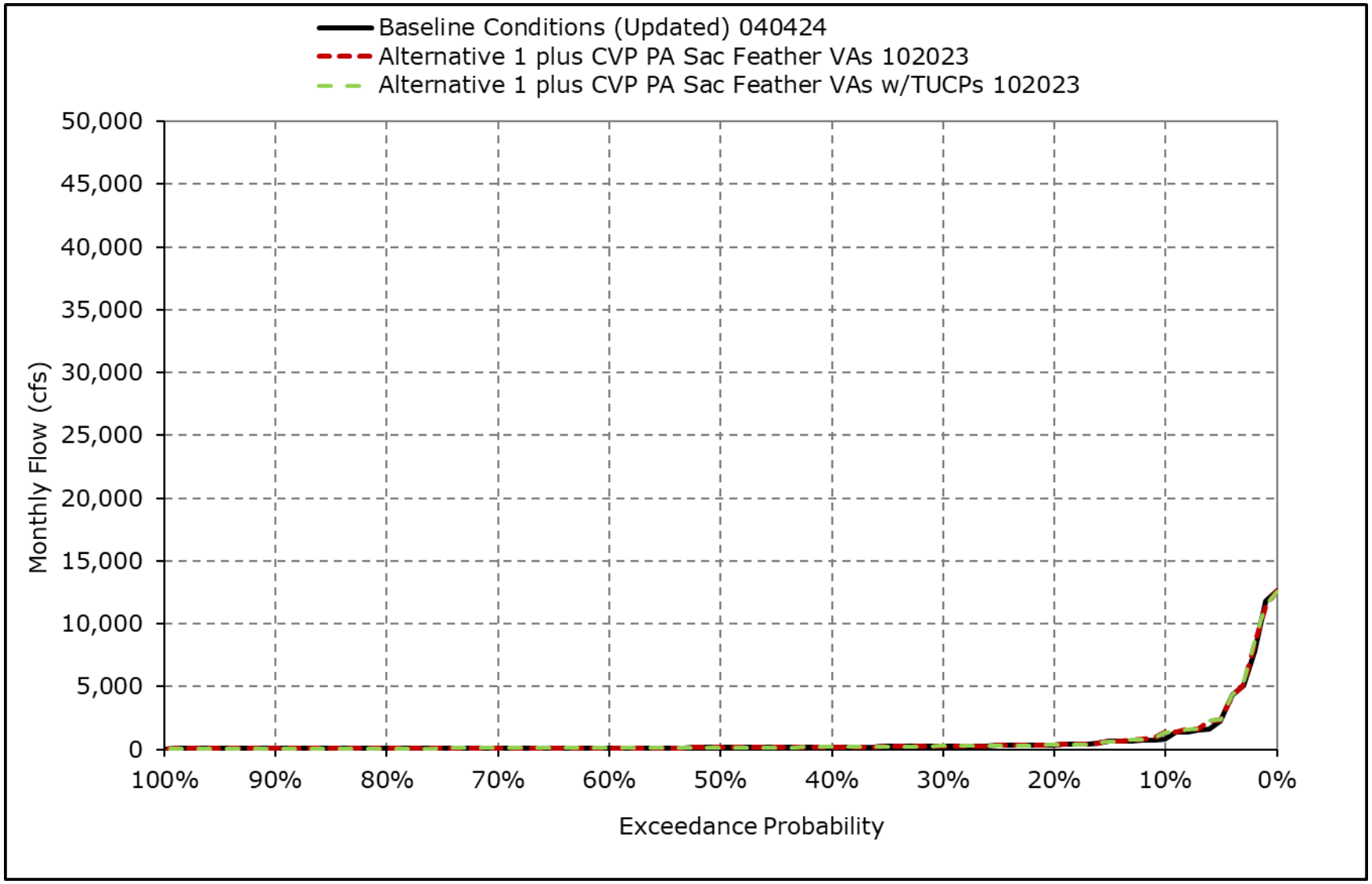
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3g. Yolo Bypass Flow, October



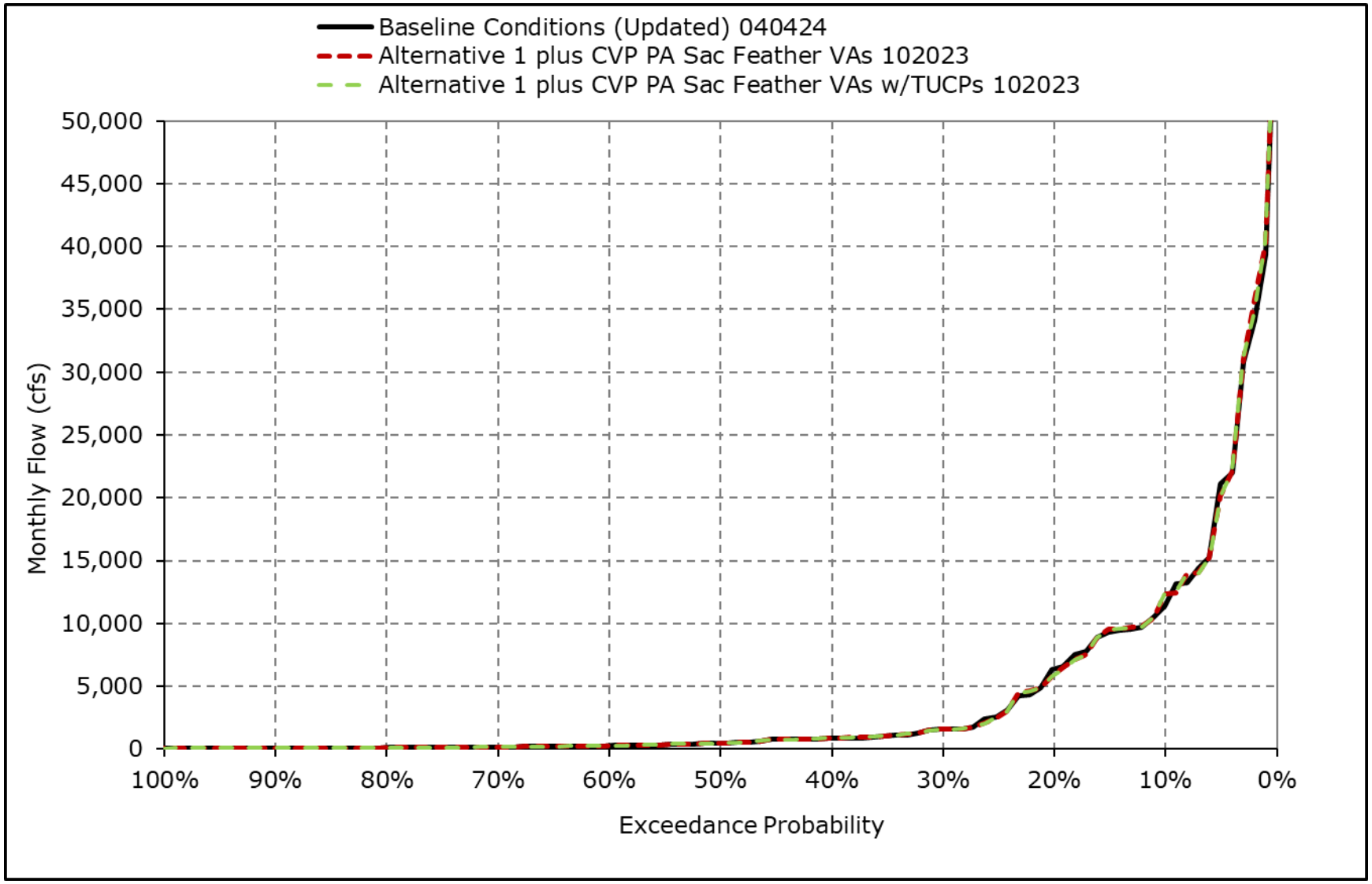
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3h. Yolo Bypass Flow, November



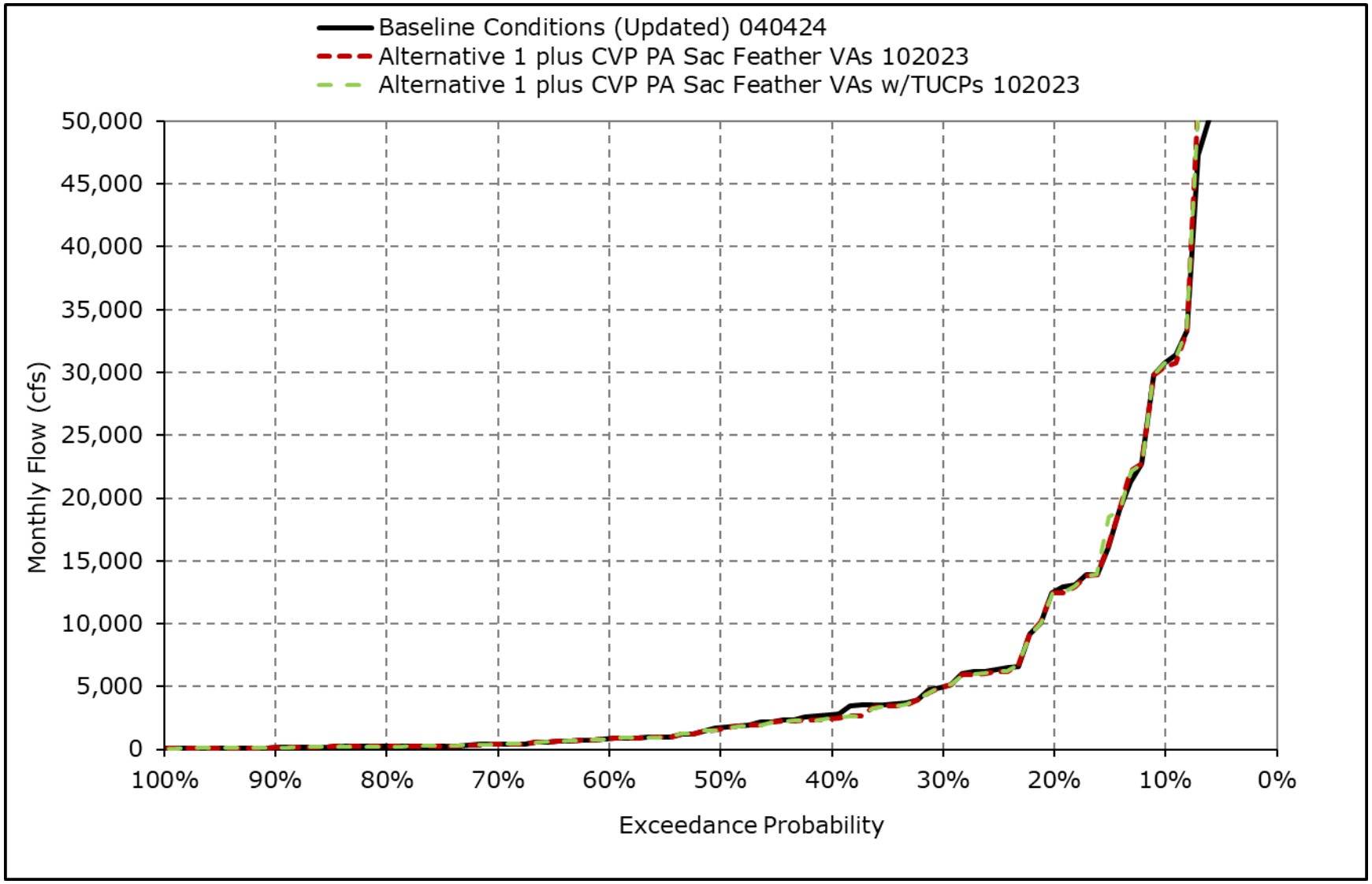
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3i. Yolo Bypass Flow, December



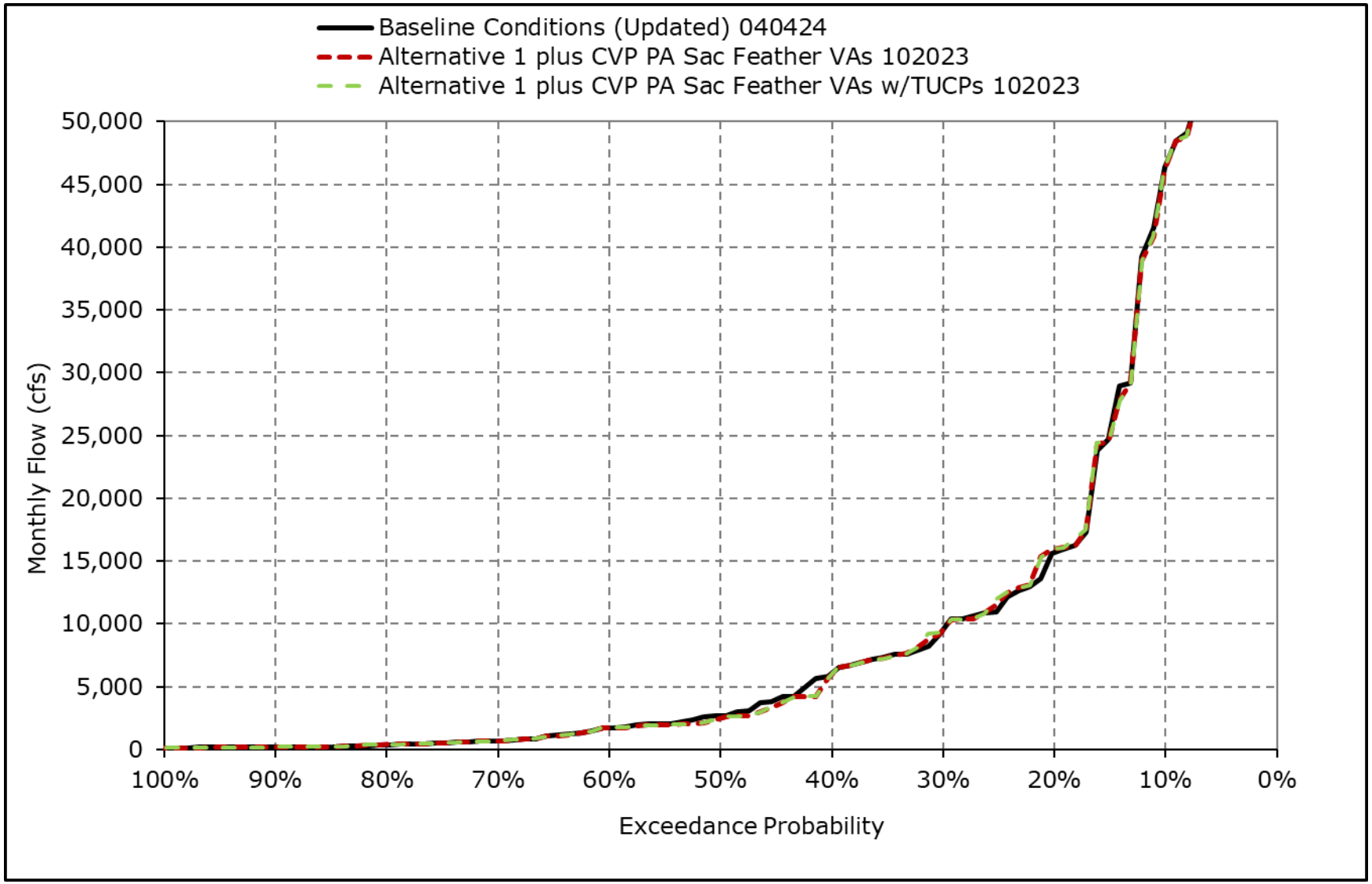
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3j. Yolo Bypass Flow, January



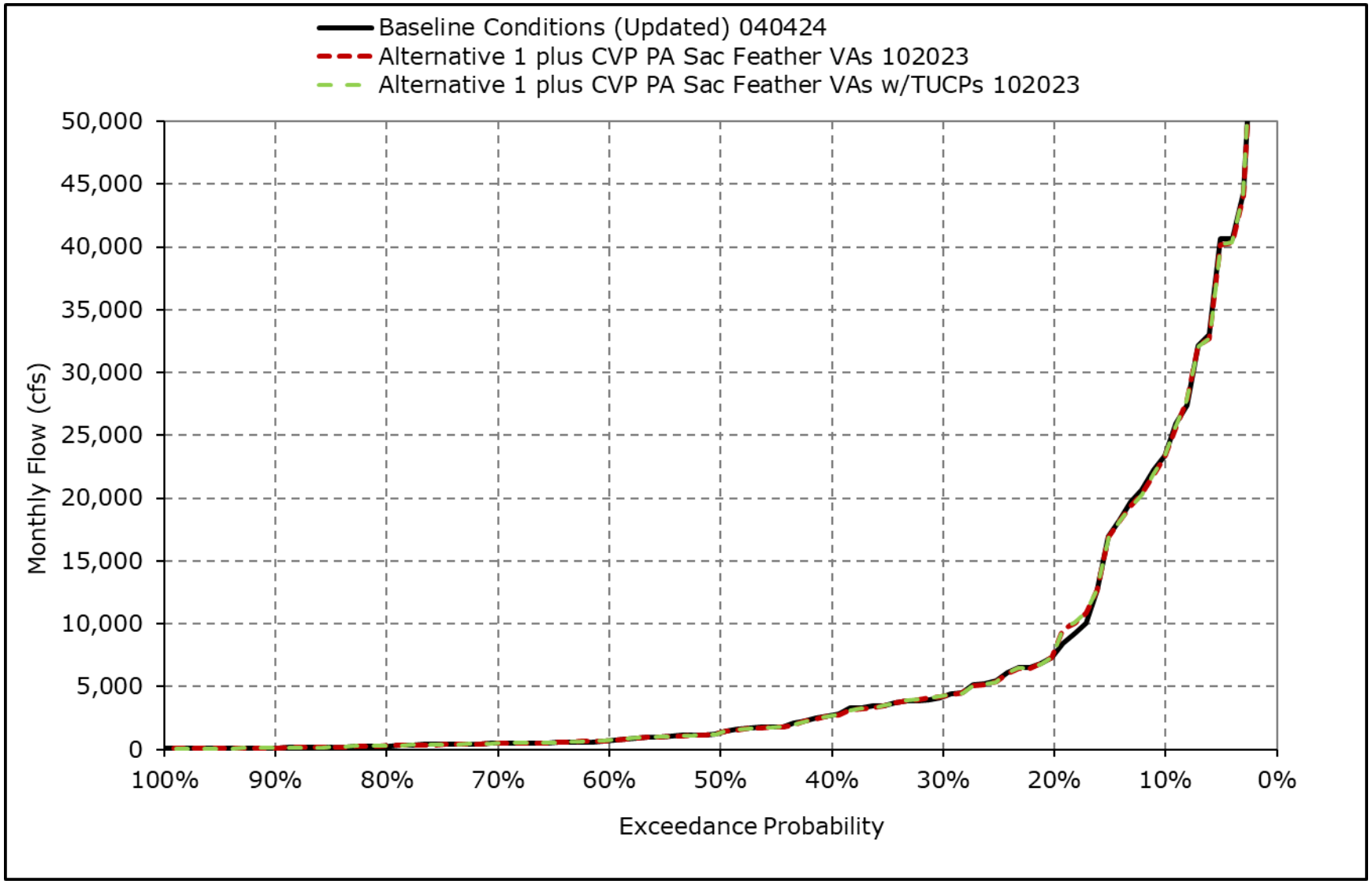
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3k. Yolo Bypass Flow, February



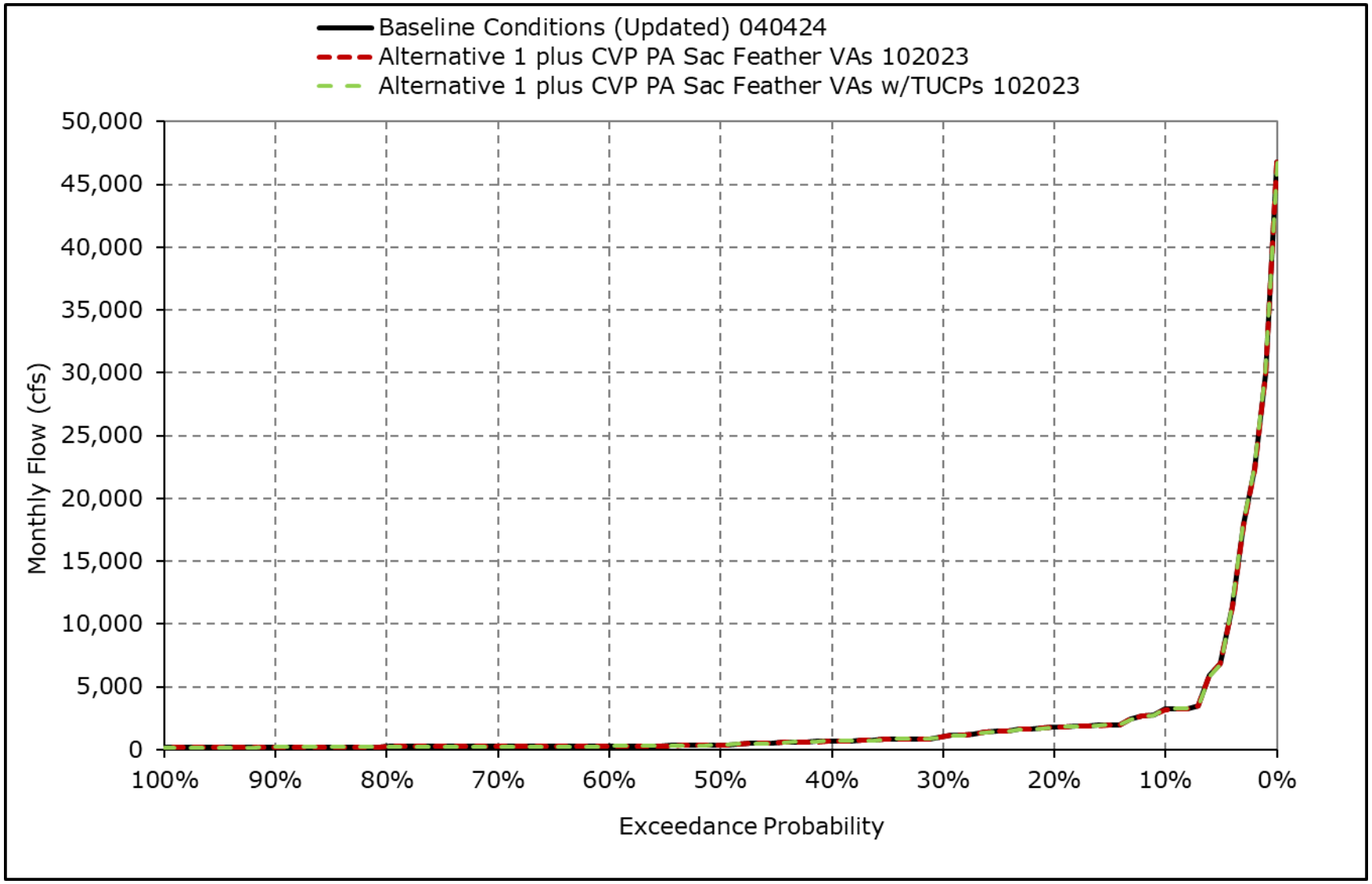
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3l. Yolo Bypass Flow, March



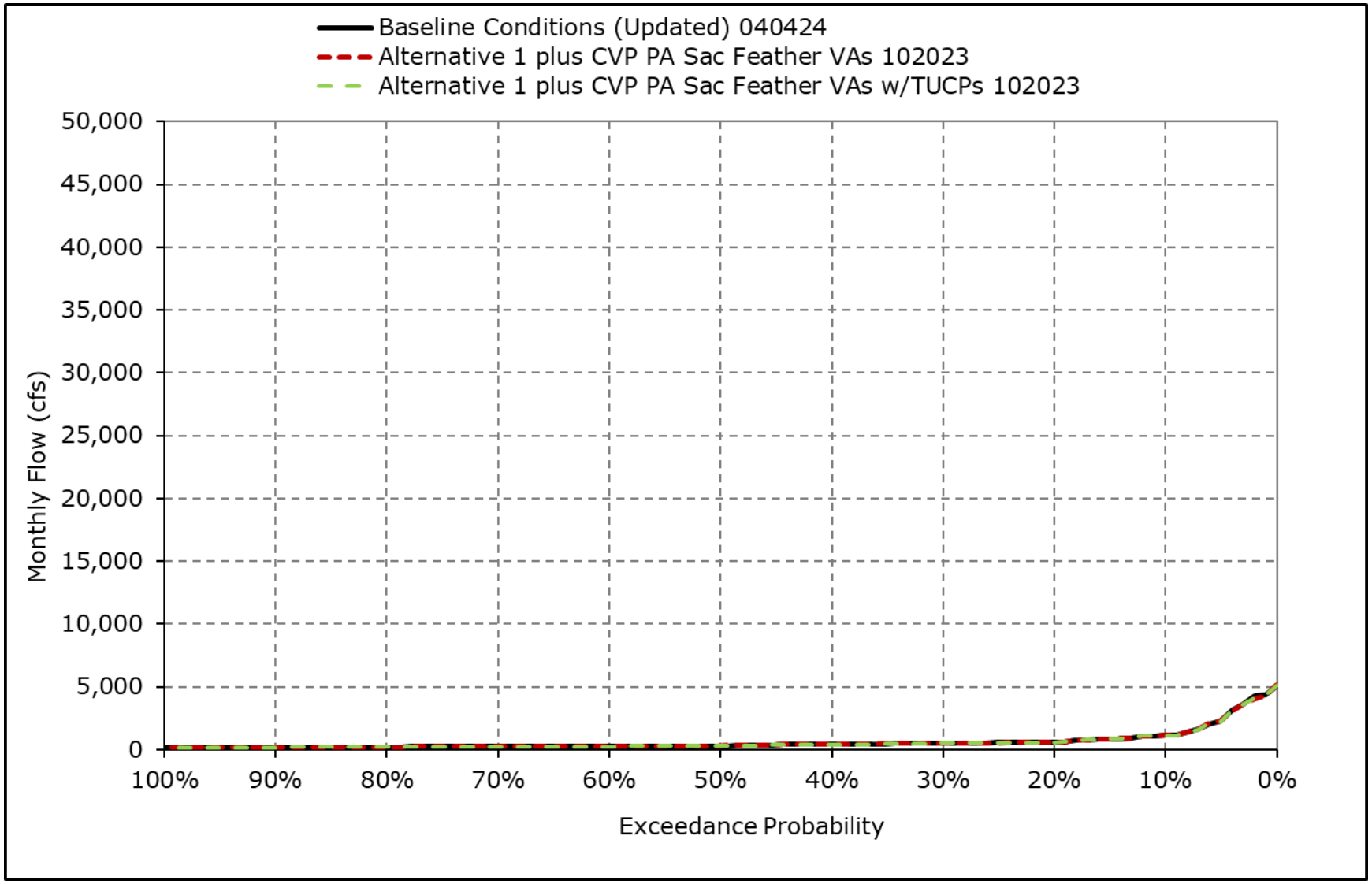
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3m. Yolo Bypass Flow, April



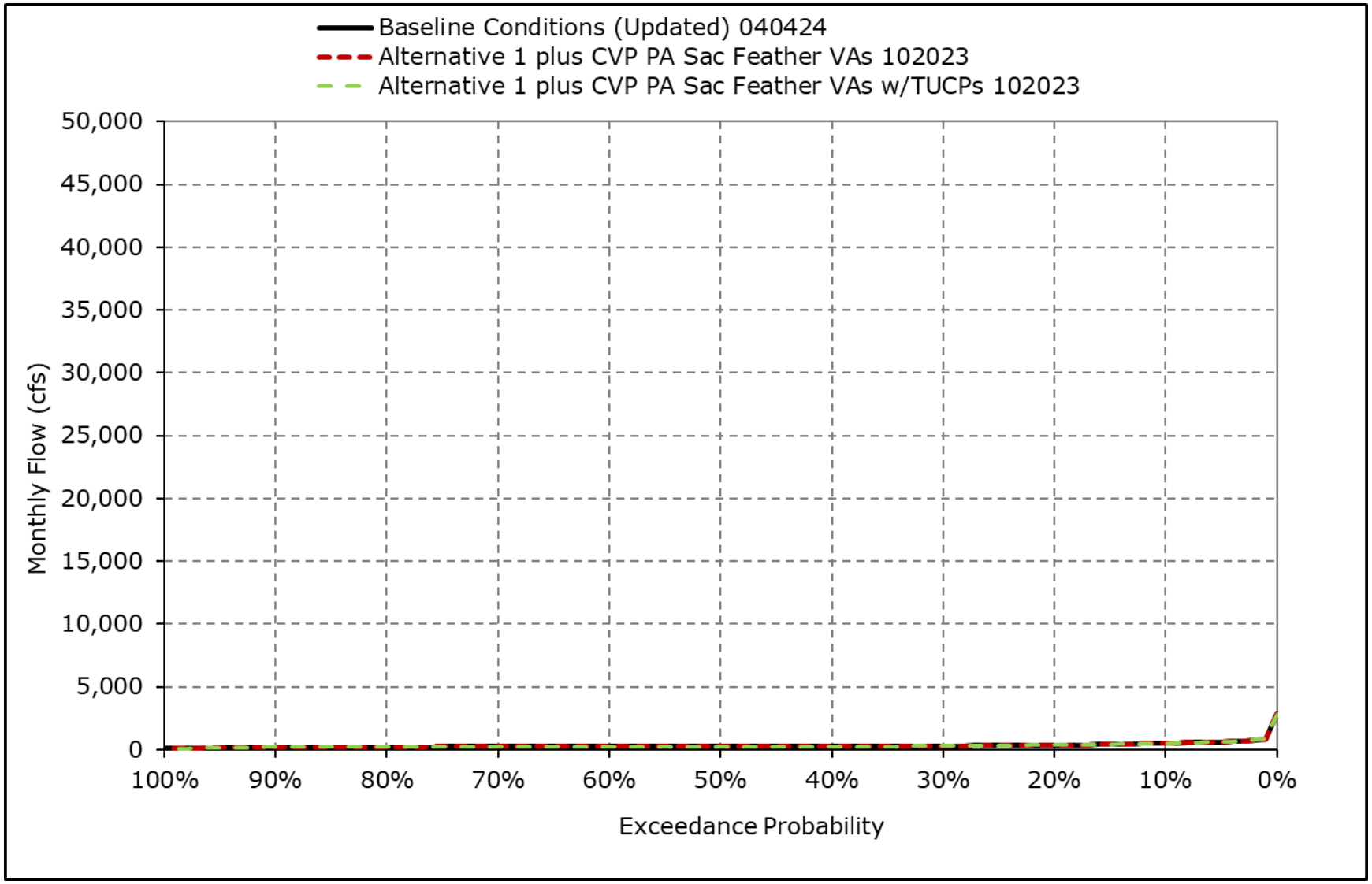
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3n. Yolo Bypass Flow, May



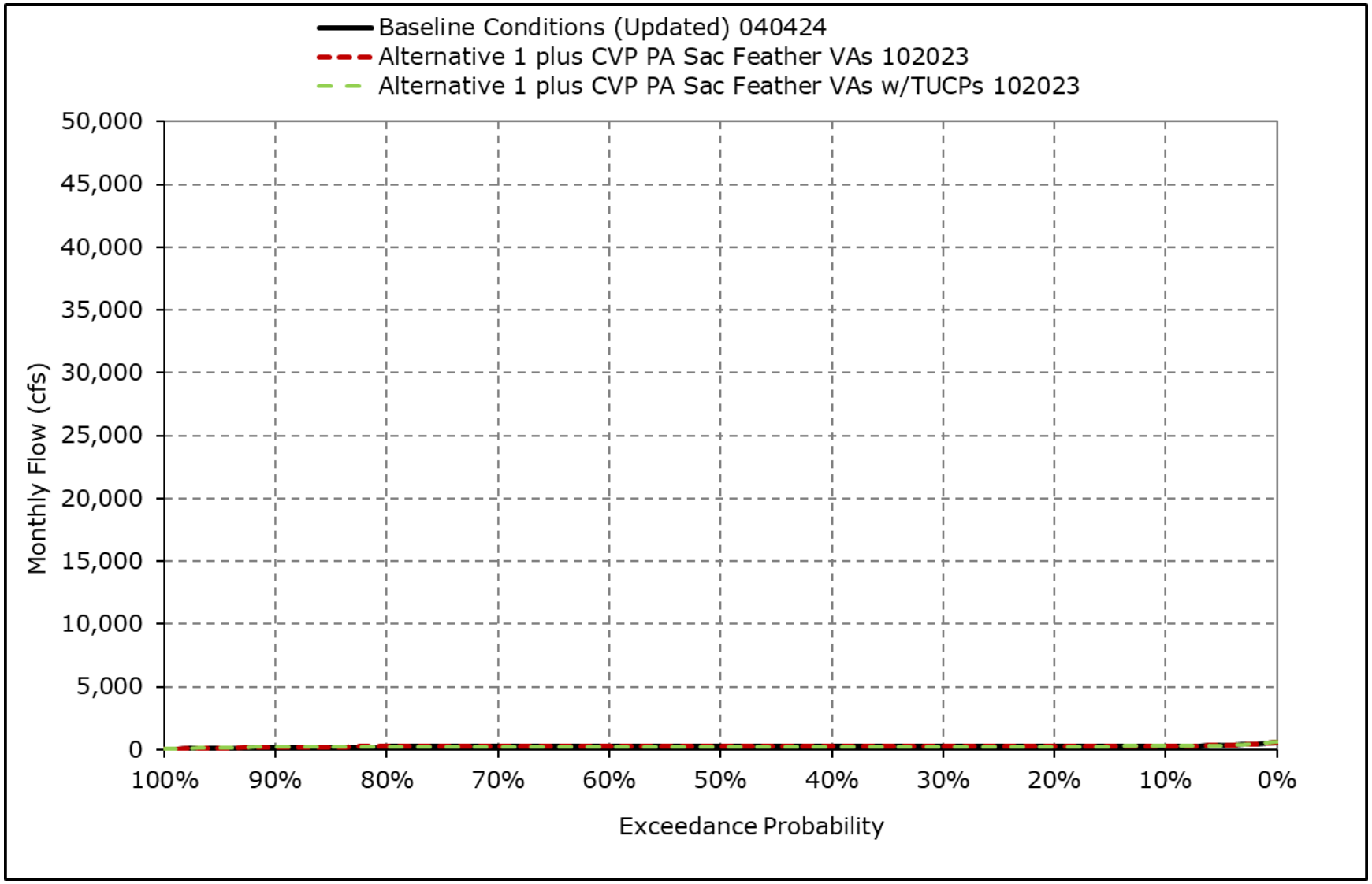
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3o. Yolo Bypass Flow, June



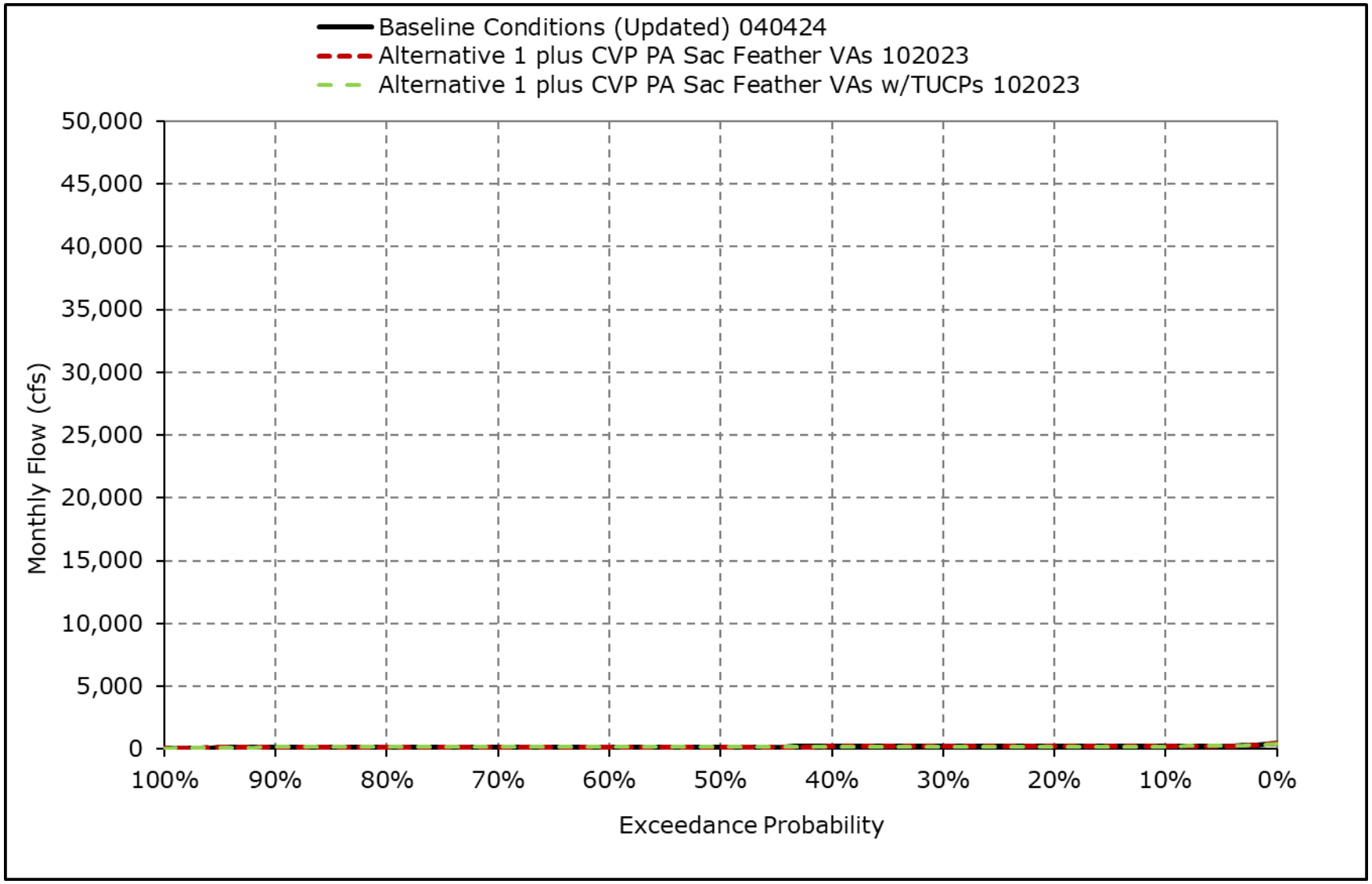
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3p. Yolo Bypass Flow, July



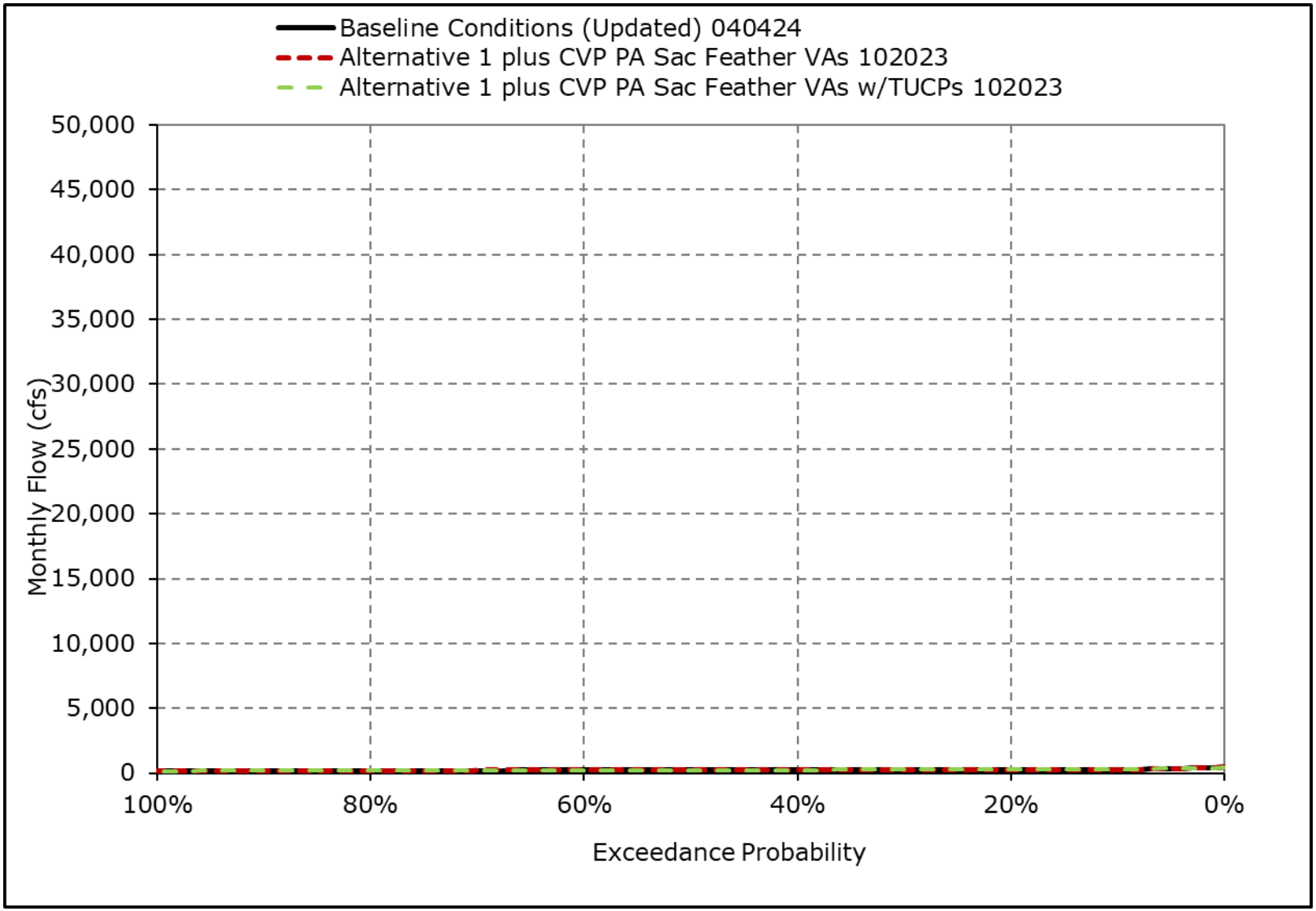
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3q. Yolo Bypass Flow, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-3r. Yolo Bypass Flow, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-4-1a. Sacramento River Flow at Rio Vista, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	10,564	18,829	56,038	83,067	103,529	79,940	45,957	37,632	22,411	13,194	10,744	12,210
20% Exceedance	9,335	10,271	35,920	58,332	65,694	51,920	32,943	27,475	13,482	12,759	10,338	11,798
30% Exceedance	8,688	9,224	20,553	32,268	50,369	38,950	21,651	18,175	9,320	11,650	10,128	10,793
40% Exceedance	7,567	8,554	15,532	25,145	36,813	29,246	16,878	13,305	7,769	11,175	9,816	9,710
50% Exceedance	6,376	8,092	12,662	19,905	26,702	20,968	12,906	11,639	7,380	10,775	9,203	8,810
60% Exceedance	5,633	7,214	11,363	15,933	19,854	18,388	9,531	9,565	7,122	10,287	8,616	7,599
70% Exceedance	4,972	5,817	10,295	11,075	16,066	15,276	8,265	8,207	6,731	9,288	7,527	5,780
80% Exceedance	4,444	5,168	8,250	9,308	13,734	12,071	7,873	7,709	6,013	8,014	5,718	4,905
90% Exceedance	3,791	4,305	6,844	8,068	10,440	9,492	6,719	6,195	4,895	5,416	4,002	4,203
Full Simulation Period Average[a]	7,480	10,259	22,754	34,740	44,638	35,391	20,761	16,543	10,870	10,369	8,386	8,493
Wet Water Years (30%)	9,824	15,700	43,531	69,470	87,046	65,806	40,301	29,249	18,673	11,546	9,854	11,880
Above Normal Water Years (11%)	6,493	9,203	17,698	45,419	52,256	46,440	22,174	18,609	12,223	12,054	10,760	11,229
Below Normal Water Years (21%)	7,308	9,545	14,404	20,161	29,079	23,969	14,201	13,424	7,647	11,999	9,709	8,491
Dry Water Years (22%)	6,950	7,635	13,898	13,097	20,395	17,149	9,682	8,854	7,068	10,051	7,125	5,648
Critical Water Years (16%)	4,719	5,325	10,410	11,171	13,643	10,840	6,993	5,965	4,767	5,305	3,998	4,174

Table 4F-3-4-1b. Sacramento River Flow at Rio Vista, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	10,482	19,109	56,044	83,147	103,761	79,434	45,904	37,671	21,831	12,914	10,480	13,034
20% Exceedance	9,444	10,430	35,595	58,421	67,552	52,793	33,532	28,447	13,474	12,415	10,137	12,353
30% Exceedance	8,716	9,222	20,550	32,653	50,561	38,558	22,225	18,344	9,305	11,674	9,853	11,287
40% Exceedance	7,660	8,562	15,588	25,133	37,148	29,223	17,032	13,820	7,710	10,952	9,393	9,994
50% Exceedance	6,226	8,067	13,007	20,033	26,543	21,191	13,410	12,420	7,386	10,567	9,161	9,032
60% Exceedance	5,554	7,190	11,326	15,921	19,845	18,376	10,359	10,531	7,111	10,043	8,459	7,001
70% Exceedance	4,739	5,920	10,159	11,591	16,057	15,252	9,037	9,348	6,767	9,069	7,307	5,803
80% Exceedance	4,542	5,254	8,325	9,457	13,665	12,167	8,195	8,671	6,312	7,809	5,149	4,954
90% Exceedance	3,864	4,549	6,867	8,070	10,274	9,478	7,115	6,812	4,218	5,249	3,881	4,157
Full Simulation Period Average[a]	7,475	10,344	22,944	34,940	44,806	35,395	21,229	17,148	10,892	10,161	8,145	8,731
Wet Water Years (30%)	9,814	15,934	44,046	69,896	87,144	65,572	40,329	29,394	18,708	11,518	9,823	12,472
Above Normal Water Years (11%)	6,392	9,246	17,863	45,694	53,139	46,550	22,933	19,673	12,287	11,936	10,388	12,039
Below Normal Water Years (21%)	7,252	9,619	14,579	20,296	29,204	23,977	15,379	14,396	7,908	11,698	9,387	8,274
Dry Water Years (22%)	7,039	7,685	13,969	13,154	20,167	17,442	10,248	9,893	7,055	9,577	6,657	5,729
Critical Water Years (16%)	4,729	5,228	10,190	11,180	14,048	10,814	7,021	6,040	4,470	5,185	3,871	4,171

Table 4F-3-4-1c. Sacramento River Flow at Rio Vista, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-82	280	6	80	232	-505	-53	40	-581	-280	-264	824
20% Exceedance	109	159	-325	90	1,858	873	589	972	-7	-344	-201	556
30% Exceedance	28	-2	-3	385	192	-392	574	169	-15	24	-275	494
40% Exceedance	93	8	56	-12	334	-23	155	516	-59	-224	-423	284
50% Exceedance	-150	-24	345	128	-159	223	504	781	6	-208	-42	222
60% Exceedance	-79	-24	-37	-11	-9	-11	827	965	-11	-244	-157	-597
70% Exceedance	-233	103	-136	516	-9	-24	772	1,141	36	-219	-220	23
80% Exceedance	98	86	75	149	-69	96	322	962	299	-205	-569	49
90% Exceedance	73	244	24	2	-166	-14	397	617	-677	-168	-121	-46
Full Simulation Period Average[a]	-5	86	190	200	167	4	468	605	22	-208	-241	238
Wet Water Years (30%)	-10	234	514	426	98	-234	28	145	35	-29	-31	591
Above Normal Water Years (11%)	-101	43	166	275	883	110	759	1,063	64	-117	-372	811
Below Normal Water Years (21%)	-56	74	175	135	126	9	1,178	972	261	-301	-321	-217
Dry Water Years (22%)	89	50	71	56	-229	293	566	1,040	-13	-474	-468	81
Critical Water Years (16%)	10	-98	-220	8	405	-26	29	75	-297	-120	-126	-3

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-4-2a. Sacramento River Flow at Rio Vista, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	10,564	18,829	56,038	83,067	103,529	79,940	45,957	37,632	22,411	13,194	10,744	12,210
20% Exceedance	9,335	10,271	35,920	58,332	65,694	51,920	32,943	27,475	13,482	12,759	10,338	11,798
30% Exceedance	8,688	9,224	20,553	32,268	50,369	38,950	21,651	18,175	9,320	11,650	10,128	10,793
40% Exceedance	7,567	8,554	15,532	25,145	36,813	29,246	16,878	13,305	7,769	11,175	9,816	9,710
50% Exceedance	6,376	8,092	12,662	19,905	26,702	20,968	12,906	11,639	7,380	10,775	9,203	8,810
60% Exceedance	5,633	7,214	11,363	15,933	19,854	18,388	9,531	9,565	7,122	10,287	8,616	7,599
70% Exceedance	4,972	5,817	10,295	11,075	16,066	15,276	8,265	8,207	6,731	9,288	7,527	5,780
80% Exceedance	4,444	5,168	8,250	9,308	13,734	12,071	7,873	7,709	6,013	8,014	5,718	4,905
90% Exceedance	3,791	4,305	6,844	8,068	10,440	9,492	6,719	6,195	4,895	5,416	4,002	4,203
Full Simulation Period Average[a]	7,480	10,259	22,754	34,740	44,638	35,391	20,761	16,543	10,870	10,369	8,386	8,493
Wet Water Years (30%)	9,824	15,700	43,531	69,470	87,046	65,806	40,301	29,249	18,673	11,546	9,854	11,880
Above Normal Water Years (11%)	6,493	9,203	17,698	45,419	52,256	46,440	22,174	18,609	12,223	12,054	10,760	11,229
Below Normal Water Years (21%)	7,308	9,545	14,404	20,161	29,079	23,969	14,201	13,424	7,647	11,999	9,709	8,491
Dry Water Years (22%)	6,950	7,635	13,898	13,097	20,395	17,149	9,682	8,854	7,068	10,051	7,125	5,648
Critical Water Years (16%)	4,719	5,325	10,410	11,171	13,643	10,840	6,993	5,965	4,767	5,305	3,998	4,174

Table 4F-3-4-2b. Sacramento River Flow at Rio Vista, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	10,485	19,330	56,045	83,150	103,792	79,415	45,913	37,673	21,799	12,942	10,505	13,040
20% Exceedance	9,445	10,428	35,654	58,325	67,531	52,866	33,849	28,448	13,476	12,404	10,121	12,354
30% Exceedance	8,717	9,292	20,551	32,888	50,456	38,564	22,221	18,368	9,314	11,674	9,854	11,287
40% Exceedance	7,733	8,564	15,611	25,140	37,375	29,224	17,037	13,826	7,710	11,021	9,444	10,172
50% Exceedance	6,422	8,068	12,975	20,034	26,539	21,195	13,413	12,421	7,339	10,569	9,181	9,202
60% Exceedance	5,625	7,184	11,327	15,921	19,852	18,384	10,361	10,912	7,073	10,037	8,459	6,998
70% Exceedance	4,787	5,995	10,243	11,595	16,062	15,254	9,038	9,477	6,768	9,081	7,371	5,785
80% Exceedance	4,589	5,257	8,302	9,466	13,757	11,997	7,916	8,677	6,313	7,925	5,097	4,950
90% Exceedance	3,964	4,560	6,861	8,072	10,275	8,487	6,726	6,829	4,489	5,079	3,781	4,189
Full Simulation Period Average[a]	7,564	10,371	22,922	35,004	44,862	35,319	21,051	17,176	10,854	10,073	8,111	8,735
Wet Water Years (30%)	9,836	15,971	43,996	69,920	87,151	65,581	40,337	29,402	18,712	11,517	9,827	12,476
Above Normal Water Years (11%)	6,557	9,257	17,875	46,063	53,239	46,567	22,935	19,684	12,328	11,963	10,391	12,036
Below Normal Water Years (21%)	7,381	9,645	14,550	20,337	29,326	24,006	15,402	14,417	7,911	11,716	9,398	8,358
Dry Water Years (22%)	7,056	7,701	13,991	13,174	20,233	17,412	10,295	9,910	7,050	9,588	6,709	5,754
Critical Water Years (16%)	4,933	5,262	10,148	11,197	14,066	10,315	5,798	6,140	4,196	4,574	3,567	4,044

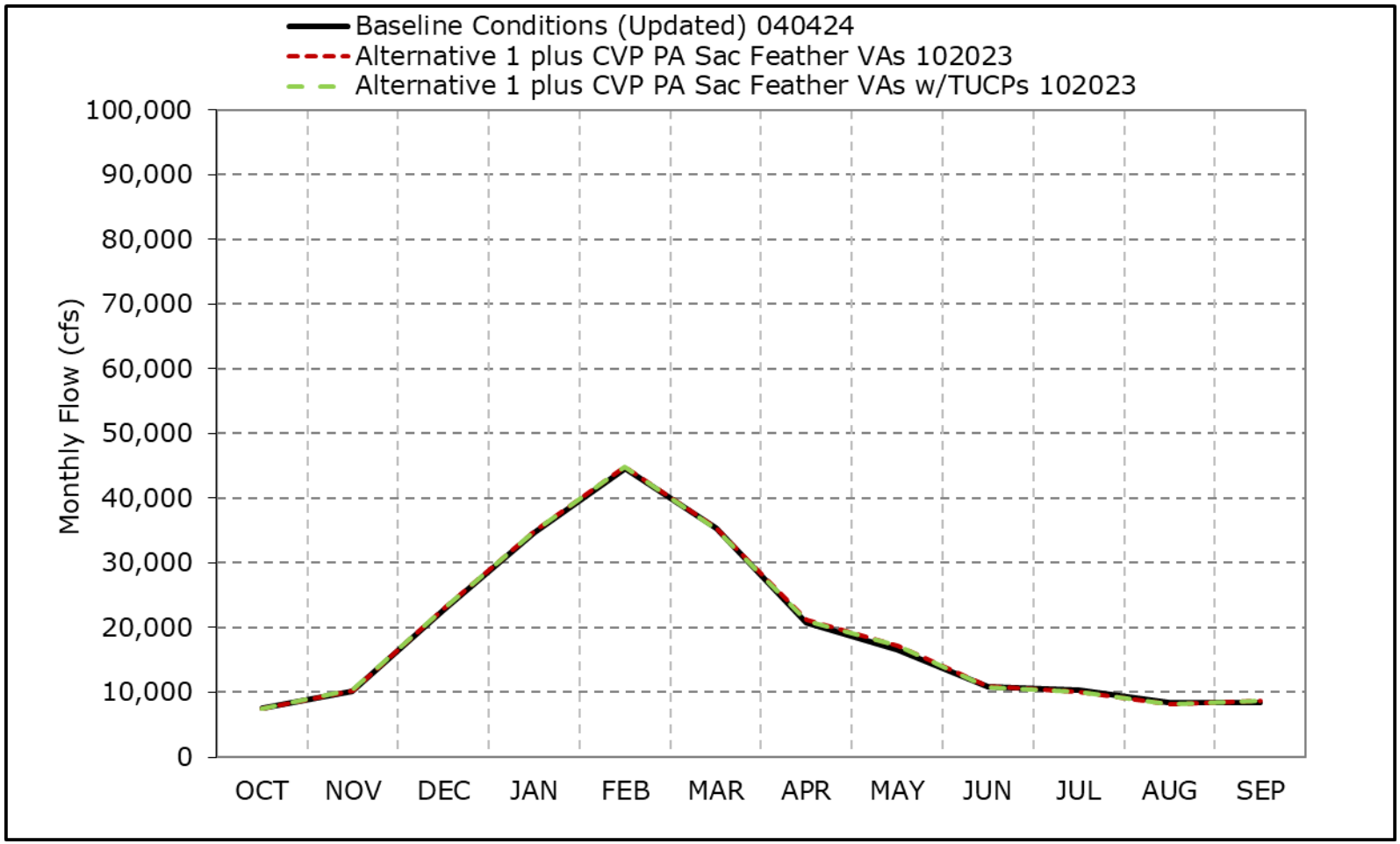
Table 4F-3-4-2c. Sacramento River Flow at Rio Vista, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-79	501	7	83	263	-525	-44	41	-613	-253	-239	830
20% Exceedance	110	157	-266	-7	1,837	946	906	973	-6	-355	-216	557
30% Exceedance	29	68	-2	621	87	-386	570	193	-6	24	-274	493
40% Exceedance	166	10	79	-5	562	-22	160	521	-58	-154	-373	461
50% Exceedance	46	-24	313	129	-163	226	507	781	-41	-206	-22	393
60% Exceedance	-7	-30	-36	-11	-2	-3	830	1,346	-48	-250	-157	-600
70% Exceedance	-185	178	-52	519	-4	-22	773	1,270	36	-206	-156	5
80% Exceedance	145	89	52	158	24	-74	43	969	300	-90	-621	45
90% Exceedance	173	254	18	4	-165	-1,005	7	635	-406	-337	-221	-14
Full Simulation Period Average[a]	84	113	168	264	224	-72	290	633	-16	-297	-274	242
Wet Water Years (30%)	13	271	465	450	106	-225	36	152	40	-29	-27	596
Above Normal Water Years (11%)	64	54	177	645	982	127	761	1,075	105	-90	-370	808
Below Normal Water Years (21%)	73	100	146	176	247	38	1,201	993	265	-283	-311	-133
Dry Water Years (22%)	105	66	93	77	-163	263	613	1,057	-18	-462	-416	106
Critical Water Years (16%)	214	-63	-263	26	423	-525	-1,194	175	-571	-731	-431	-130

[a] Based on the 100-year simulation period.

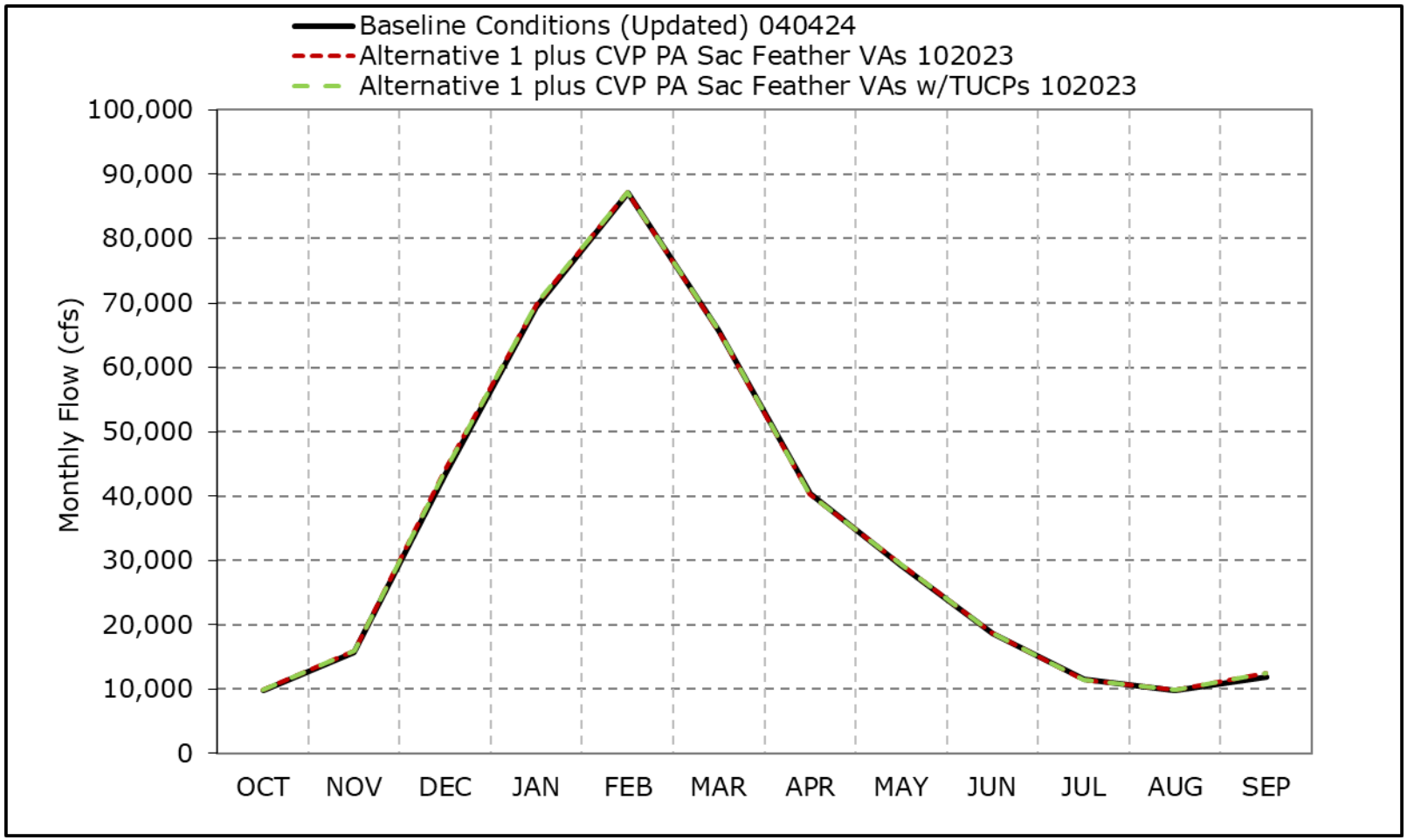
* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-4a. Sacramento River Flow at Rio Vista, Long-Term Average Flow



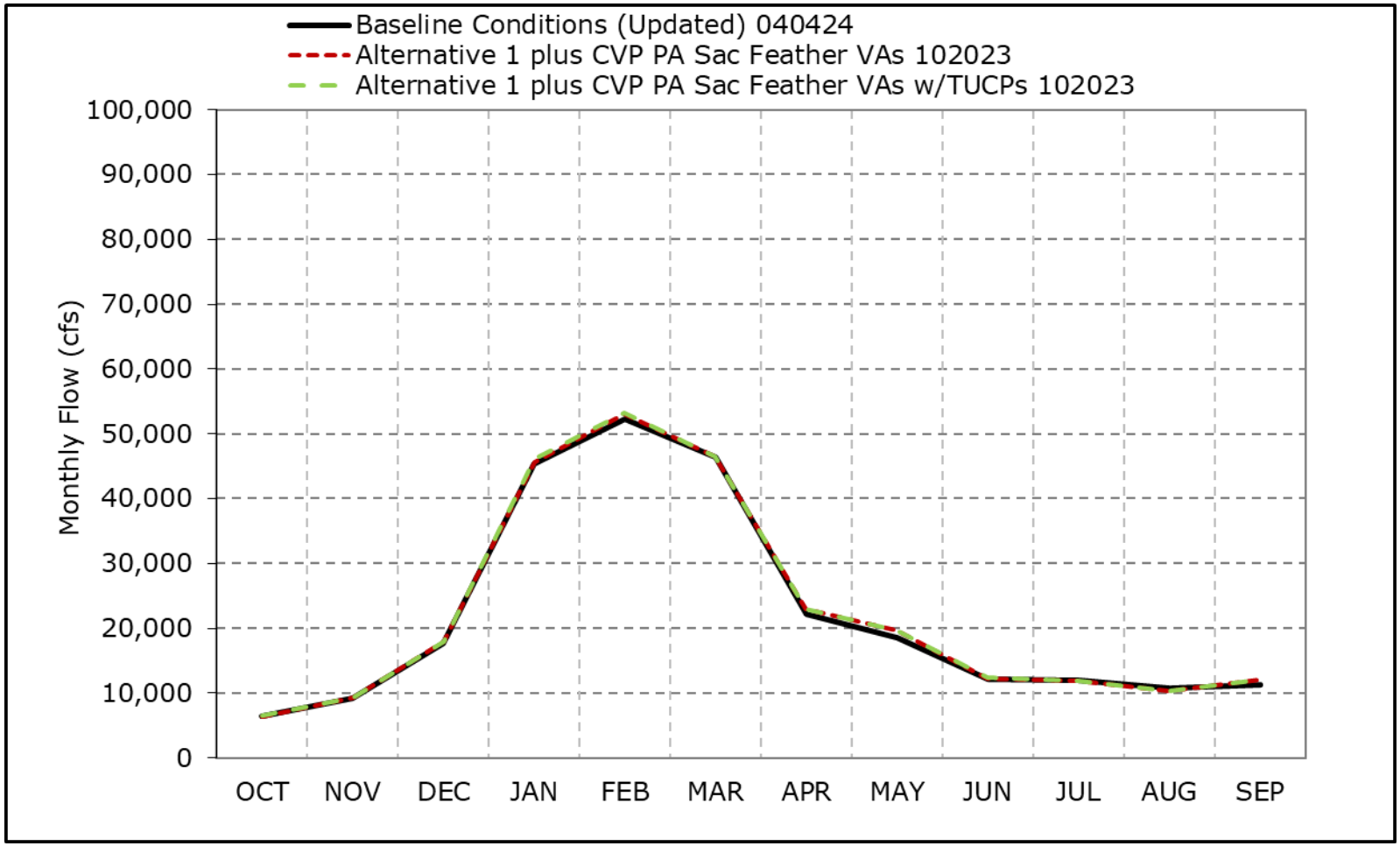
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4b. Sacramento River Flow at Rio Vista, Wet Year Average Flow



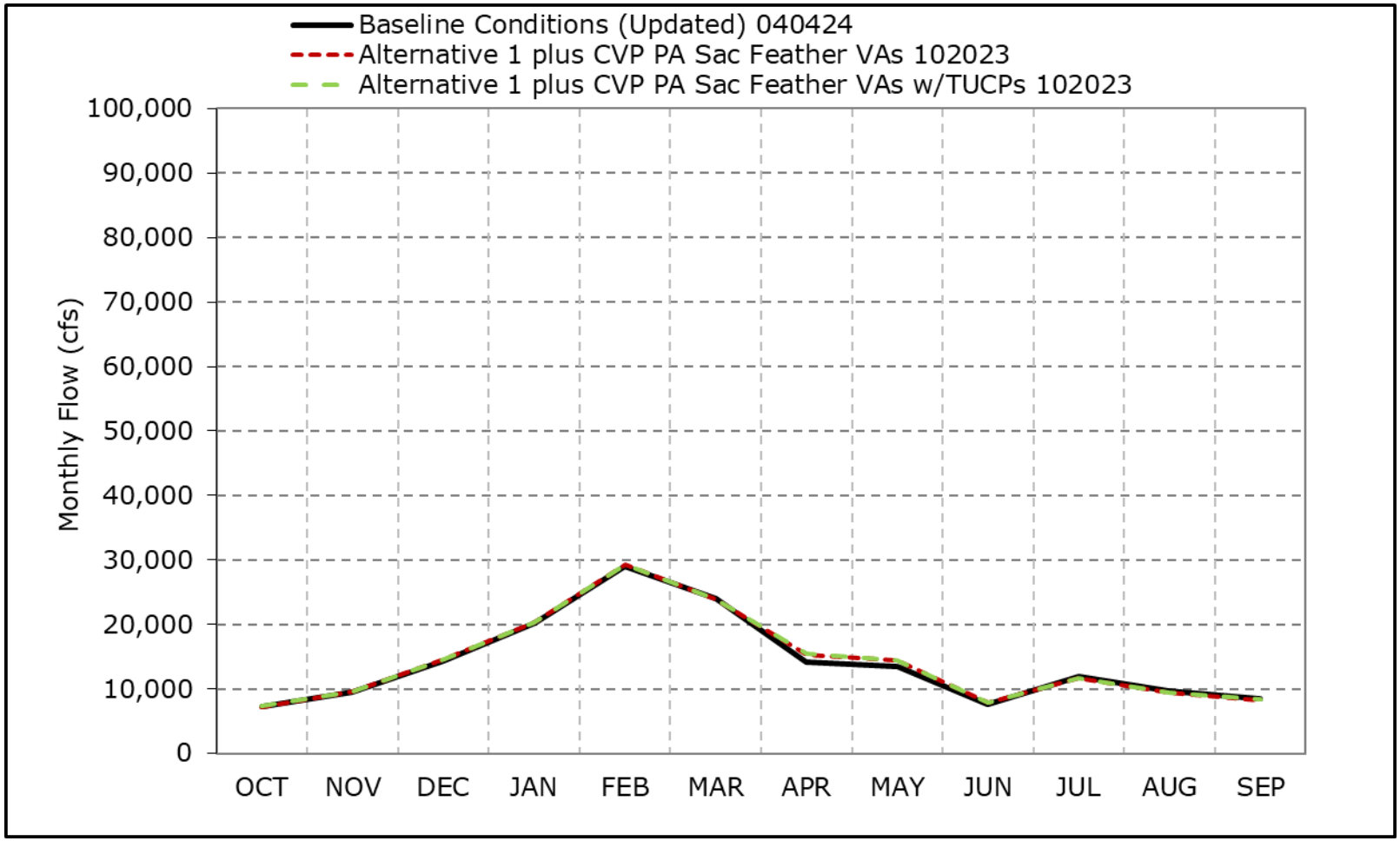
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

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



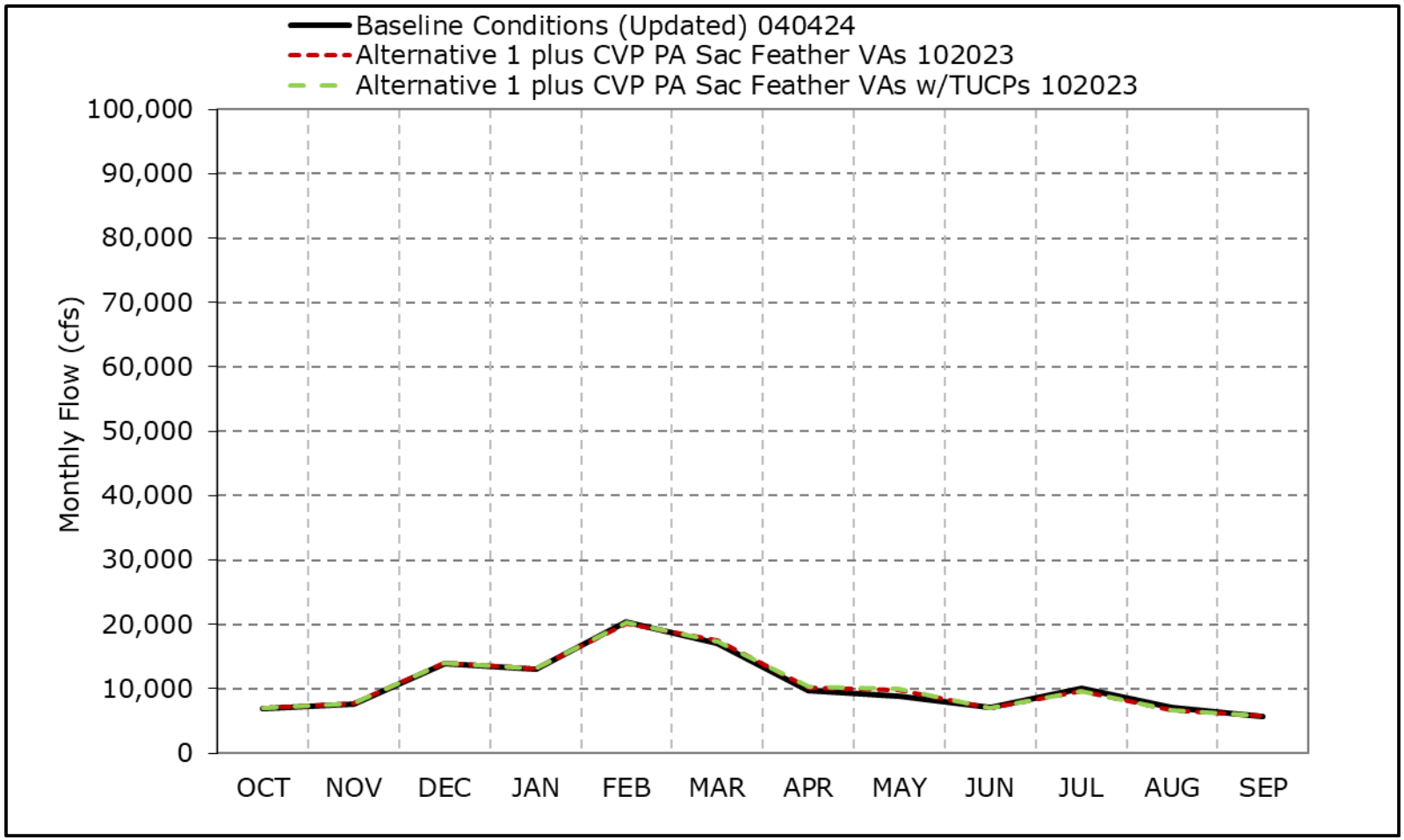
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4d. Sacramento River Flow at Rio Vista, Below Normal Year Average Flow



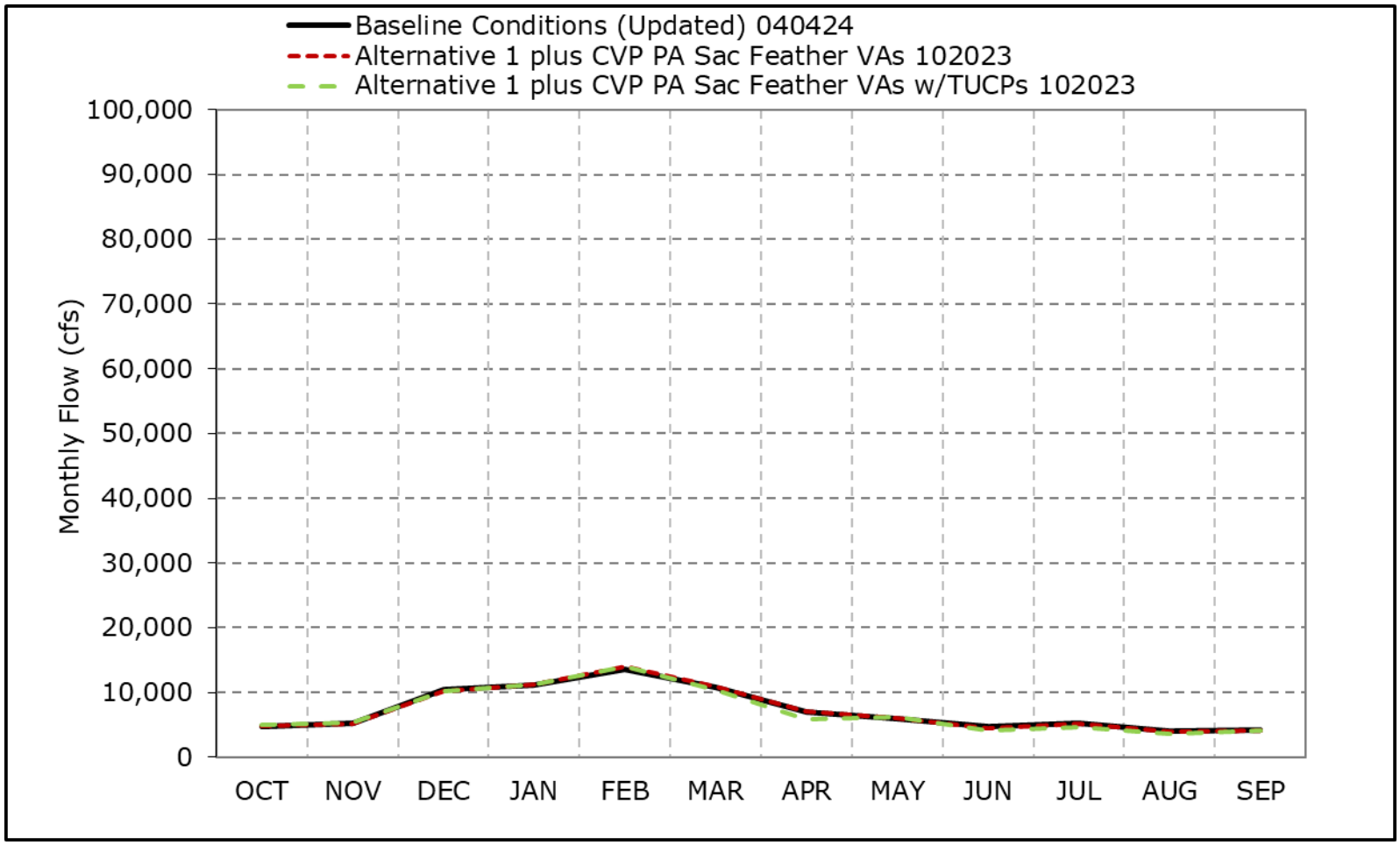
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4e. Sacramento River Flow at Rio Vista, Dry Year Average Flow



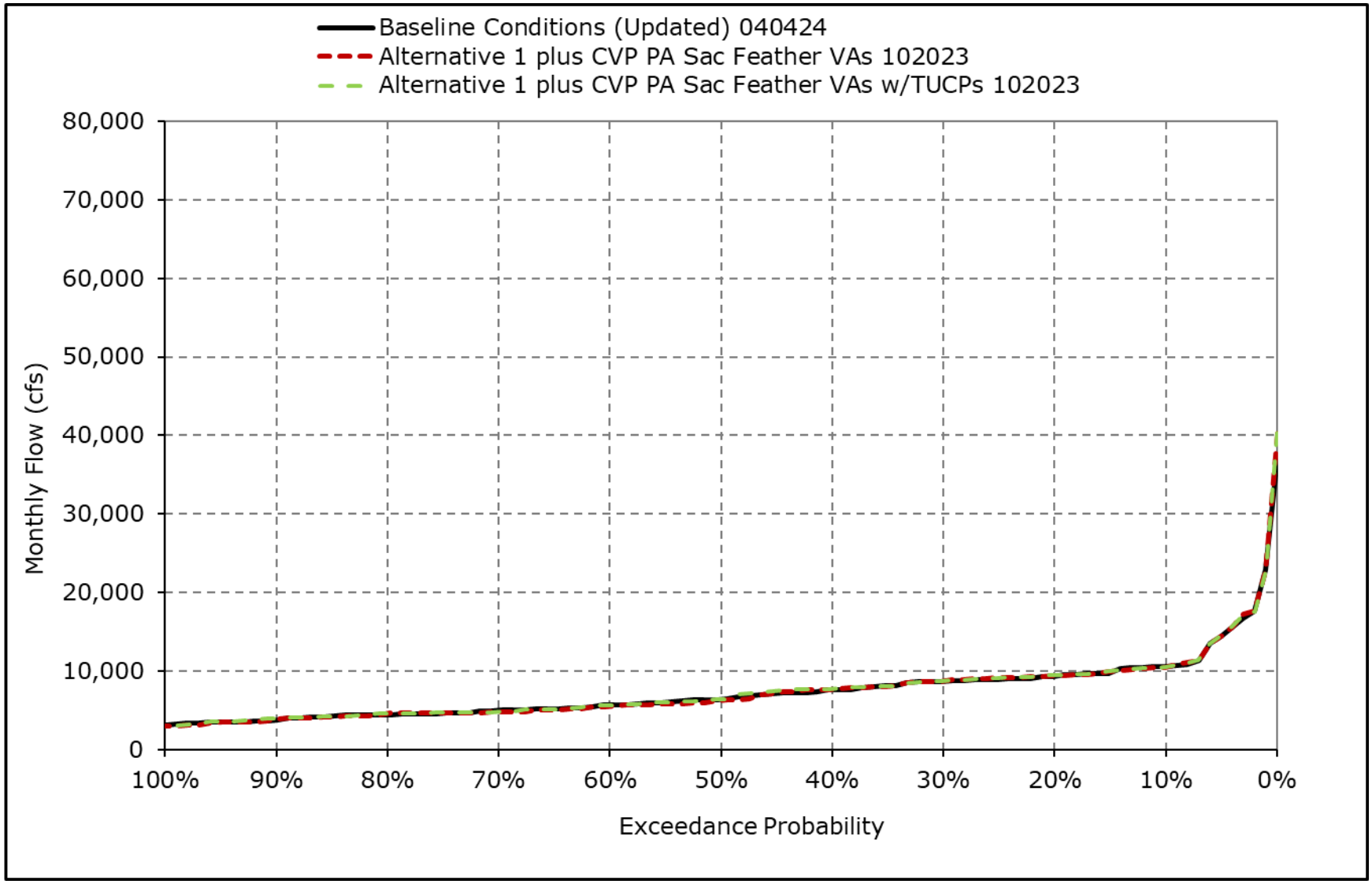
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4f. Sacramento River Flow at Rio Vista, Critical Year Average Flow



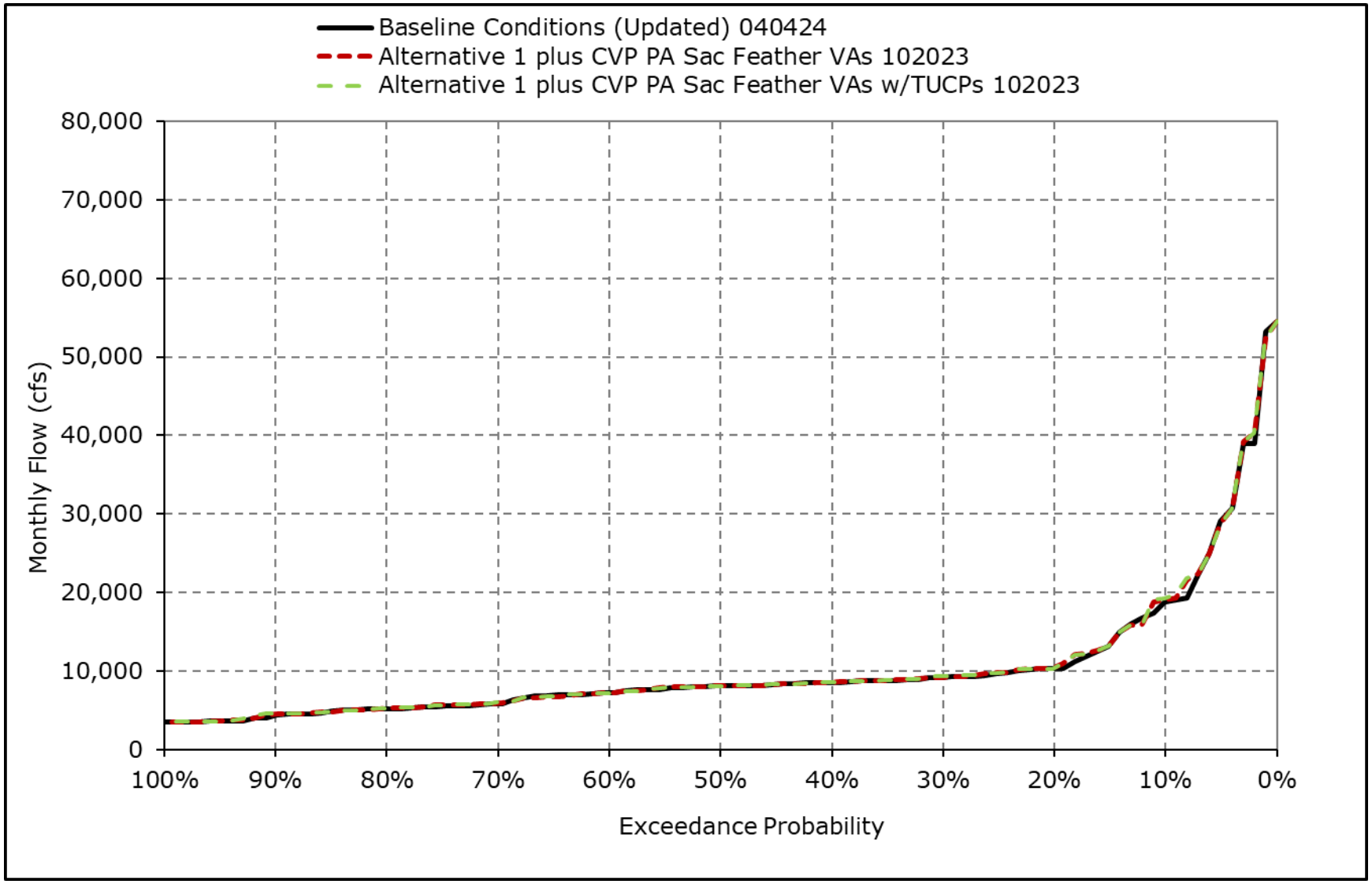
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4g. Sacramento River Flow at Rio Vista, October



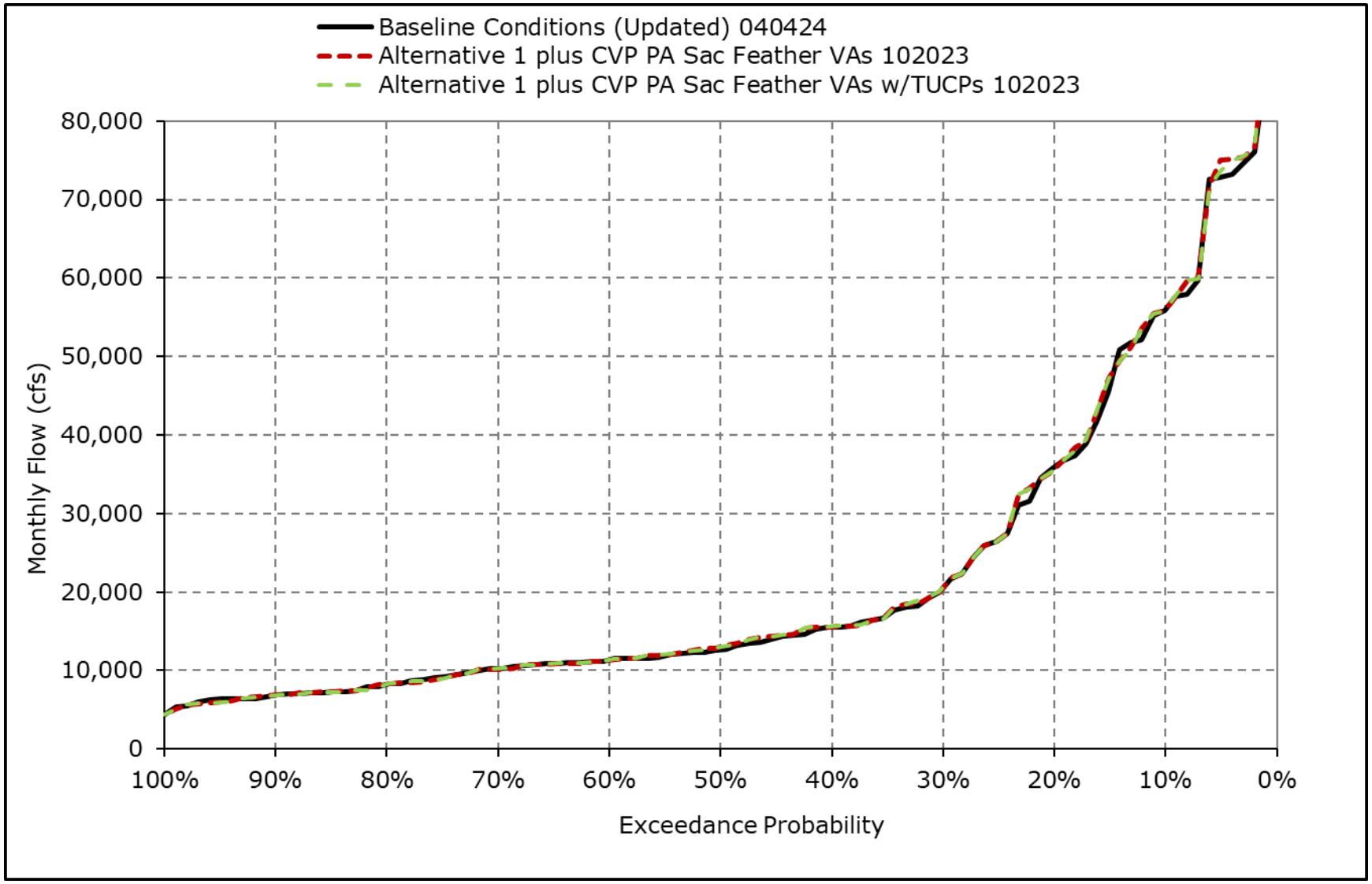
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4h. Sacramento River Flow at Rio Vista, November



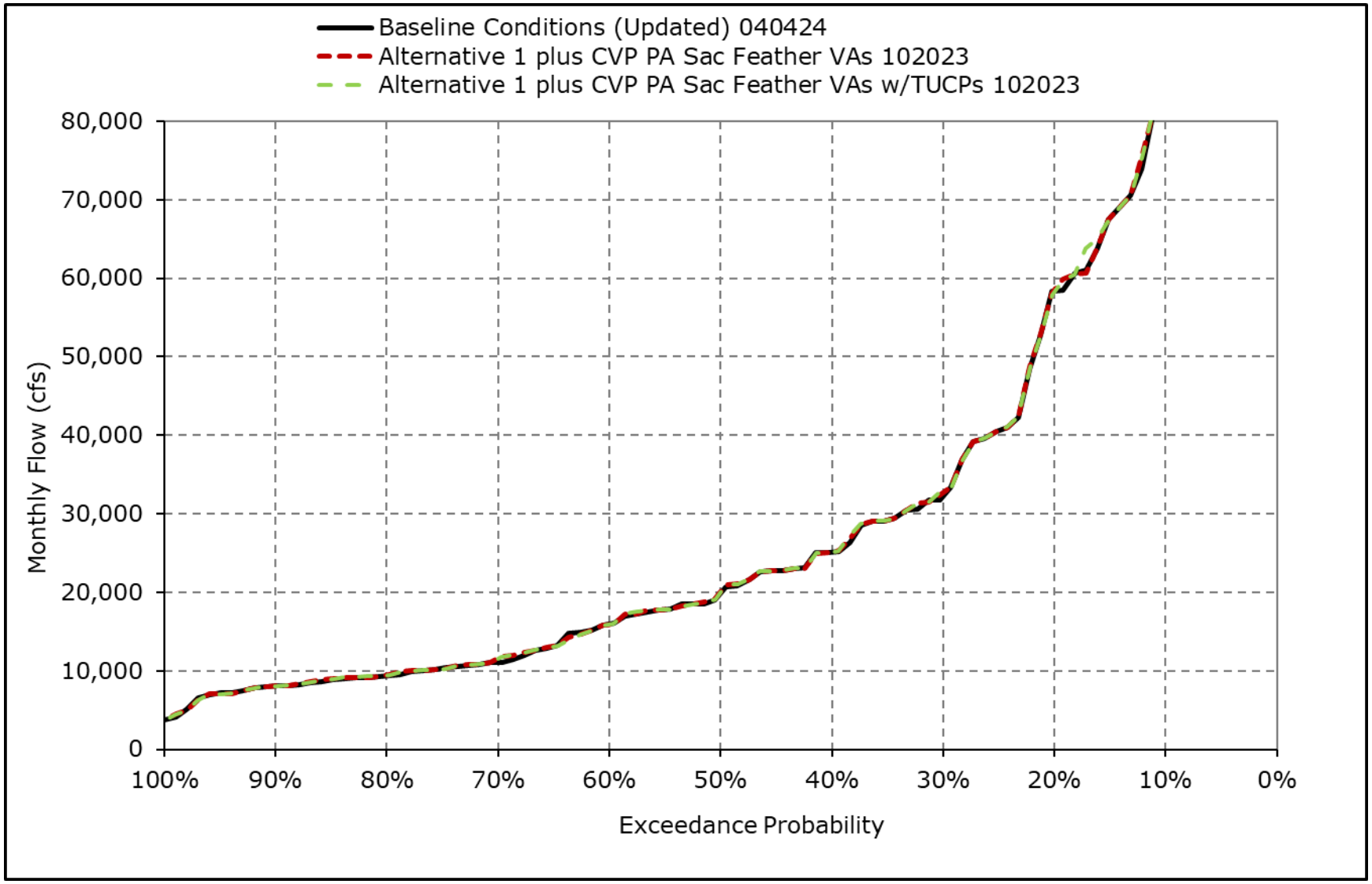
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4i. Sacramento River Flow at Rio Vista, December



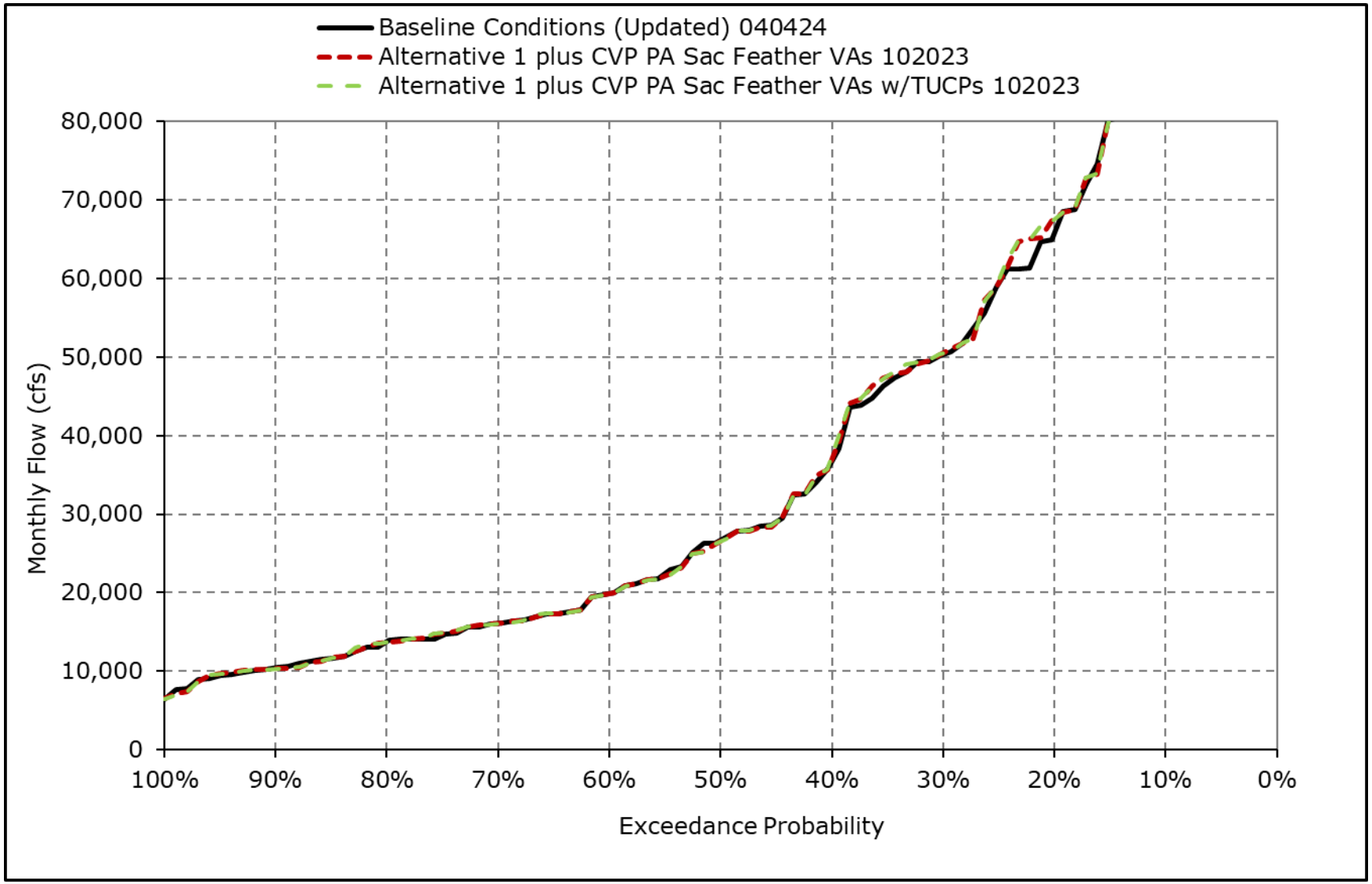
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4j. Sacramento River Flow at Rio Vista, January



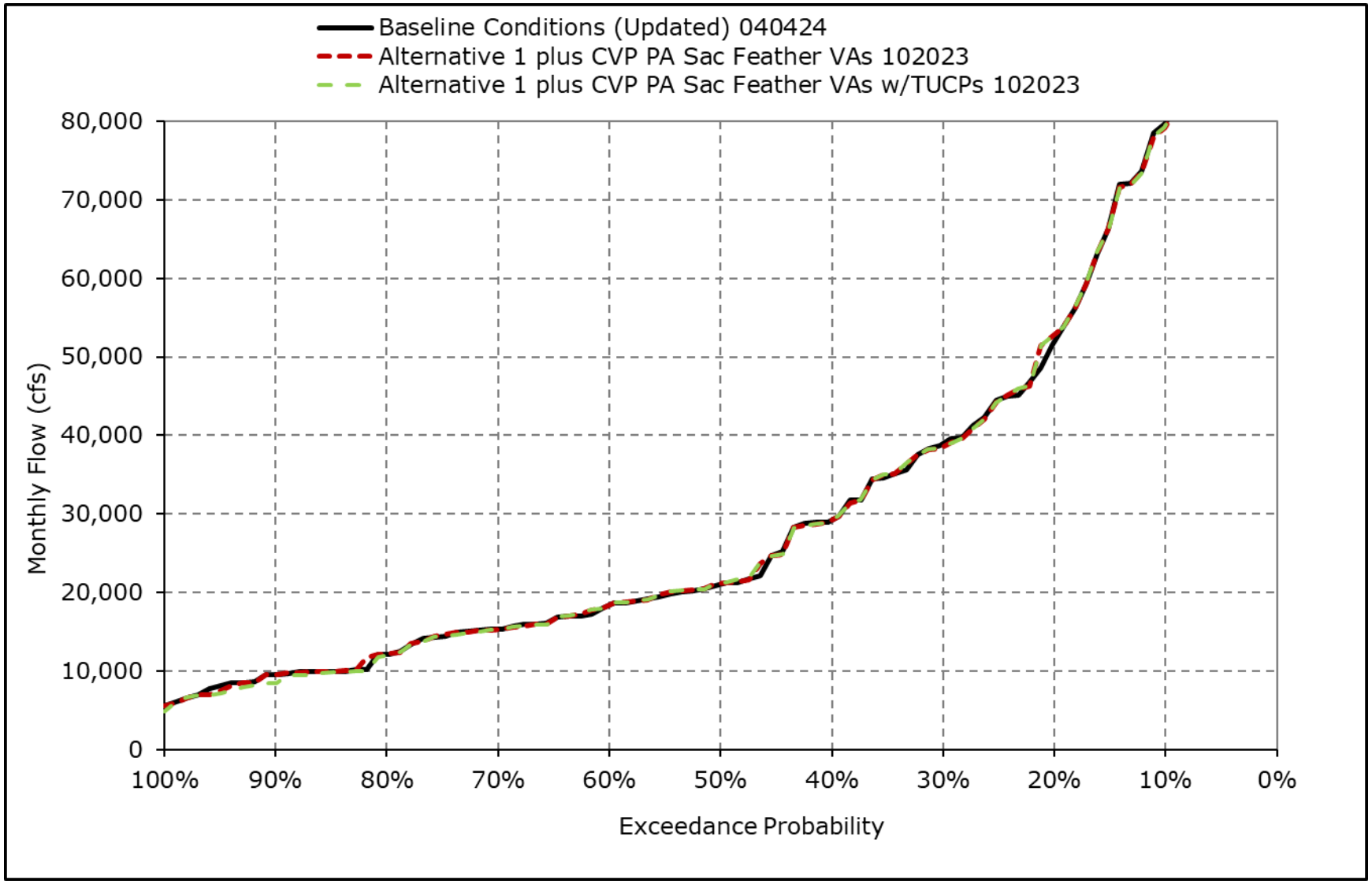
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4k. Sacramento River Flow at Rio Vista, February



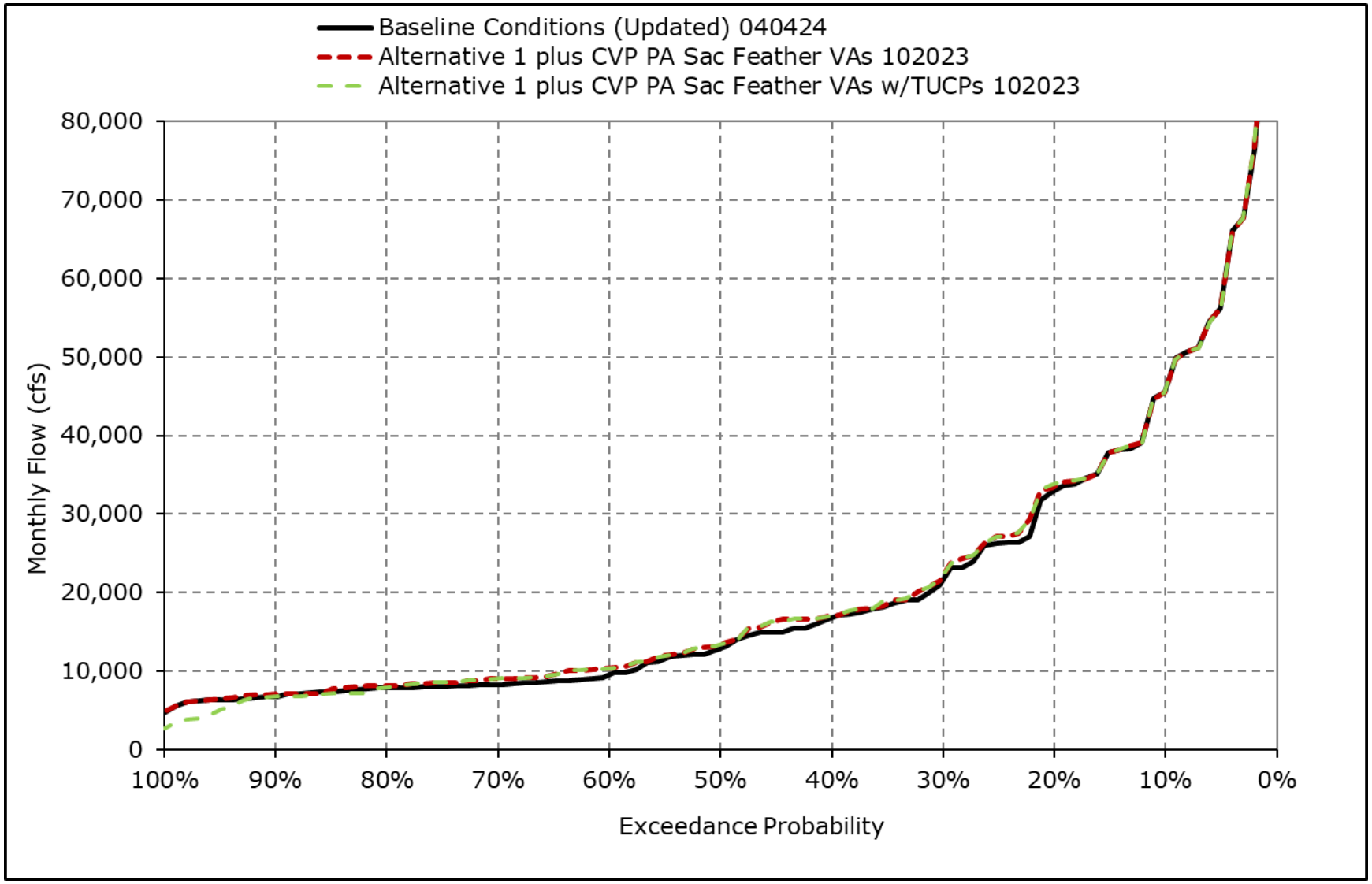
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4l. Sacramento River Flow at Rio Vista, March



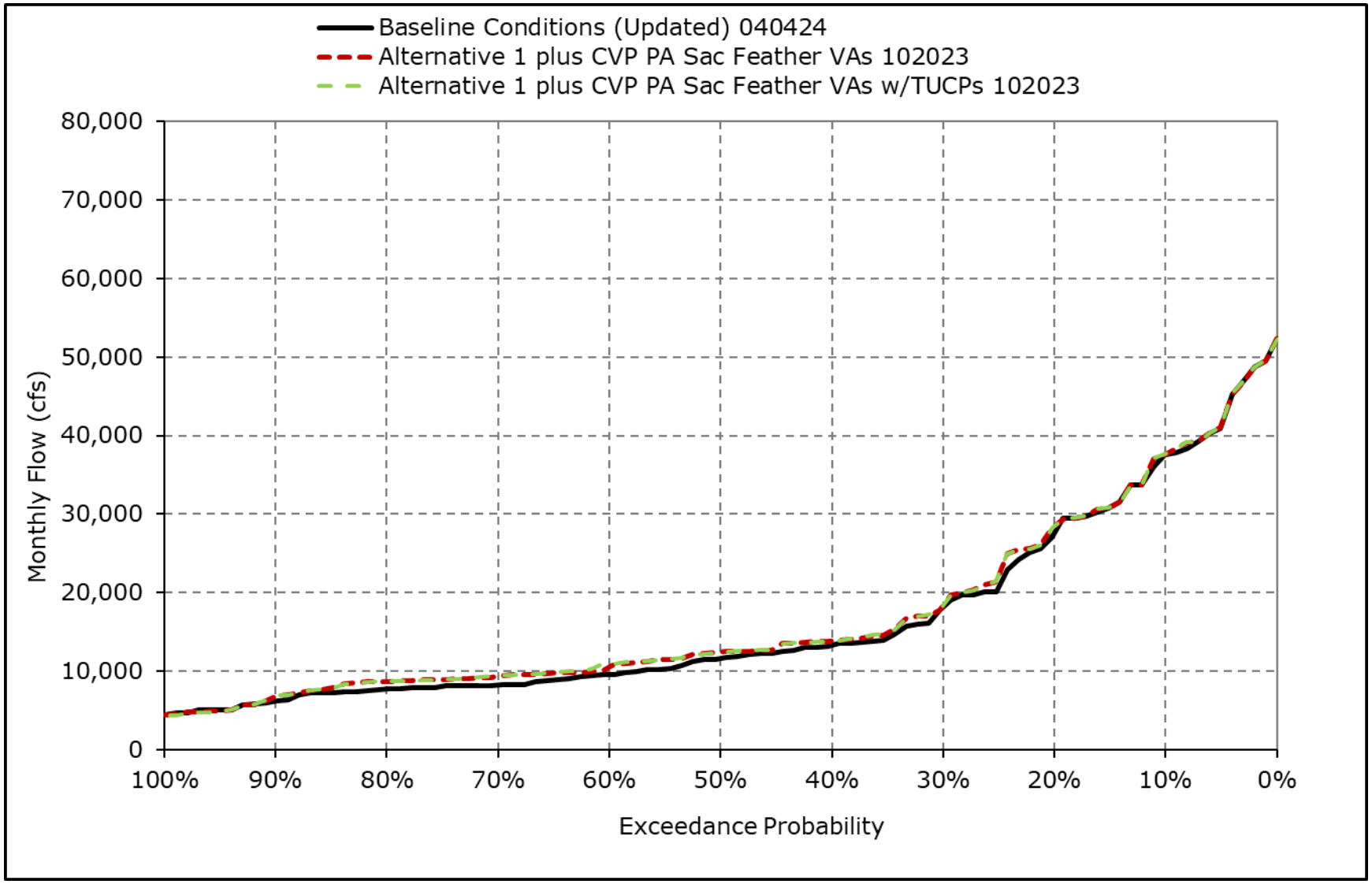
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4m. Sacramento River Flow at Rio Vista, April



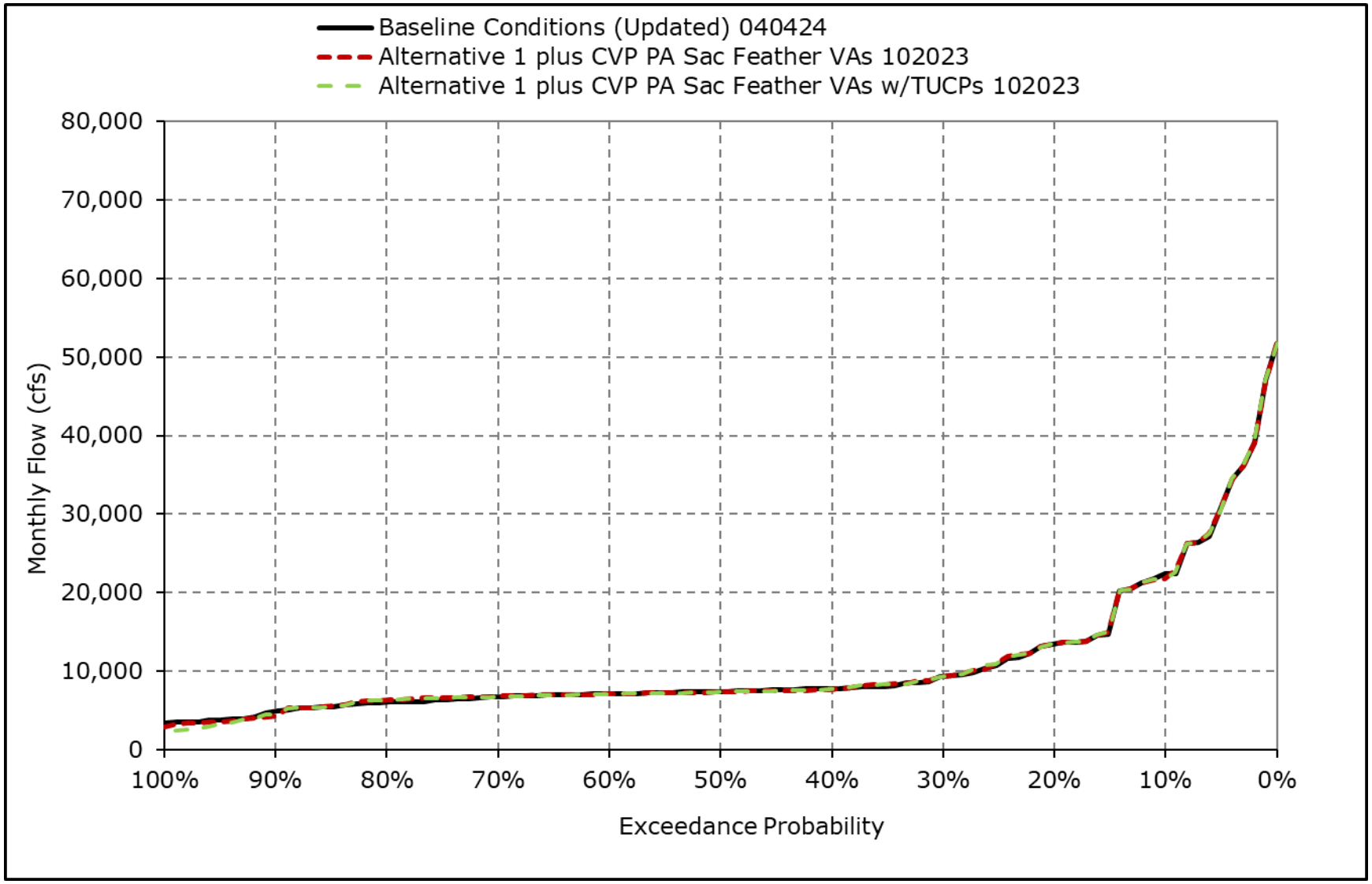
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4n. Sacramento River Flow at Rio Vista, May



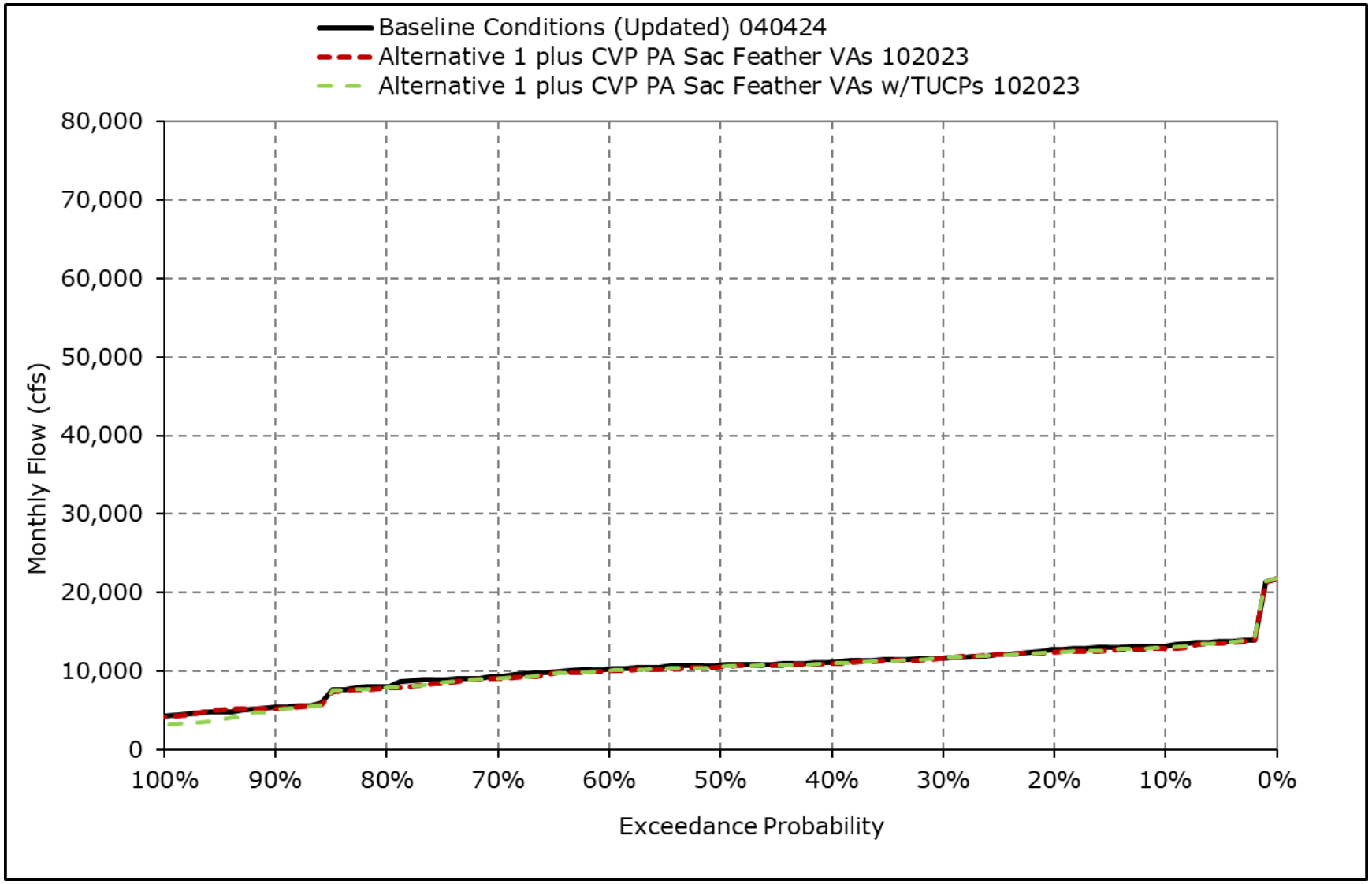
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4o. Sacramento River Flow at Rio Vista, June



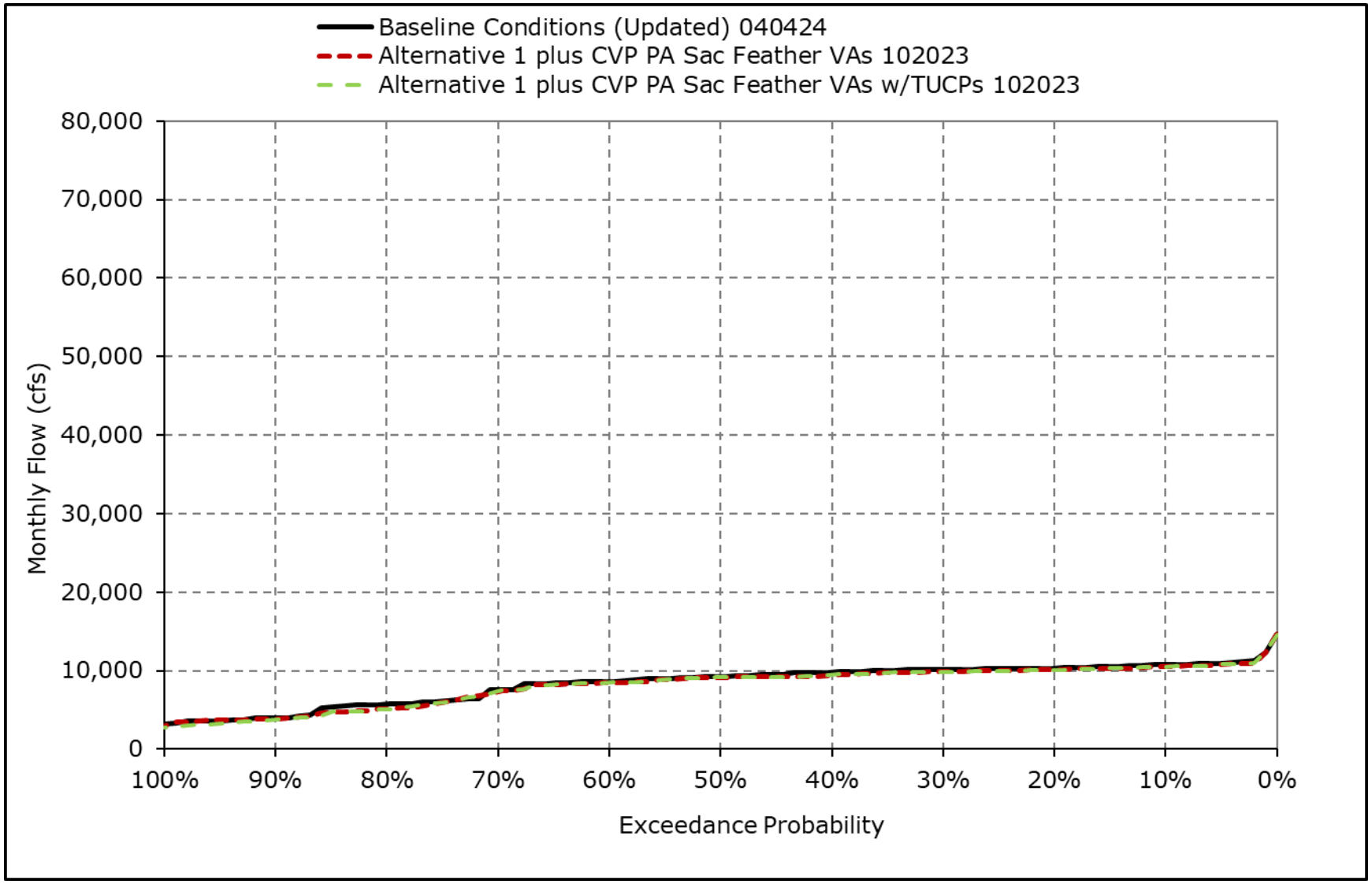
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4p. Sacramento River Flow at Rio Vista, July



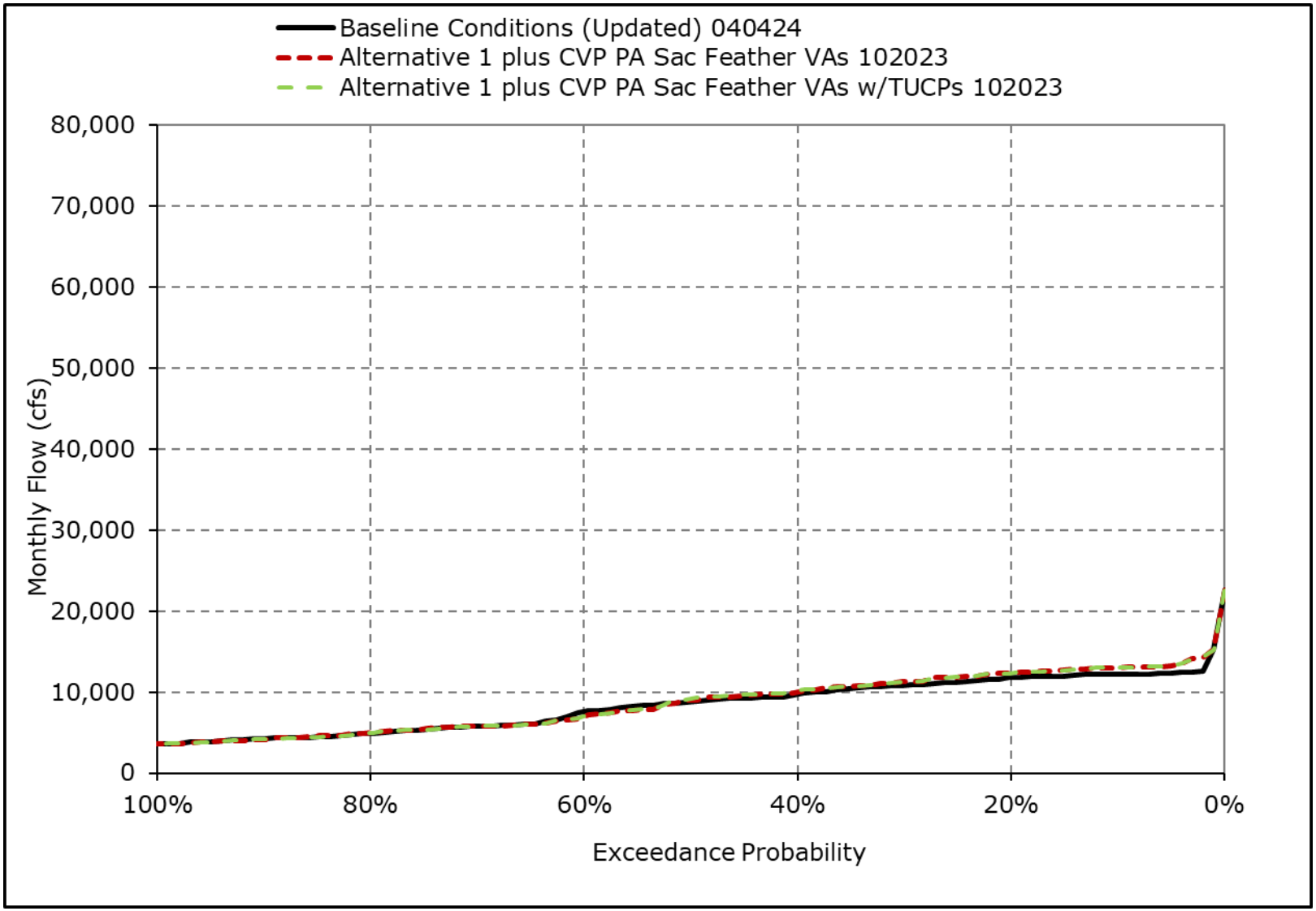
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4q. Sacramento River Flow at Rio Vista, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-4r. Sacramento River Flow at Rio Vista, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-5-1a. San Joaquin River at Vernalis, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,745	2,791	4,101	7,308	11,298	13,134	13,819	10,607	11,467	5,768	4,628	3,532
20% Exceedance	3,332	2,397	2,730	4,281	8,152	7,835	9,112	6,663	5,419	3,345	2,287	1,993
30% Exceedance	3,007	2,324	2,227	3,337	5,269	6,556	7,660	5,416	3,327	2,121	1,713	1,606
40% Exceedance	2,126	2,101	1,925	2,712	3,940	4,562	5,869	4,348	2,590	1,789	1,554	1,469
50% Exceedance	1,864	1,872	1,783	2,221	3,161	3,108	4,256	3,509	2,047	1,487	1,460	1,383
60% Exceedance	1,749	1,584	1,644	2,059	2,502	2,702	3,332	2,702	1,760	1,299	1,237	1,266
70% Exceedance	1,661	1,478	1,530	1,893	2,295	2,408	2,964	2,447	1,633	1,185	1,101	1,158
80% Exceedance	1,555	1,371	1,348	1,757	2,129	2,224	2,638	2,071	1,440	925	925	989
90% Exceedance	1,374	1,304	1,255	1,647	1,949	2,126	2,285	1,710	1,183	743	750	848
Full Simulation Period Average[a]	2,387	2,098	2,616	3,912	5,584	5,844	6,426	5,131	4,241	2,502	1,906	1,683
Wet Water Years (30%)	2,738	2,684	4,492	7,533	10,543	11,408	11,912	9,653	8,998	5,122	3,546	2,747
Above Normal Water Years (11%)	2,174	1,932	2,050	3,566	6,062	5,875	6,754	5,160	3,976	2,322	1,762	1,659
Below Normal Water Years (21%)	2,606	2,131	2,014	2,515	4,153	4,238	5,228	4,146	2,674	1,680	1,411	1,387
Dry Water Years (22%)	2,296	1,806	1,723	1,975	2,366	2,420	2,854	2,336	1,566	1,116	1,093	1,147
Critical Water Years (16%)	1,712	1,471	1,506	1,857	2,258	2,207	2,398	1,769	1,237	696	700	827

Table 4F-3-5-1b. San Joaquin River at Vernalis, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,750	2,799	4,102	7,315	11,302	12,750	14,271	10,621	11,475	5,780	4,635	3,538
20% Exceedance	3,336	2,403	2,738	4,299	8,160	7,852	9,176	6,672	5,451	3,350	2,304	2,000
30% Exceedance	3,011	2,335	2,237	3,343	5,277	6,563	7,720	5,440	3,370	2,152	1,740	1,615
40% Exceedance	2,133	2,116	1,931	2,721	3,947	4,564	5,979	4,355	2,614	1,807	1,575	1,486
50% Exceedance	1,879	1,892	1,788	2,227	3,162	3,099	4,260	3,553	2,066	1,523	1,482	1,392
60% Exceedance	1,786	1,593	1,654	2,045	2,500	2,701	3,327	2,725	1,792	1,332	1,295	1,272
70% Exceedance	1,709	1,478	1,535	1,899	2,303	2,414	2,969	2,450	1,647	1,238	1,172	1,210
80% Exceedance	1,548	1,396	1,360	1,755	2,134	2,215	2,644	2,085	1,488	968	961	1,022
90% Exceedance	1,422	1,306	1,266	1,654	1,957	2,128	2,300	1,714	1,199	771	789	869
Full Simulation Period Average[a]	2,402	2,108	2,624	3,913	5,572	5,844	6,461	5,146	4,264	2,531	1,938	1,705
Wet Water Years (30%)	2,752	2,693	4,501	7,545	10,557	11,421	11,954	9,669	9,015	5,133	3,555	2,755
Above Normal Water Years (11%)	2,216	1,957	2,068	3,513	5,895	5,841	6,852	5,173	3,986	2,330	1,768	1,667
Below Normal Water Years (21%)	2,616	2,142	2,023	2,523	4,159	4,240	5,267	4,177	2,709	1,723	1,456	1,420
Dry Water Years (22%)	2,318	1,820	1,731	1,982	2,370	2,415	2,869	2,345	1,579	1,137	1,123	1,169
Critical Water Years (16%)	1,706	1,467	1,503	1,861	2,257	2,209	2,400	1,772	1,277	766	777	873

Table 4F-3-5-1c. San Joaquin River at Vernalis, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	5	8	1	7	4	-384	452	14	9	12	8	6
20% Exceedance	4	5	8	18	8	17	64	9	32	5	17	6
30% Exceedance	4	12	10	6	7	6	61	25	43	31	27	8
40% Exceedance	7	15	6	9	7	2	110	8	24	18	21	18
50% Exceedance	15	19	5	6	1	-8	4	43	19	36	23	9
60% Exceedance	36	9	9	-14	-2	-1	-5	22	32	33	58	5
70% Exceedance	48	0	5	6	8	6	5	3	14	53	71	52
80% Exceedance	-7	25	12	-2	5	-9	6	14	48	43	36	33
90% Exceedance	47	2	11	7	8	2	14	4	15	29	39	21
Full Simulation Period Average[a]	15	10	8	2	-12	0	35	15	23	29	32	22
Wet Water Years (30%)	14	9	9	12	14	13	43	16	17	11	9	8
Above Normal Water Years (11%)	42	25	18	-54	-166	-34	98	13	9	8	6	8
Below Normal Water Years (21%)	10	10	9	8	6	2	39	31	35	43	45	33
Dry Water Years (22%)	22	13	9	7	4	-6	15	9	13	21	30	22
Critical Water Years (16%)	-5	-4	-2	4	-1	1	2	2	40	70	76	46

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-5-2a. San Joaquin River at Vernalis, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,745	2,791	4,101	7,308	11,298	13,134	13,819	10,607	11,467	5,768	4,628	3,532
20% Exceedance	3,332	2,397	2,730	4,281	8,152	7,835	9,112	6,663	5,419	3,345	2,287	1,993
30% Exceedance	3,007	2,324	2,227	3,337	5,269	6,556	7,660	5,416	3,327	2,121	1,713	1,606
40% Exceedance	2,126	2,101	1,925	2,712	3,940	4,562	5,869	4,348	2,590	1,789	1,554	1,469
50% Exceedance	1,864	1,872	1,783	2,221	3,161	3,108	4,256	3,509	2,047	1,487	1,460	1,383
60% Exceedance	1,749	1,584	1,644	2,059	2,502	2,702	3,332	2,702	1,760	1,299	1,237	1,266
70% Exceedance	1,661	1,478	1,530	1,893	2,295	2,408	2,964	2,447	1,633	1,185	1,101	1,158
80% Exceedance	1,555	1,371	1,348	1,757	2,129	2,224	2,638	2,071	1,440	925	925	989
90% Exceedance	1,374	1,304	1,255	1,647	1,949	2,126	2,285	1,710	1,183	743	750	848
Full Simulation Period Average[a]	2,387	2,098	2,616	3,912	5,584	5,844	6,426	5,131	4,241	2,502	1,906	1,683
Wet Water Years (30%)	2,738	2,684	4,492	7,533	10,543	11,408	11,912	9,653	8,998	5,122	3,546	2,747
Above Normal Water Years (11%)	2,174	1,932	2,050	3,566	6,062	5,875	6,754	5,160	3,976	2,322	1,762	1,659
Below Normal Water Years (21%)	2,606	2,131	2,014	2,515	4,153	4,238	5,228	4,146	2,674	1,680	1,411	1,387
Dry Water Years (22%)	2,296	1,806	1,723	1,975	2,366	2,420	2,854	2,336	1,566	1,116	1,093	1,147
Critical Water Years (16%)	1,712	1,471	1,506	1,857	2,258	2,207	2,398	1,769	1,237	696	700	827

Table 4F-3-5-2b. San Joaquin River at Vernalis, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,749	2,799	4,102	7,311	11,303	12,747	14,271	10,617	11,474	5,780	4,633	3,537
20% Exceedance	3,353	2,400	2,736	4,294	8,160	7,849	9,175	6,669	5,658	3,348	2,300	1,999
30% Exceedance	3,012	2,336	2,236	3,342	5,276	6,560	7,719	5,439	3,368	2,187	1,739	1,614
40% Exceedance	2,132	2,114	1,930	2,721	3,945	4,562	5,870	4,354	2,613	1,807	1,575	1,486
50% Exceedance	1,879	1,893	1,787	2,227	3,161	3,098	4,258	3,556	2,064	1,526	1,484	1,403
60% Exceedance	1,805	1,591	1,652	2,047	2,493	2,702	3,324	2,724	1,791	1,334	1,293	1,277
70% Exceedance	1,700	1,482	1,535	1,896	2,310	2,411	2,965	2,447	1,648	1,228	1,157	1,218
80% Exceedance	1,557	1,369	1,361	1,761	2,134	2,215	2,642	2,084	1,486	960	946	1,012
90% Exceedance	1,422	1,307	1,267	1,650	1,950	2,114	2,300	1,714	1,202	758	769	910
Full Simulation Period Average[a]	2,403	2,109	2,624	3,912	5,570	5,842	6,455	5,141	4,264	2,530	1,937	1,706
Wet Water Years (30%)	2,755	2,694	4,500	7,542	10,555	11,418	11,952	9,667	9,013	5,132	3,553	2,754
Above Normal Water Years (11%)	2,206	1,947	2,060	3,509	5,893	5,838	6,809	5,140	4,011	2,336	1,772	1,669
Below Normal Water Years (21%)	2,611	2,139	2,020	2,521	4,158	4,239	5,264	4,176	2,708	1,726	1,468	1,427
Dry Water Years (22%)	2,315	1,820	1,732	1,982	2,369	2,413	2,867	2,344	1,578	1,139	1,118	1,170
Critical Water Years (16%)	1,729	1,483	1,515	1,864	2,258	2,208	2,400	1,771	1,271	751	763	872

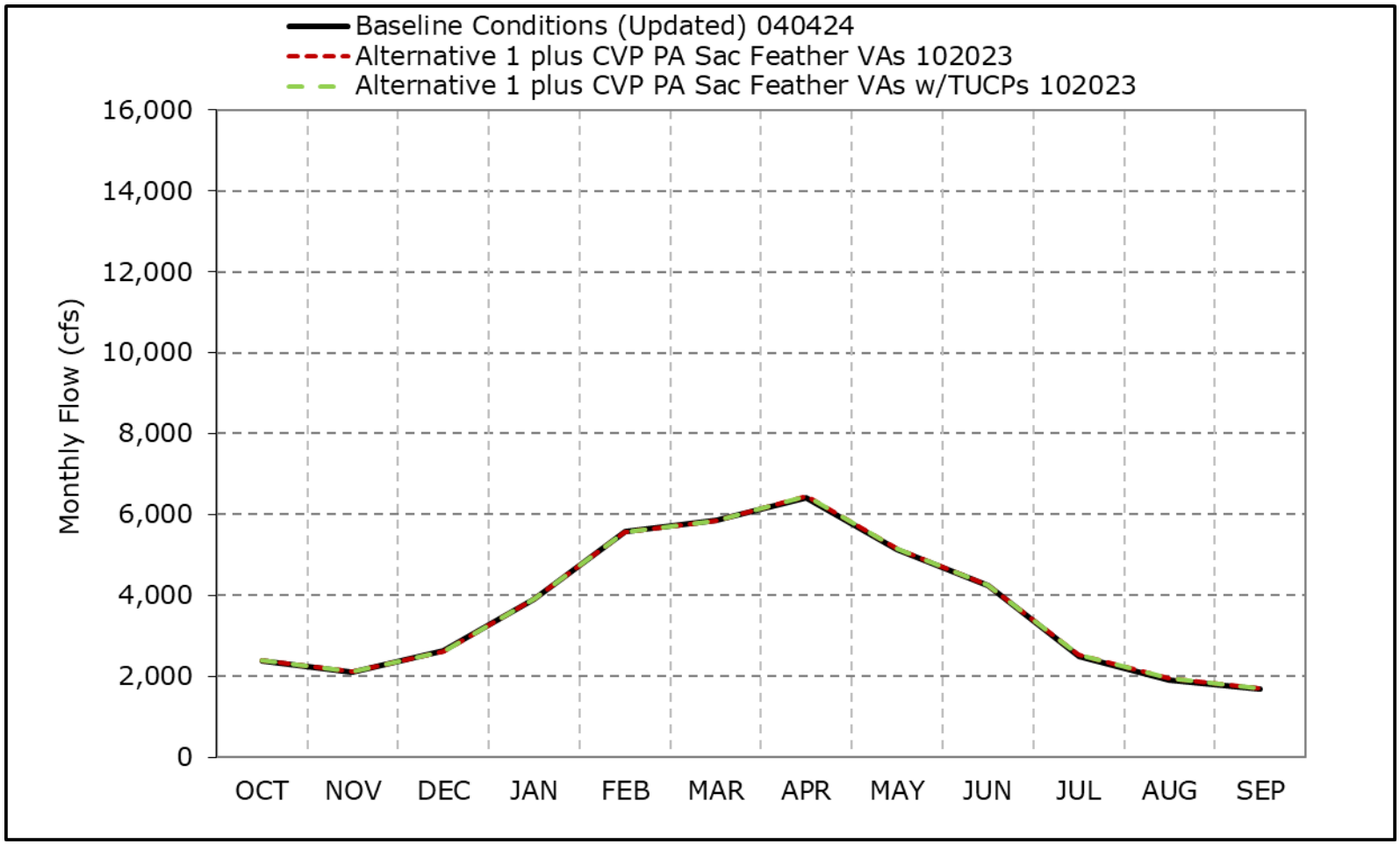
Table 4F-3-5-2c. San Joaquin River at Vernalis, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	4	8	1	4	5	-387	452	10	7	12	6	4
20% Exceedance	21	2	7	13	7	14	63	5	238	3	13	6
30% Exceedance	5	12	8	5	6	3	60	23	41	65	25	8
40% Exceedance	6	13	6	10	4	-1	0	6	23	18	21	18
50% Exceedance	15	20	4	6	0	-9	2	46	16	38	24	20
60% Exceedance	56	7	8	-12	-9	0	-9	21	31	35	56	11
70% Exceedance	39	5	5	3	15	3	1	0	15	43	56	61
80% Exceedance	2	-2	13	4	6	-9	4	13	47	35	21	23
90% Exceedance	48	3	12	2	1	-12	14	4	19	15	20	62
Full Simulation Period Average[a]	17	11	8	0	-13	-2	29	11	24	28	31	24
Wet Water Years (30%)	17	10	8	9	12	10	40	14	15	10	8	7
Above Normal Water Years (11%)	32	15	10	-57	-169	-37	54	-20	35	14	10	10
Below Normal Water Years (21%)	5	7	7	7	5	1	35	31	34	46	57	40
Dry Water Years (22%)	20	14	9	6	3	-8	13	8	13	23	25	23
Critical Water Years (16%)	17	12	9	7	0	1	2	2	34	55	63	46

[a] Based on the 100-year simulation period.

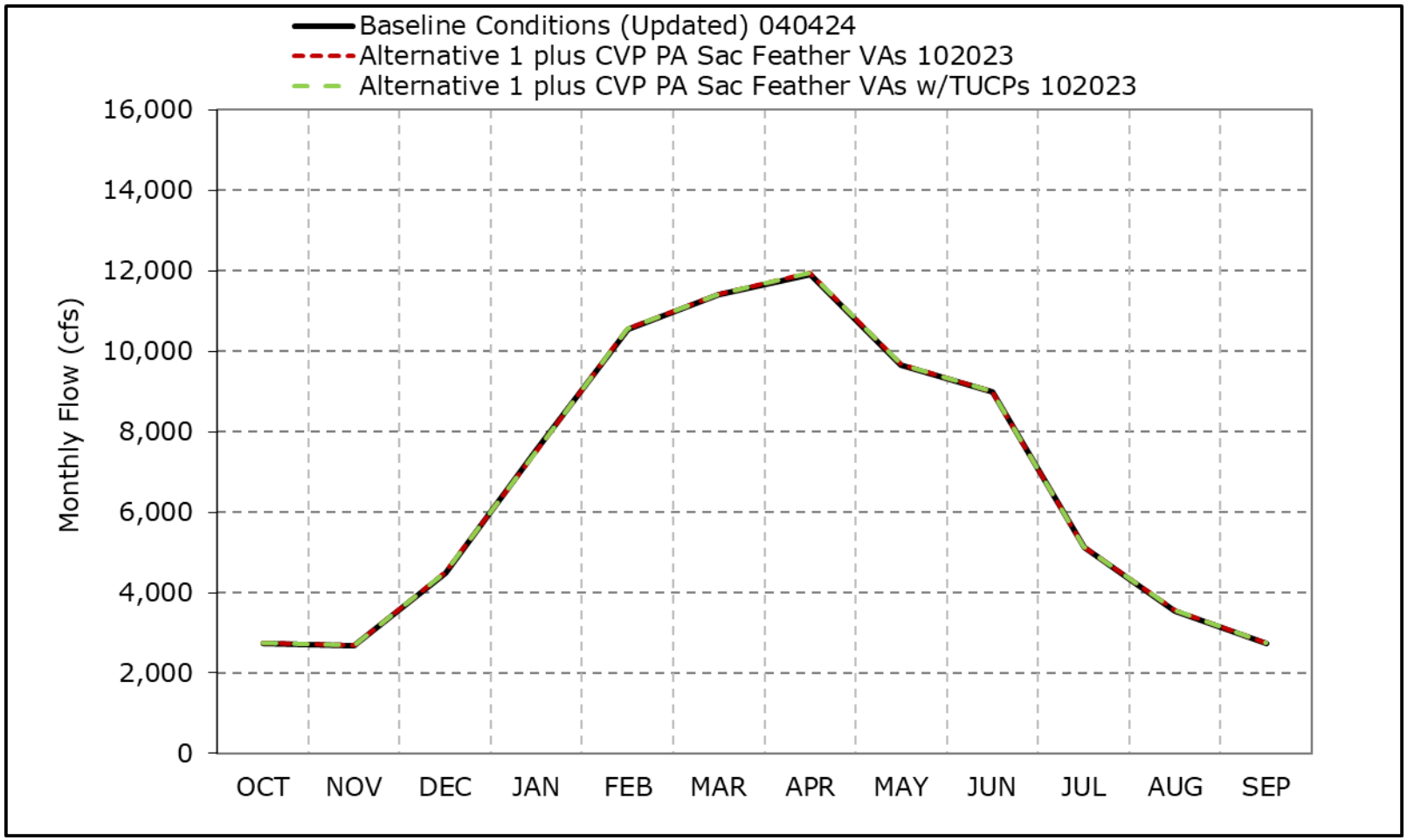
* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-5a. San Joaquin River at Vernalis, Long-Term Average Flow



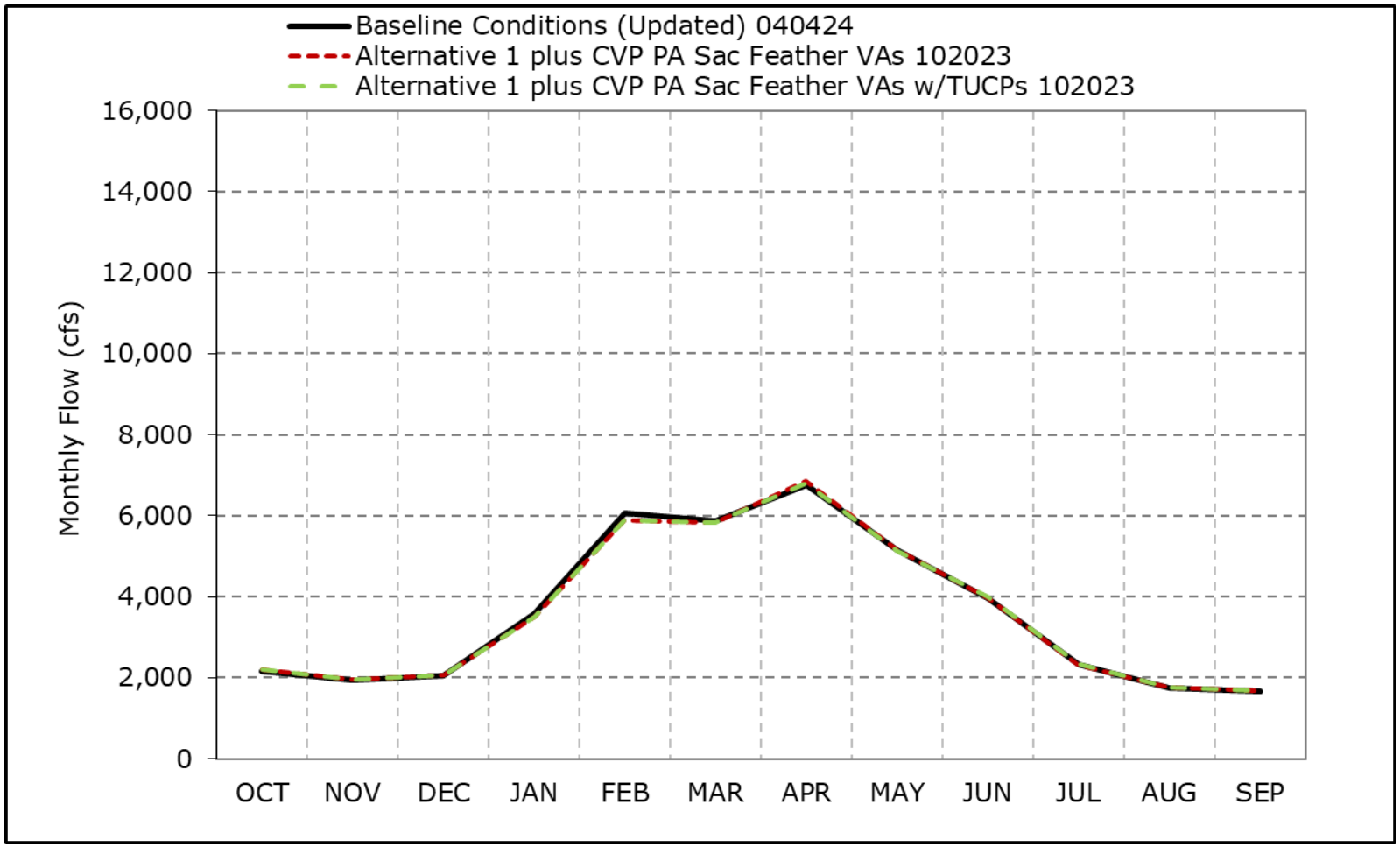
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5b. San Joaquin River at Vernalis, Wet Year Average Flow



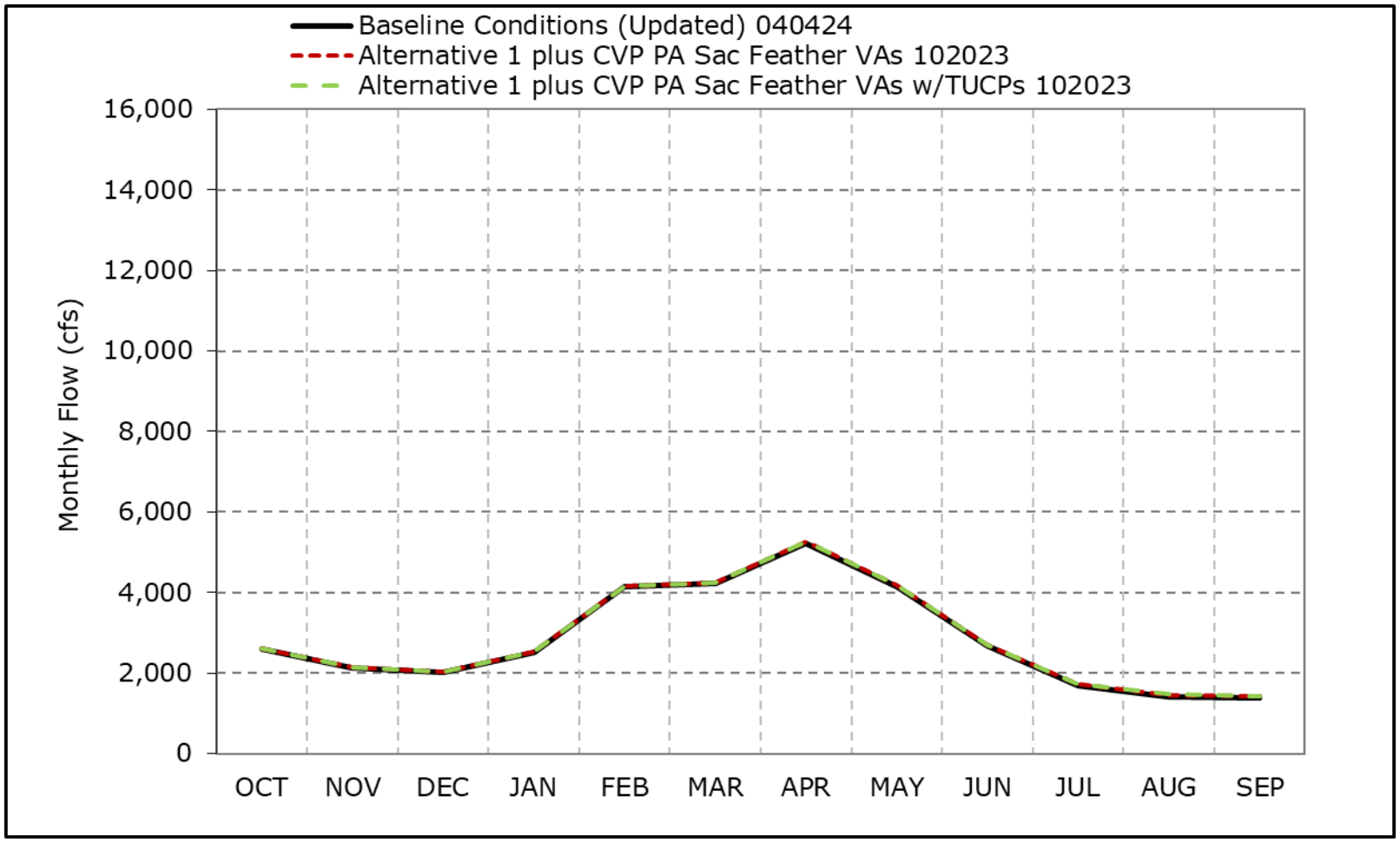
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5c. San Joaquin River at Vernalis, Above Normal Year Average Flow



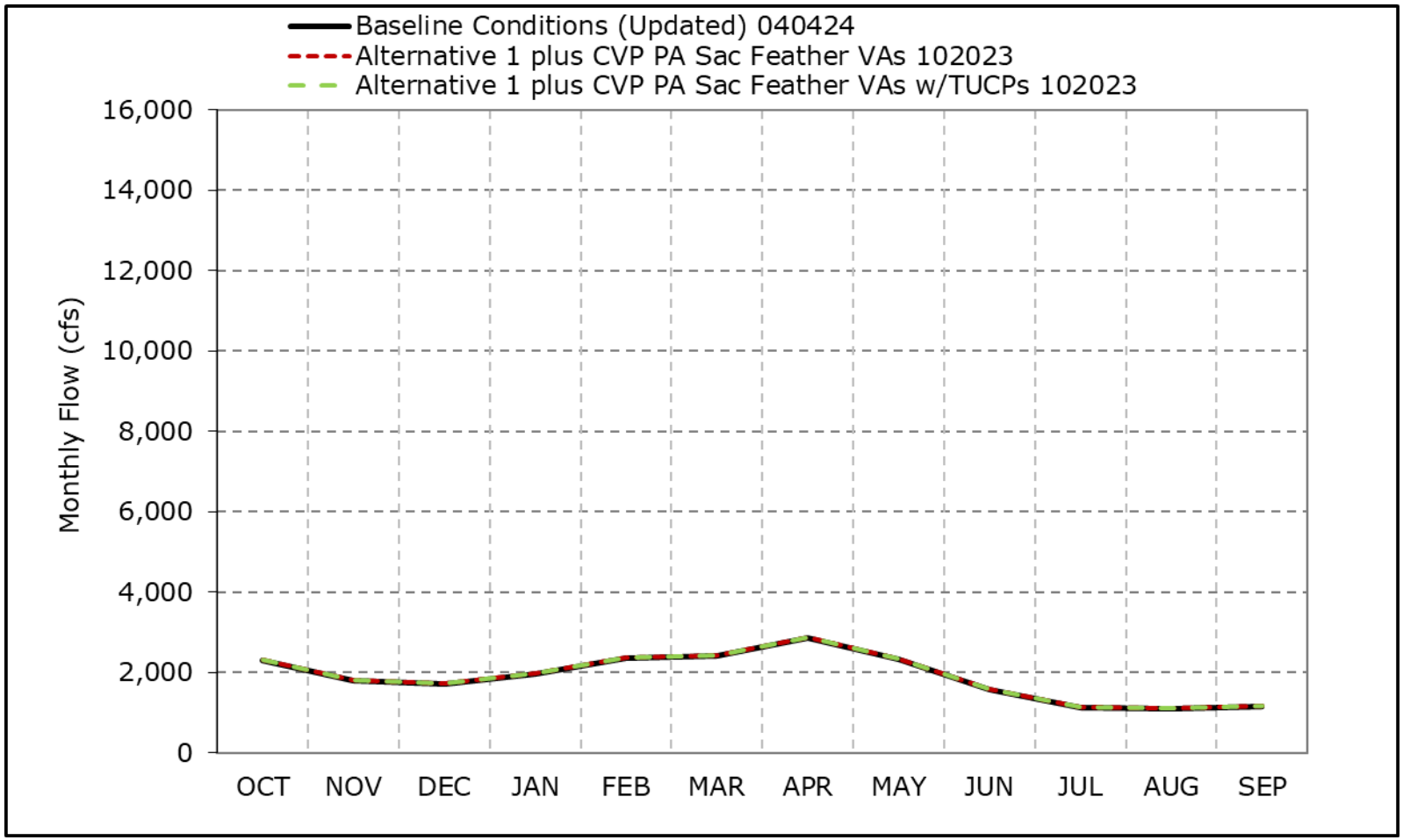
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5d. San Joaquin River at Vernalis, Below Normal Year Average Flow



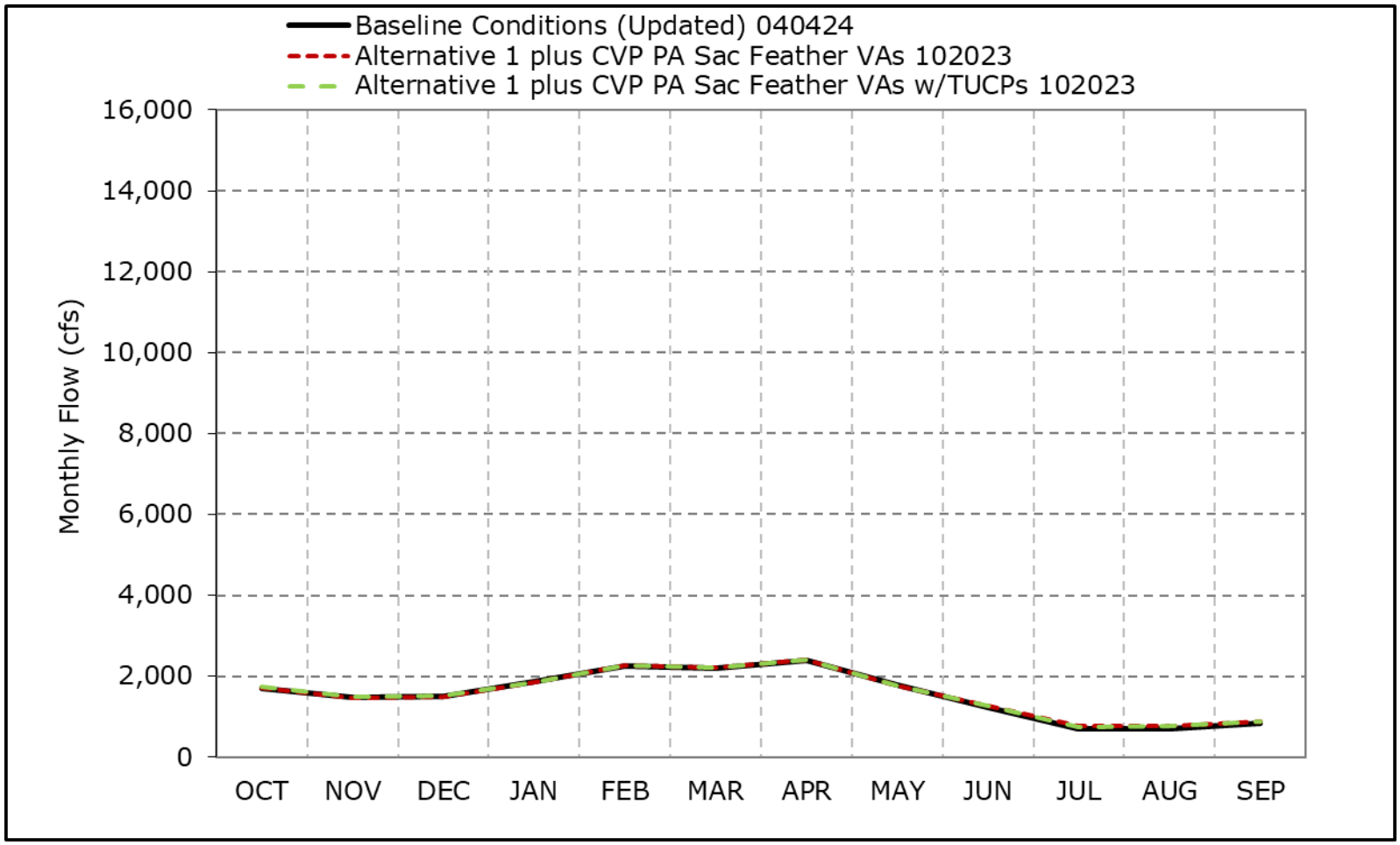
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5e. San Joaquin River at Vernalis, Dry Year Average Flow



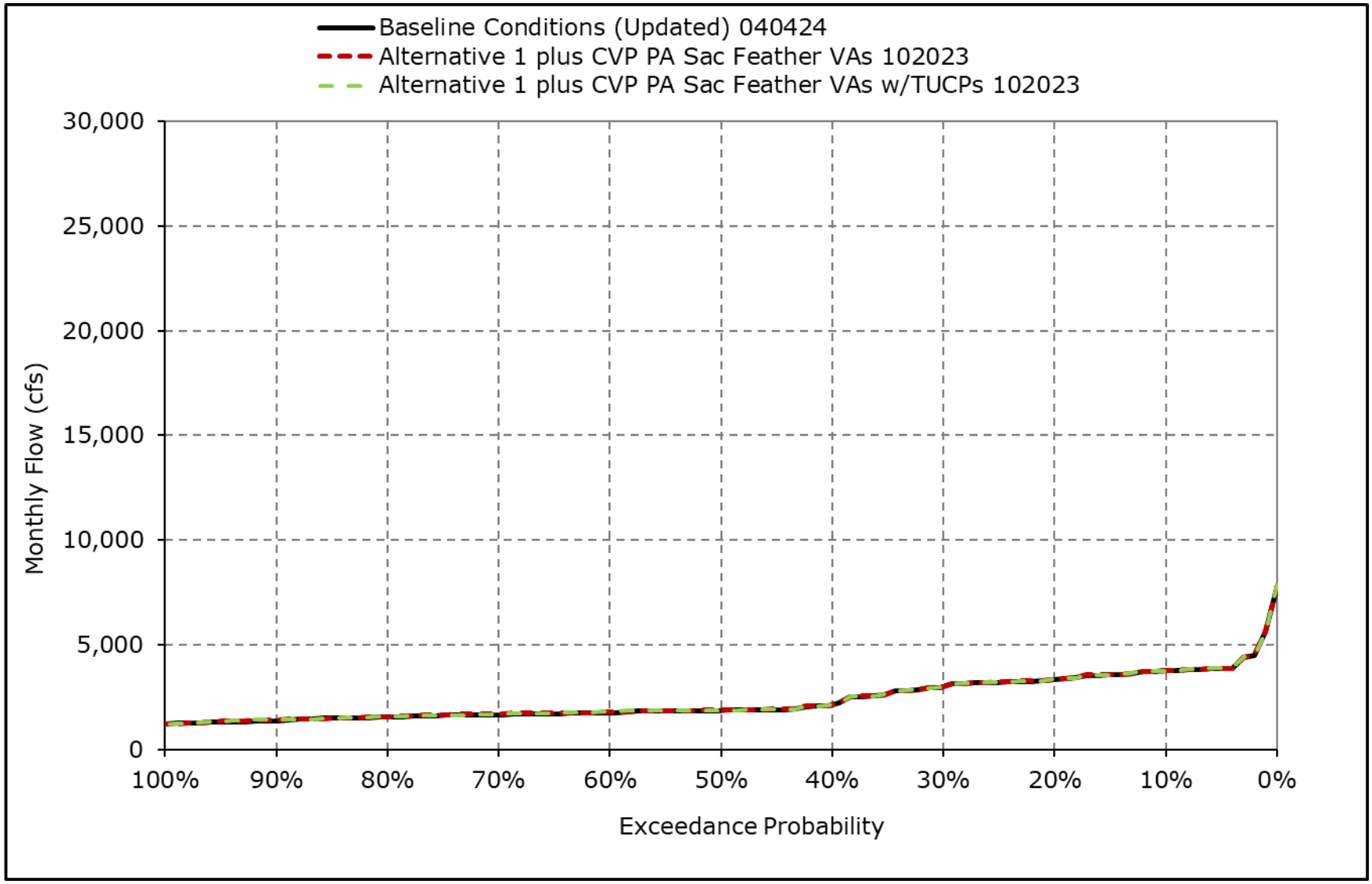
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5f. San Joaquin River at Vernalis, Critical Year Average Flow



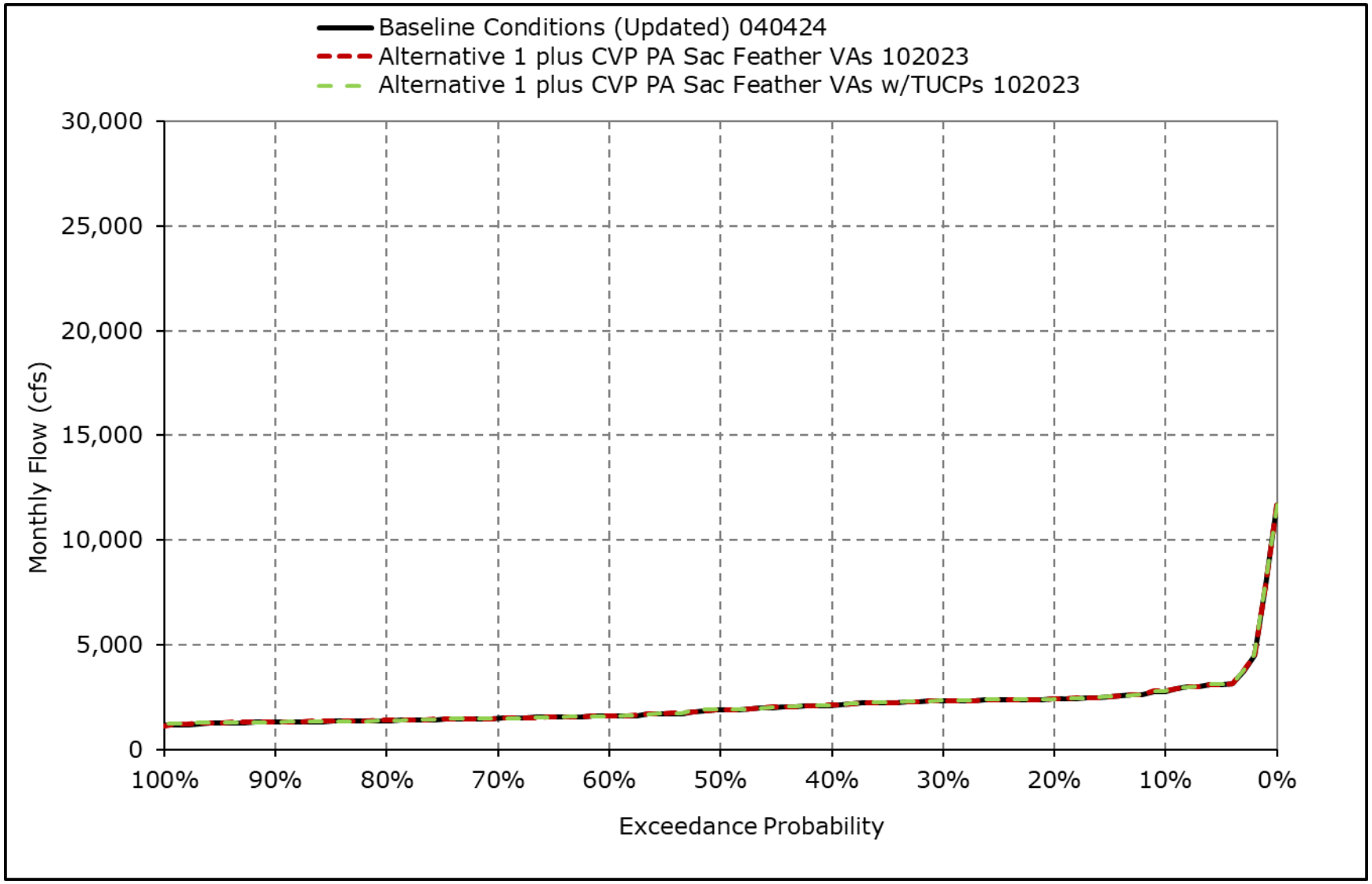
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5g. San Joaquin River at Vernalis, October



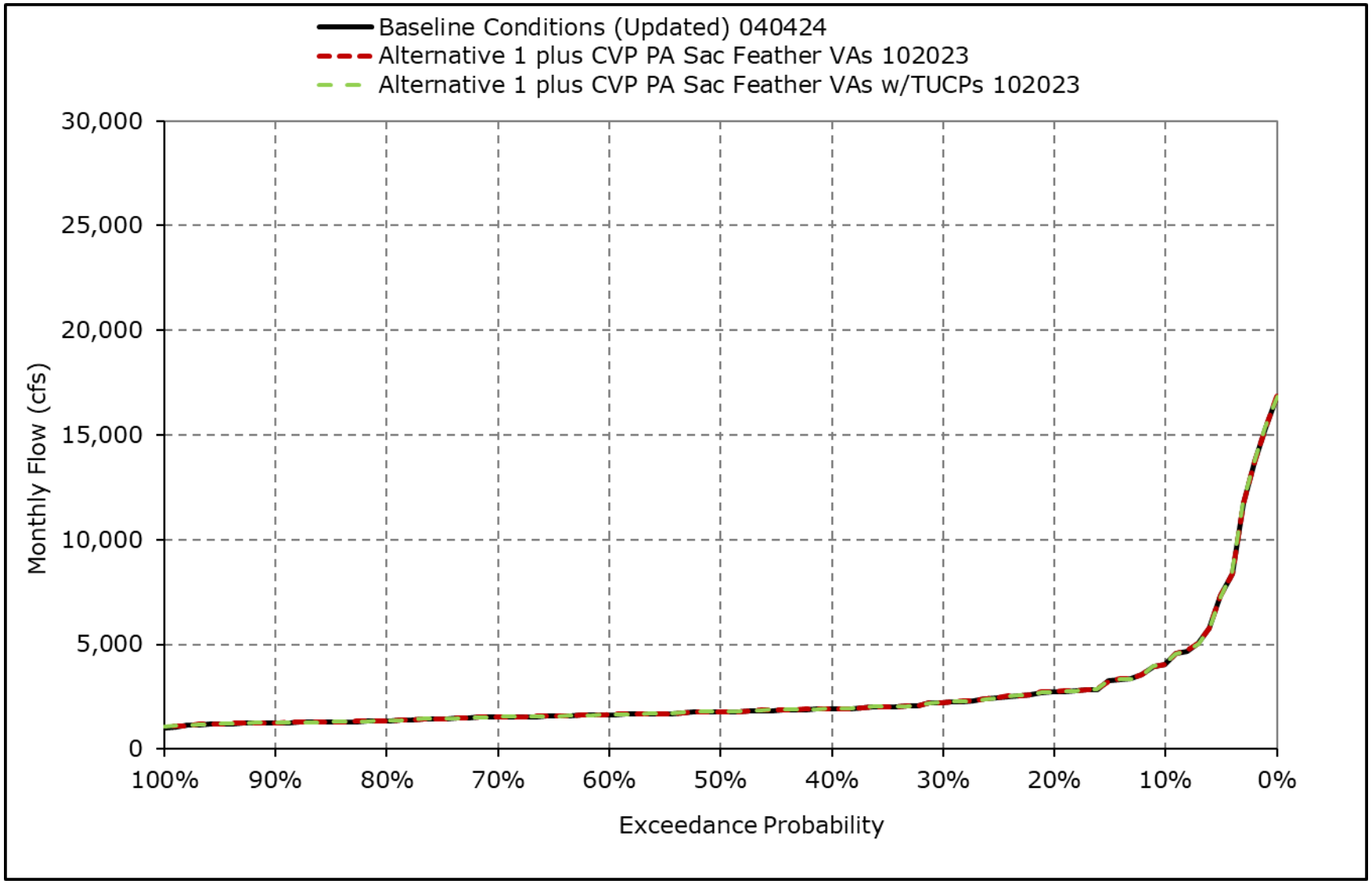
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5h. San Joaquin River at Vernalis, November



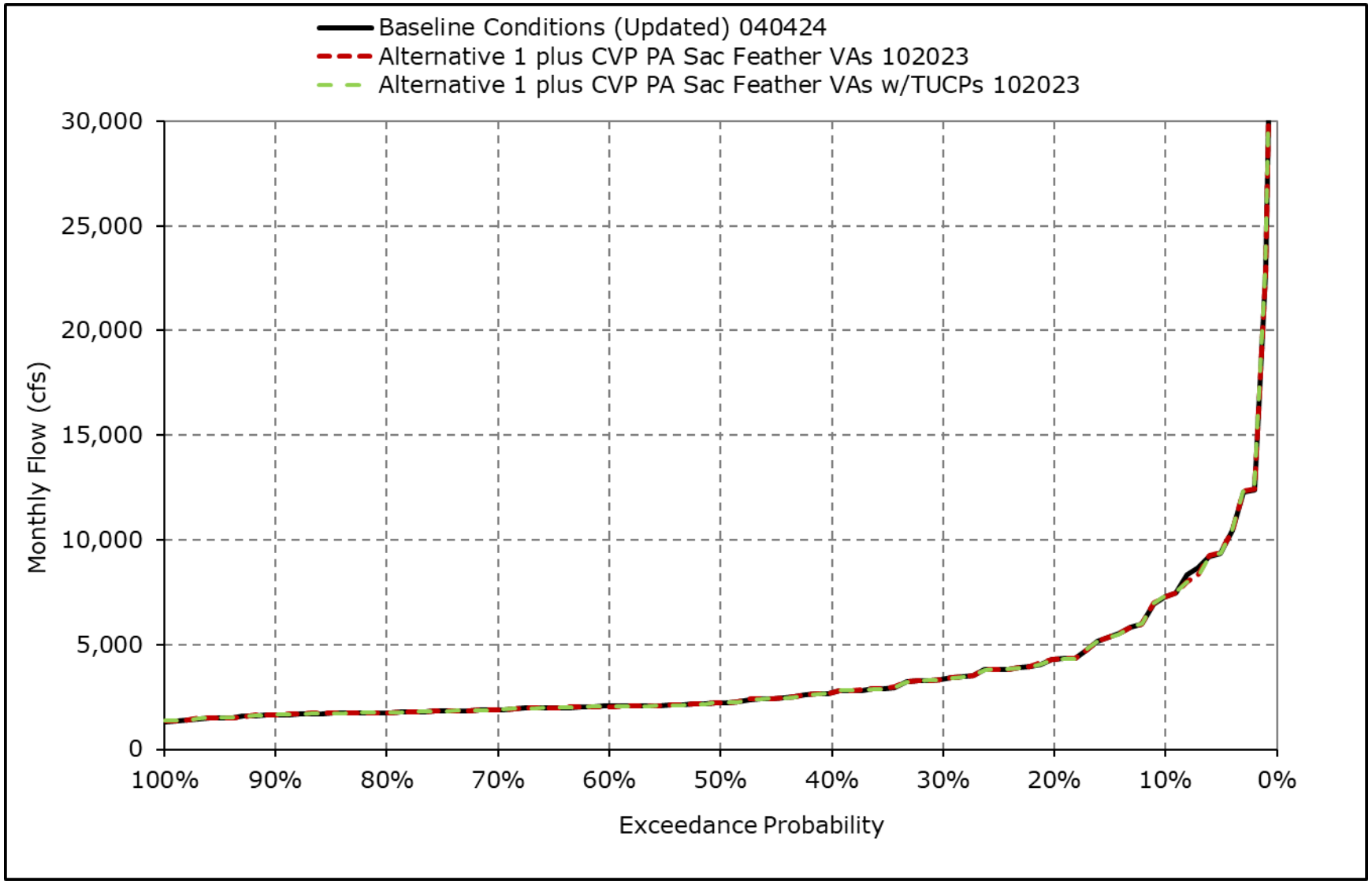
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5i. San Joaquin River at Vernalis, December



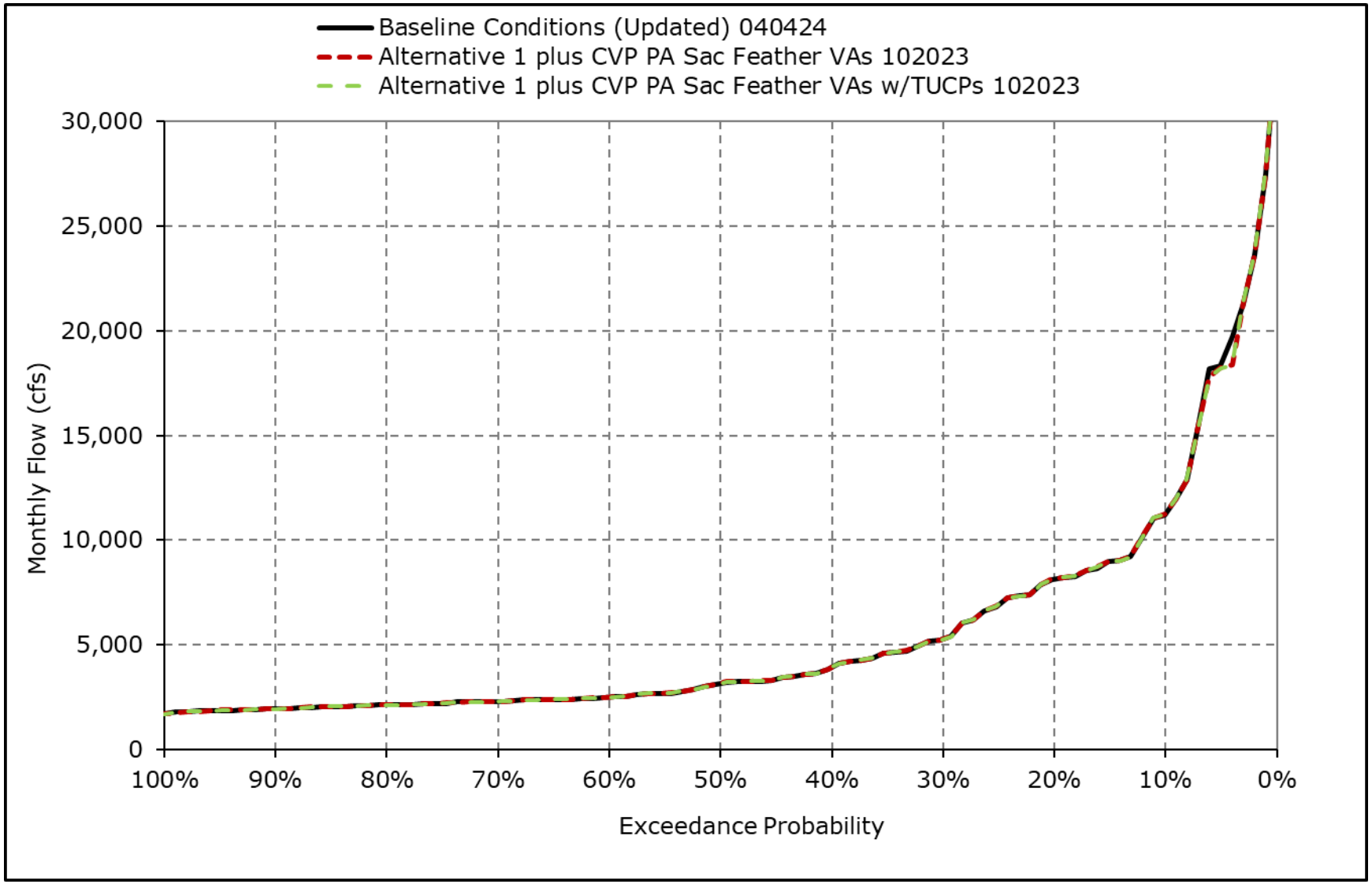
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5j. San Joaquin River at Vernalis, January



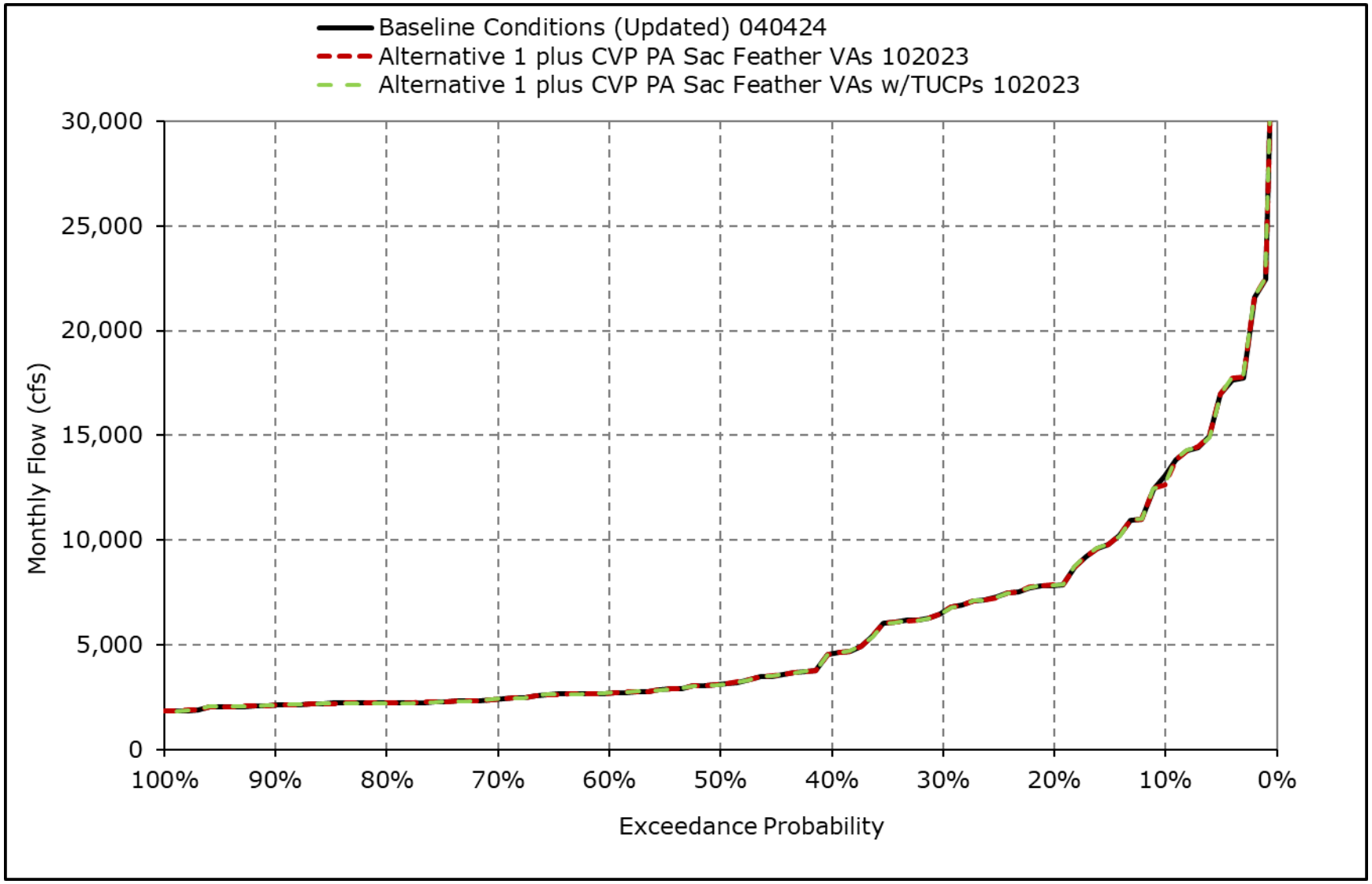
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5k. San Joaquin River at Vernalis, February



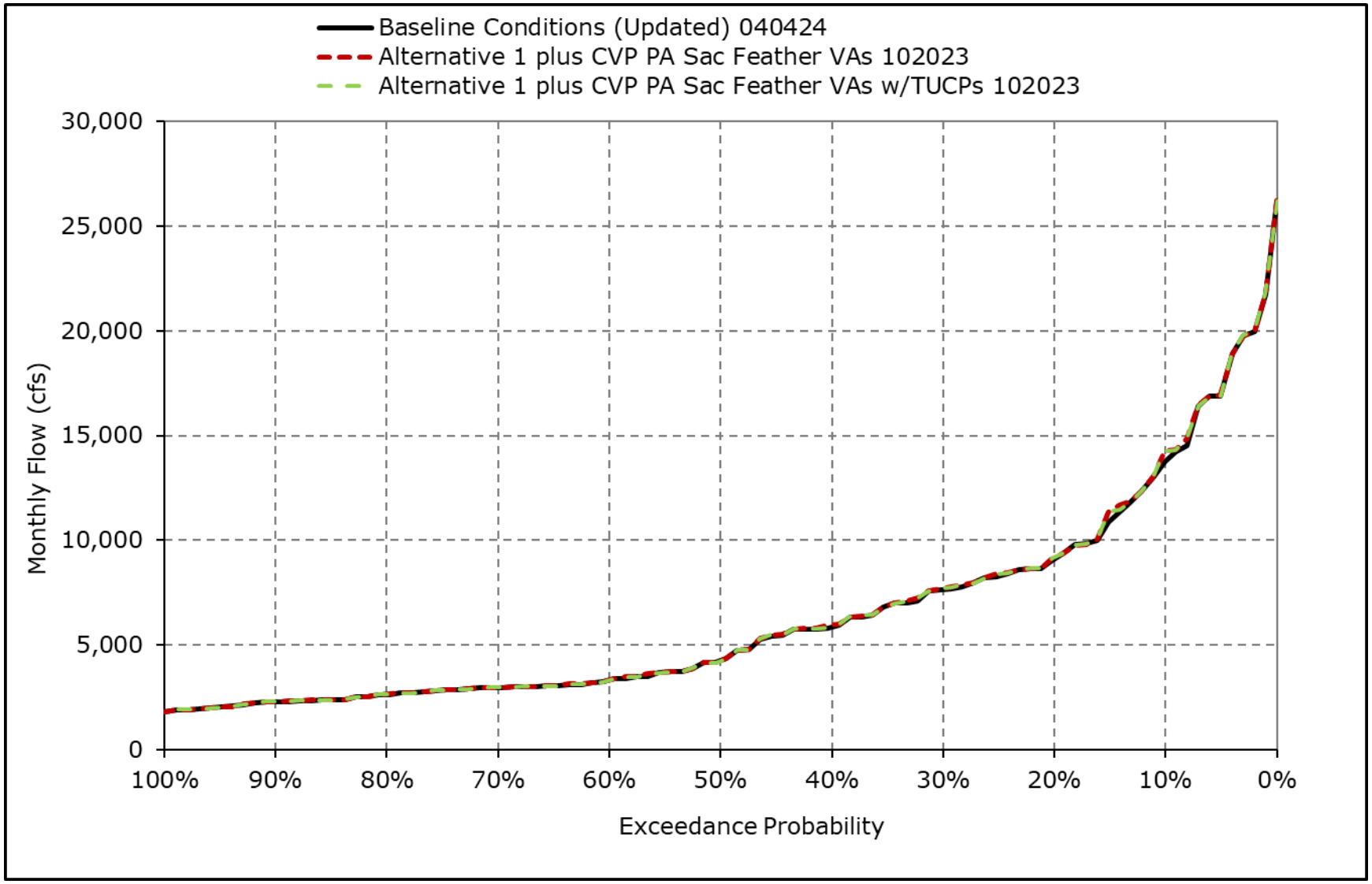
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5l. San Joaquin River at Vernalis, March



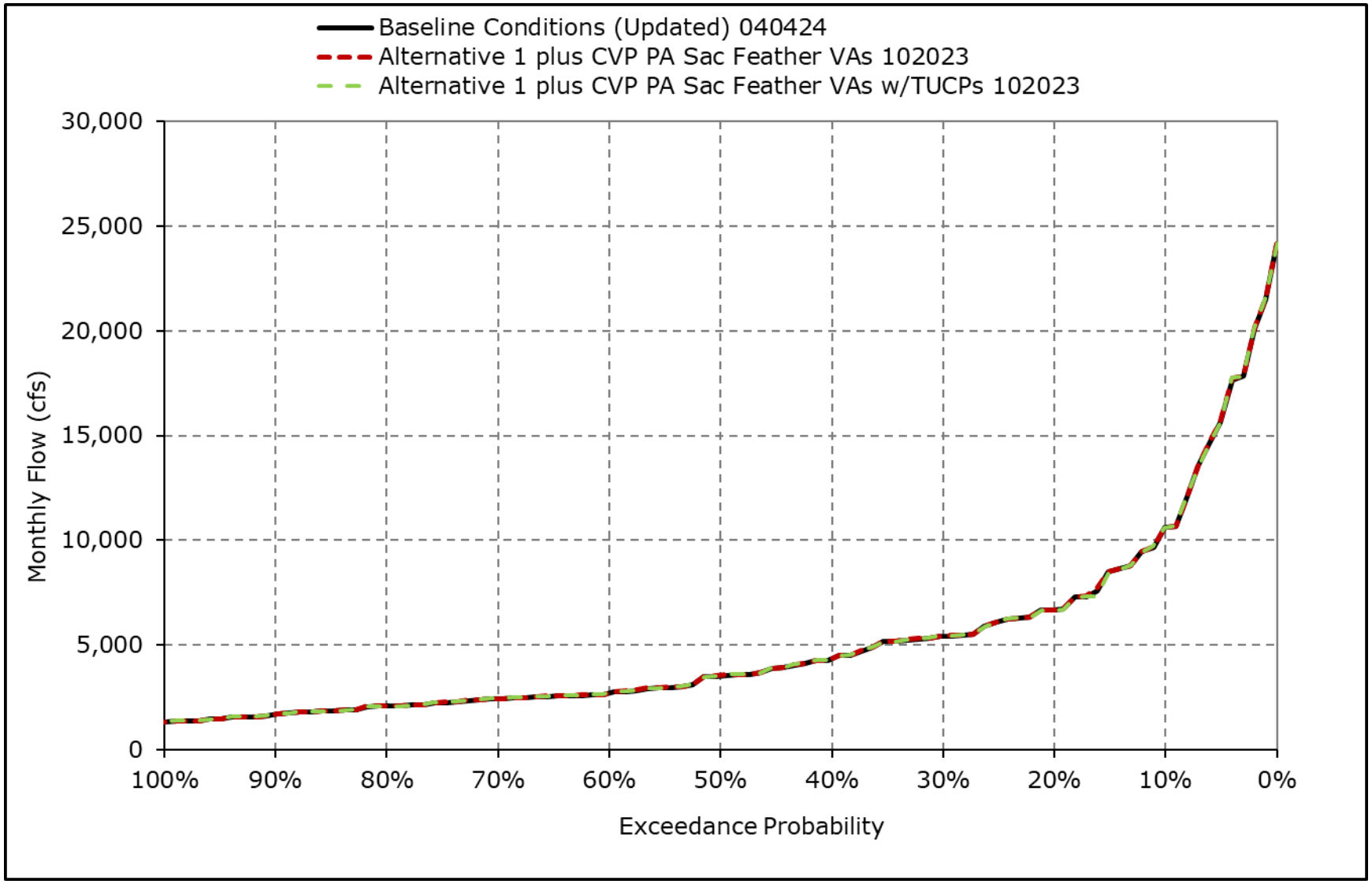
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5m. San Joaquin River at Vernalis, April



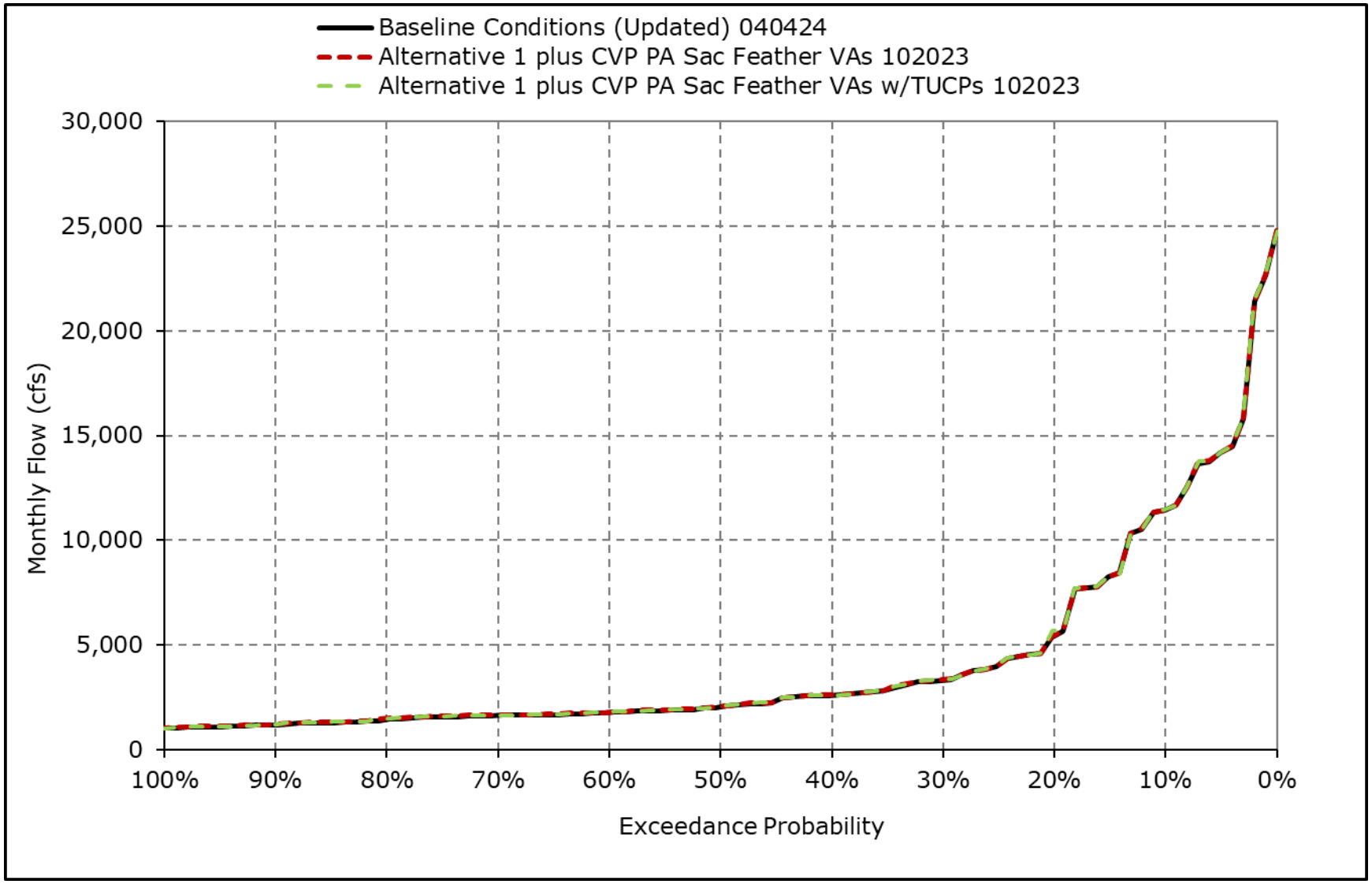
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5n. San Joaquin River at Vernalis, May



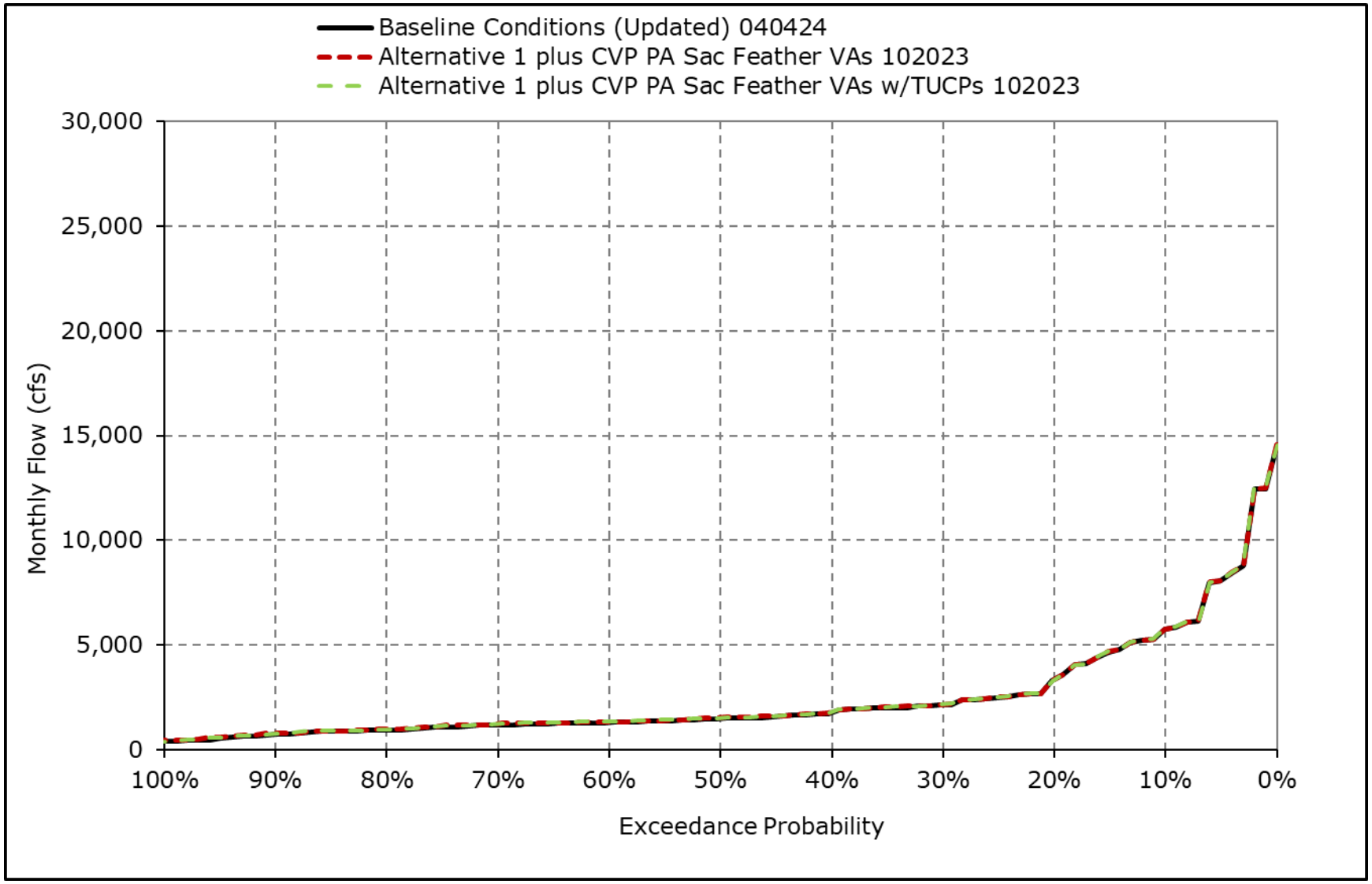
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5o. San Joaquin River at Vernalis, June



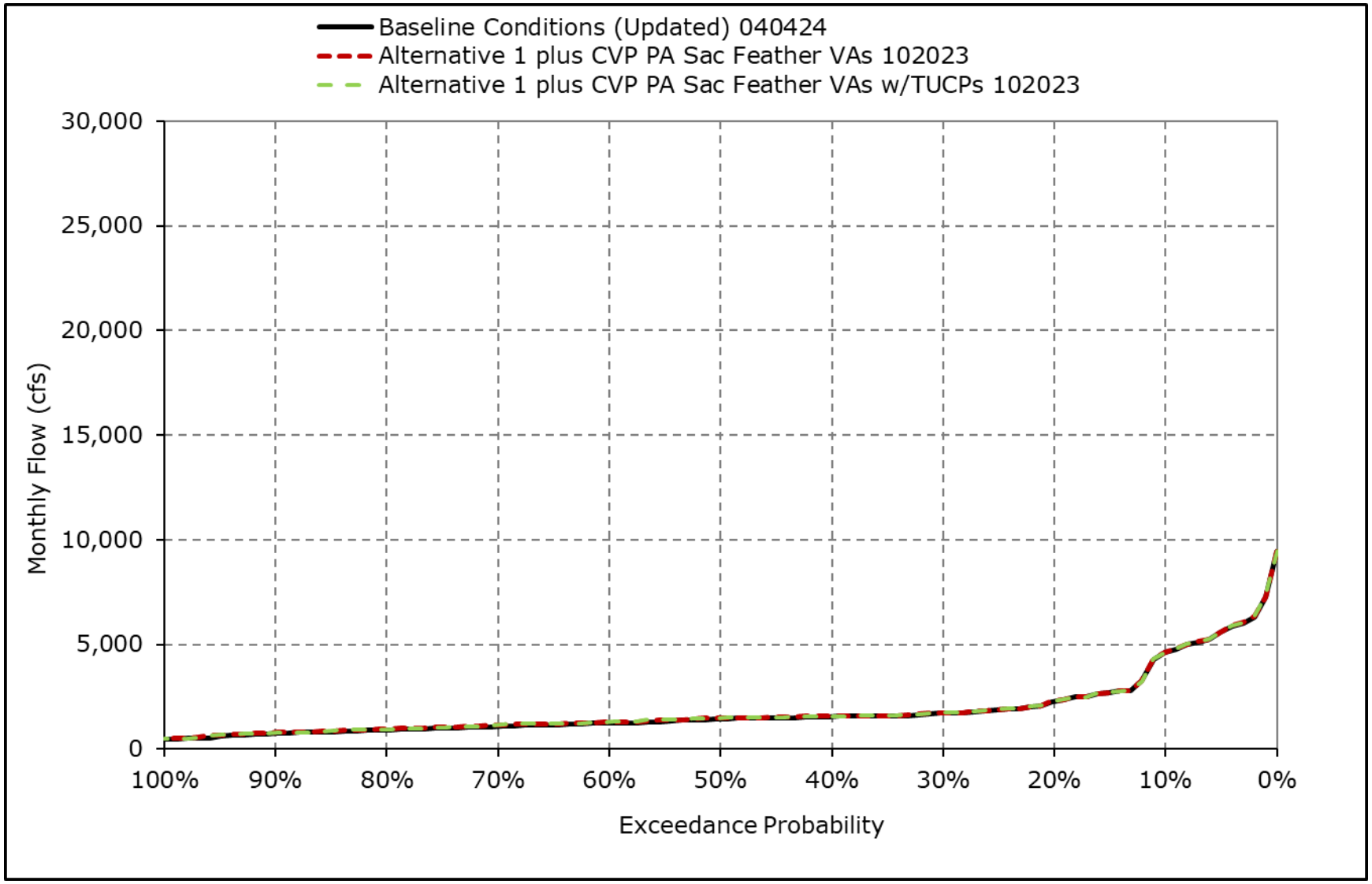
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5p. San Joaquin River at Vernalis, July



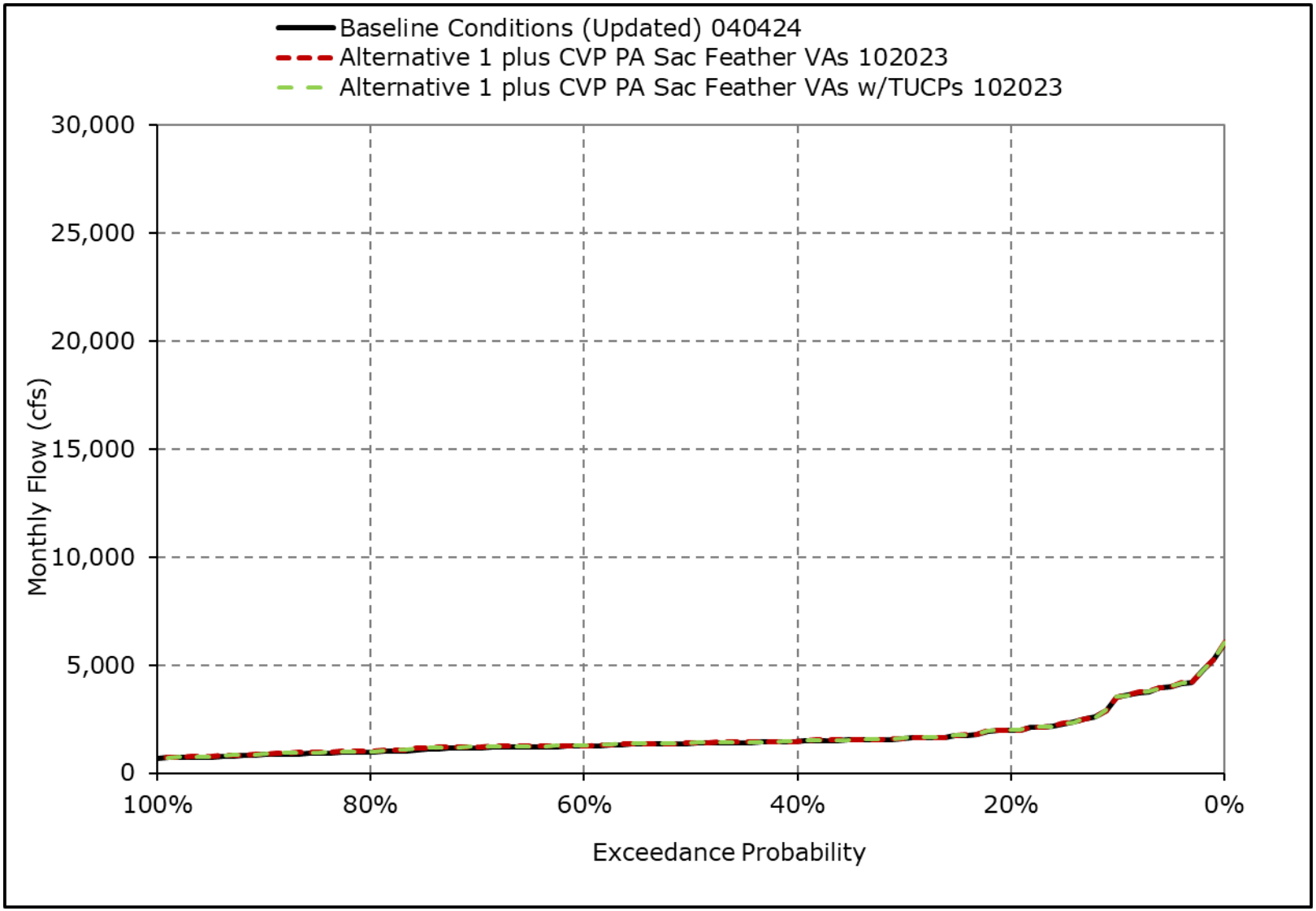
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5q. San Joaquin River at Vernalis, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-5r. San Joaquin River at Vernalis, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-6-1a. San Joaquin River at Vernalis (60-20-20), Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,745	2,791	4,101	7,308	11,298	13,134	13,819	10,607	11,467	5,768	4,628	3,532
20% Exceedance	3,332	2,397	2,730	4,281	8,152	7,835	9,112	6,663	5,419	3,345	2,287	1,993
30% Exceedance	3,007	2,324	2,227	3,337	5,269	6,556	7,660	5,416	3,327	2,121	1,713	1,606
40% Exceedance	2,126	2,101	1,925	2,712	3,940	4,562	5,869	4,348	2,590	1,789	1,554	1,469
50% Exceedance	1,864	1,872	1,783	2,221	3,161	3,108	4,256	3,509	2,047	1,487	1,460	1,383
60% Exceedance	1,749	1,584	1,644	2,059	2,502	2,702	3,332	2,702	1,760	1,299	1,237	1,266
70% Exceedance	1,661	1,478	1,530	1,893	2,295	2,408	2,964	2,447	1,633	1,185	1,101	1,158
80% Exceedance	1,555	1,371	1,348	1,757	2,129	2,224	2,638	2,071	1,440	925	925	989
90% Exceedance	1,374	1,304	1,255	1,647	1,949	2,126	2,285	1,710	1,183	743	750	848
Full Simulation Period Average[a]	2,387	2,098	2,616	3,912	5,584	5,844	6,426	5,131	4,241	2,502	1,906	1,683
Wet Water Years (25%)	2,508	2,211	3,864	7,853	11,648	12,999	13,347	11,025	10,618	5,895	3,977	3,046
Above Normal Water Years (17%)	2,543	2,681	3,541	4,308	6,463	5,728	7,118	5,282	3,772	2,286	1,719	1,598
Below Normal Water Years (14%)	2,465	2,139	2,324	2,455	3,823	3,817	4,952	3,939	2,211	1,469	1,390	1,311
Dry Water Years (16%)	2,640	2,065	1,825	2,175	2,461	2,741	3,209	2,598	1,711	1,234	1,146	1,160
Critical Water Years (28%)	1,999	1,643	1,538	1,873	2,301	2,313	2,402	1,820	1,292	843	864	1,001

Table 4F-3-6-1b. San Joaquin River at Vernalis (60-20-20), Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,750	2,799	4,102	7,315	11,302	12,750	14,271	10,621	11,475	5,780	4,635	3,538
20% Exceedance	3,336	2,403	2,738	4,299	8,160	7,852	9,176	6,672	5,451	3,350	2,304	2,000
30% Exceedance	3,011	2,335	2,237	3,343	5,277	6,563	7,720	5,440	3,370	2,152	1,740	1,615
40% Exceedance	2,133	2,116	1,931	2,721	3,947	4,564	5,979	4,355	2,614	1,807	1,575	1,486
50% Exceedance	1,879	1,892	1,788	2,227	3,162	3,099	4,260	3,553	2,066	1,523	1,482	1,392
60% Exceedance	1,786	1,593	1,654	2,045	2,500	2,701	3,327	2,725	1,792	1,332	1,295	1,272
70% Exceedance	1,709	1,478	1,535	1,899	2,303	2,414	2,969	2,450	1,647	1,238	1,172	1,210
80% Exceedance	1,548	1,396	1,360	1,755	2,134	2,215	2,644	2,085	1,488	968	961	1,022
90% Exceedance	1,422	1,306	1,266	1,654	1,957	2,128	2,300	1,714	1,199	771	789	869
Full Simulation Period Average[a]	2,402	2,108	2,624	3,913	5,572	5,844	6,461	5,146	4,264	2,531	1,938	1,705
Wet Water Years (25%)	2,528	2,222	3,875	7,839	11,590	12,998	13,431	11,046	10,636	5,905	3,986	3,055
Above Normal Water Years (17%)	2,563	2,696	3,551	4,317	6,468	5,731	7,171	5,303	3,797	2,316	1,743	1,615
Below Normal Water Years (14%)	2,472	2,142	2,327	2,461	3,827	3,815	4,975	3,952	2,229	1,491	1,412	1,327
Dry Water Years (16%)	2,659	2,082	1,838	2,183	2,464	2,740	3,212	2,615	1,732	1,268	1,194	1,201
Critical Water Years (28%)	2,009	1,648	1,542	1,879	2,302	2,312	2,408	1,826	1,321	889	916	1,032

Table 4F-3-6-1c. San Joaquin River at Vernalis (60-20-20), Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	5	8	1	7	4	-384	452	14	9	12	8	6
20% Exceedance	4	5	8	18	8	17	64	9	32	5	17	6
30% Exceedance	4	12	10	6	7	6	61	25	43	31	27	8
40% Exceedance	7	15	6	9	7	2	110	8	24	18	21	18
50% Exceedance	15	19	5	6	1	-8	4	43	19	36	23	9
60% Exceedance	36	9	9	-14	-2	-1	-5	22	32	33	58	5
70% Exceedance	48	0	5	6	8	6	5	3	14	53	71	52
80% Exceedance	-7	25	12	-2	5	-9	6	14	48	43	36	33
90% Exceedance	47	2	11	7	8	2	14	4	15	29	39	21
Full Simulation Period Average[a]	15	10	8	2	-12	0	35	15	23	29	32	22
Wet Water Years (25%)	20	11	11	-15	-58	-1	84	21	18	11	9	8
Above Normal Water Years (17%)	20	15	10	9	5	3	53	22	25	30	23	17
Below Normal Water Years (14%)	7	3	2	6	4	-2	23	13	18	23	22	16
Dry Water Years (16%)	20	17	13	8	3	-1	2	17	21	34	48	41
Critical Water Years (28%)	9	5	4	6	1	-1	6	6	29	46	52	31

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-6-2a. San Joaquin River at Vernalis (60-20-20), Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,745	2,791	4,101	7,308	11,298	13,134	13,819	10,607	11,467	5,768	4,628	3,532
20% Exceedance	3,332	2,397	2,730	4,281	8,152	7,835	9,112	6,663	5,419	3,345	2,287	1,993
30% Exceedance	3,007	2,324	2,227	3,337	5,269	6,556	7,660	5,416	3,327	2,121	1,713	1,606
40% Exceedance	2,126	2,101	1,925	2,712	3,940	4,562	5,869	4,348	2,590	1,789	1,554	1,469
50% Exceedance	1,864	1,872	1,783	2,221	3,161	3,108	4,256	3,509	2,047	1,487	1,460	1,383
60% Exceedance	1,749	1,584	1,644	2,059	2,502	2,702	3,332	2,702	1,760	1,299	1,237	1,266
70% Exceedance	1,661	1,478	1,530	1,893	2,295	2,408	2,964	2,447	1,633	1,185	1,101	1,158
80% Exceedance	1,555	1,371	1,348	1,757	2,129	2,224	2,638	2,071	1,440	925	925	989
90% Exceedance	1,374	1,304	1,255	1,647	1,949	2,126	2,285	1,710	1,183	743	750	848
Full Simulation Period Average[a]	2,387	2,098	2,616	3,912	5,584	5,844	6,426	5,131	4,241	2,502	1,906	1,683
Wet Water Years (25%)	2,508	2,211	3,864	7,853	11,648	12,999	13,347	11,025	10,618	5,895	3,977	3,046
Above Normal Water Years (17%)	2,543	2,681	3,541	4,308	6,463	5,728	7,118	5,282	3,772	2,286	1,719	1,598
Below Normal Water Years (14%)	2,465	2,139	2,324	2,455	3,823	3,817	4,952	3,939	2,211	1,469	1,390	1,311
Dry Water Years (16%)	2,640	2,065	1,825	2,175	2,461	2,741	3,209	2,598	1,711	1,234	1,146	1,160
Critical Water Years (28%)	1,999	1,643	1,538	1,873	2,301	2,313	2,402	1,820	1,292	843	864	1,001

Table 4F-3-6-2b. San Joaquin River at Vernalis (60-20-20), Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	3,749	2,799	4,102	7,311	11,303	12,747	14,271	10,617	11,474	5,780	4,633	3,537
20% Exceedance	3,353	2,400	2,736	4,294	8,160	7,849	9,175	6,669	5,658	3,348	2,300	1,999
30% Exceedance	3,012	2,336	2,236	3,342	5,276	6,560	7,719	5,439	3,368	2,187	1,739	1,614
40% Exceedance	2,132	2,114	1,930	2,721	3,945	4,562	5,870	4,354	2,613	1,807	1,575	1,486
50% Exceedance	1,879	1,893	1,787	2,227	3,161	3,098	4,258	3,556	2,064	1,526	1,484	1,403
60% Exceedance	1,805	1,591	1,652	2,047	2,493	2,702	3,324	2,724	1,791	1,334	1,293	1,277
70% Exceedance	1,700	1,482	1,535	1,896	2,310	2,411	2,965	2,447	1,648	1,228	1,157	1,218
80% Exceedance	1,557	1,369	1,361	1,761	2,134	2,215	2,642	2,084	1,486	960	946	1,012
90% Exceedance	1,422	1,307	1,267	1,650	1,950	2,114	2,300	1,714	1,202	758	769	910
Full Simulation Period Average[a]	2,403	2,109	2,624	3,912	5,570	5,842	6,455	5,141	4,264	2,530	1,937	1,706
Wet Water Years (25%)	2,533	2,224	3,873	7,835	11,587	12,994	13,409	11,029	10,646	5,907	3,986	3,055
Above Normal Water Years (17%)	2,554	2,687	3,546	4,314	6,466	5,730	7,169	5,303	3,794	2,316	1,743	1,614
Below Normal Water Years (14%)	2,478	2,147	2,330	2,461	3,826	3,812	4,972	3,951	2,226	1,484	1,404	1,322
Dry Water Years (16%)	2,651	2,077	1,835	2,181	2,462	2,739	3,211	2,615	1,733	1,274	1,210	1,210
Critical Water Years (28%)	2,017	1,656	1,548	1,881	2,302	2,311	2,407	1,825	1,319	885	908	1,034

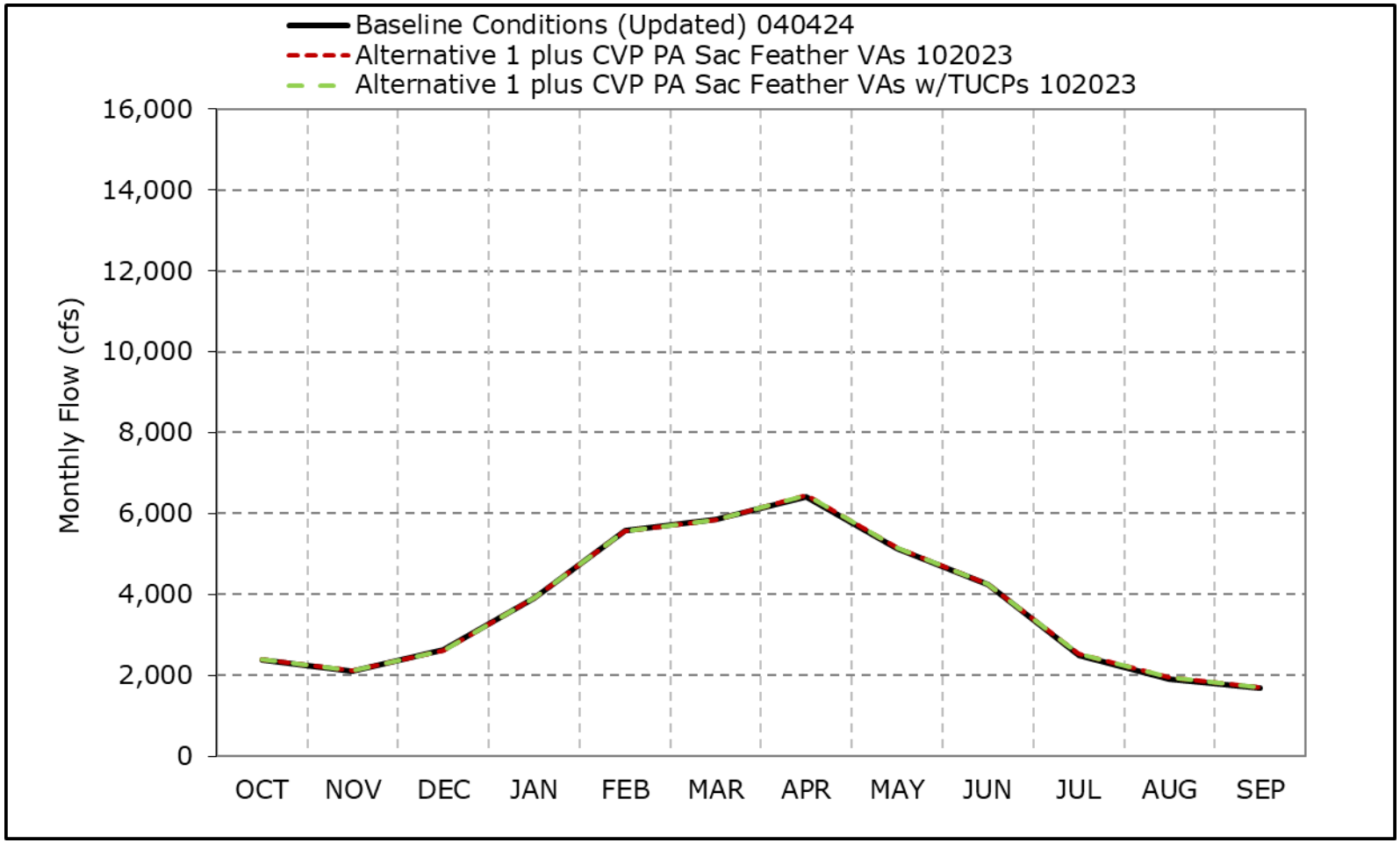
Table 4F-3-6-2c. San Joaquin River at Vernalis (60-20-20), Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	4	8	1	4	5	-387	452	10	7	12	6	4
20% Exceedance	21	2	7	13	7	14	63	5	238	3	13	6
30% Exceedance	5	12	8	5	6	3	60	23	41	65	25	8
40% Exceedance	6	13	6	10	4	-1	0	6	23	18	21	18
50% Exceedance	15	20	4	6	0	-9	2	46	16	38	24	20
60% Exceedance	56	7	8	-12	-9	0	-9	21	31	35	56	11
70% Exceedance	39	5	5	3	15	3	1	0	15	43	56	61
80% Exceedance	2	-2	13	4	6	-9	4	13	47	35	21	23
90% Exceedance	48	3	12	2	1	-12	14	4	19	15	20	62
Full Simulation Period Average[a]	17	11	8	0	-13	-2	29	11	24	28	31	24
Wet Water Years (25%)	25	13	9	-18	-61	-5	62	5	28	12	10	8
Above Normal Water Years (17%)	11	6	5	6	4	2	51	21	23	29	23	17
Below Normal Water Years (14%)	13	9	6	6	4	-5	20	12	15	16	14	11
Dry Water Years (16%)	11	12	10	6	1	-2	2	17	22	39	64	51
Critical Water Years (28%)	18	14	10	8	2	-2	5	5	26	42	44	33

[a] Based on the 100-year simulation period.

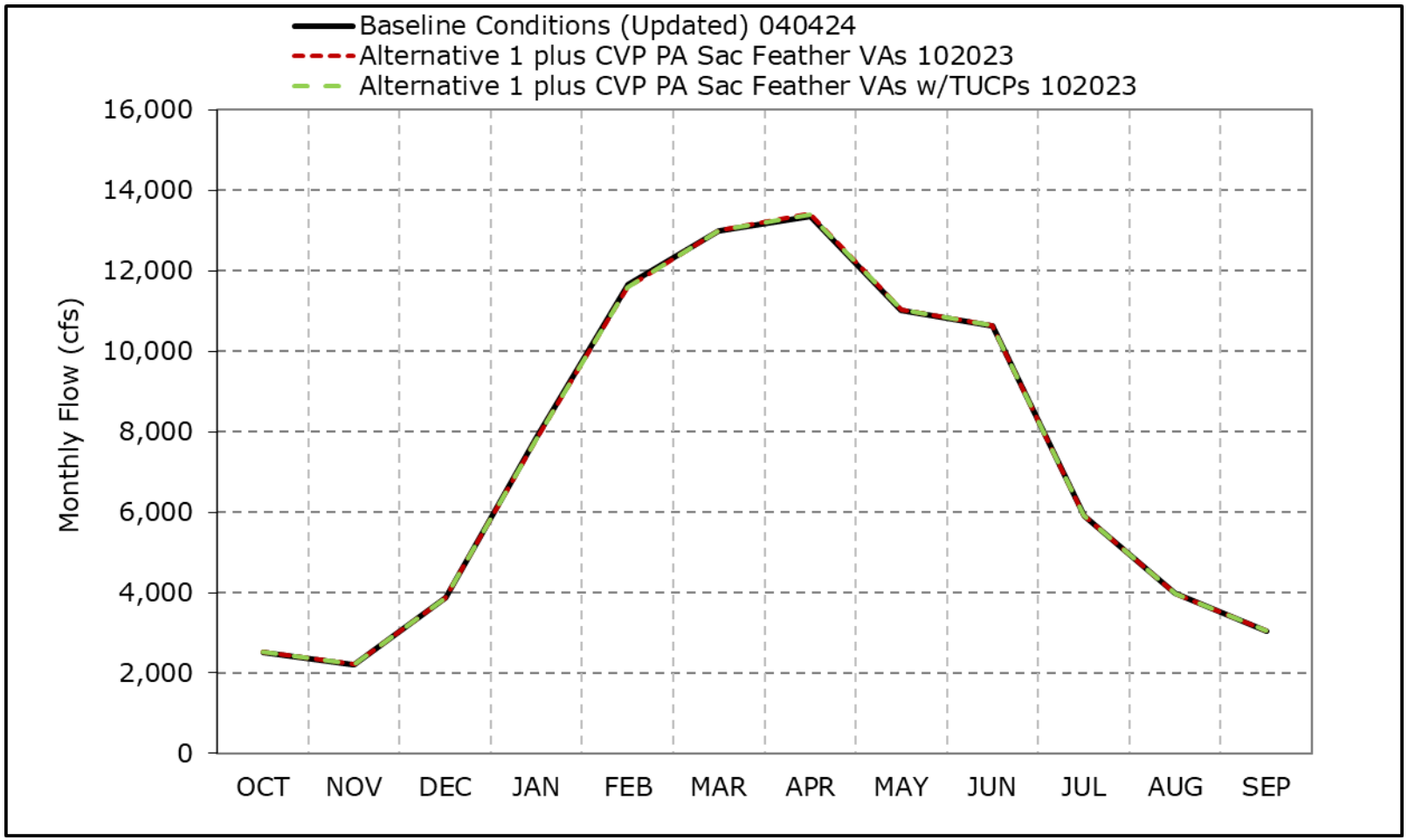
* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-6a. San Joaquin River at Vernalis (60-20-20), Long-Term Average Flow



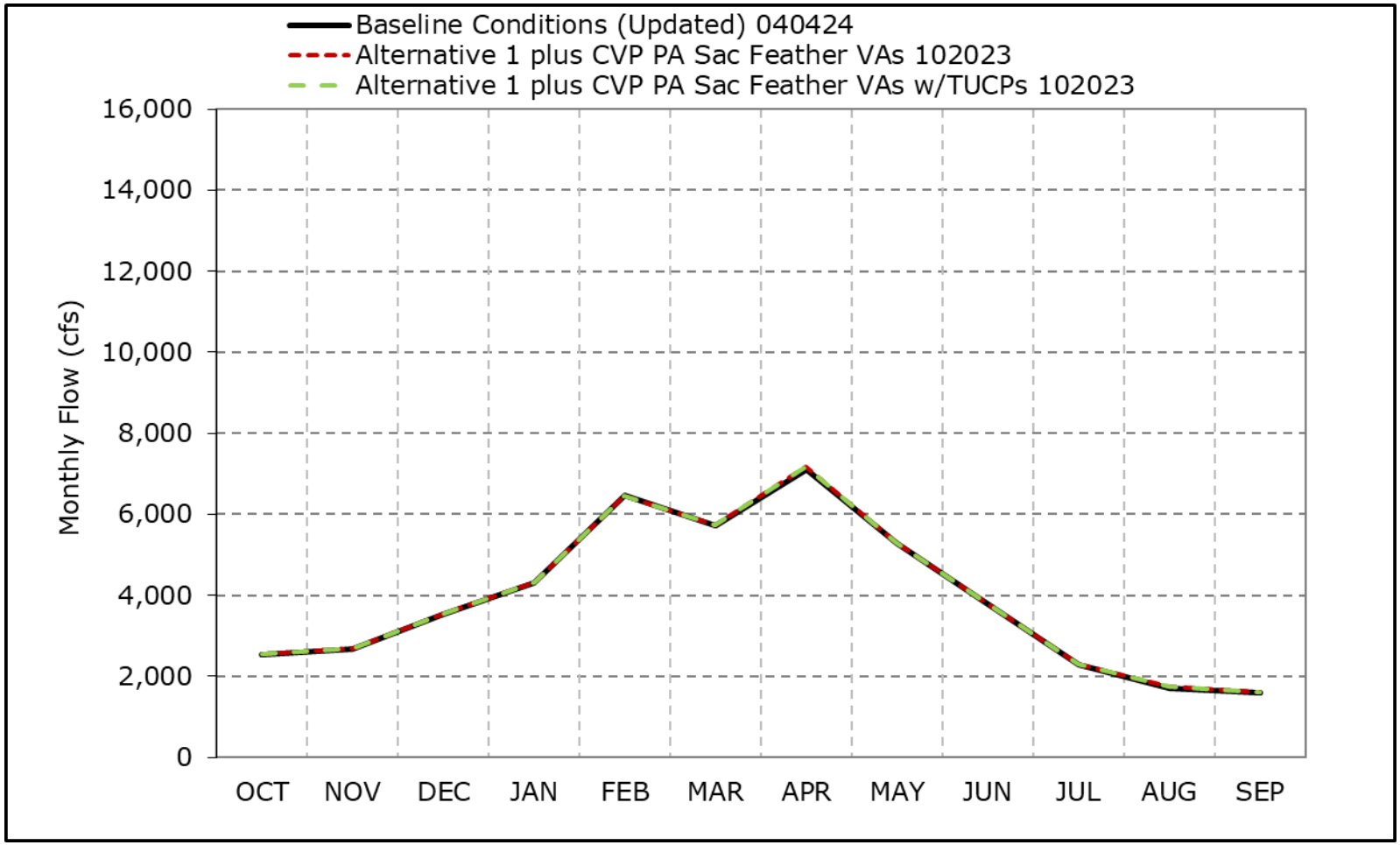
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-6b. San Joaquin River at Vernalis (60-20-20), Wet Year Average Flow



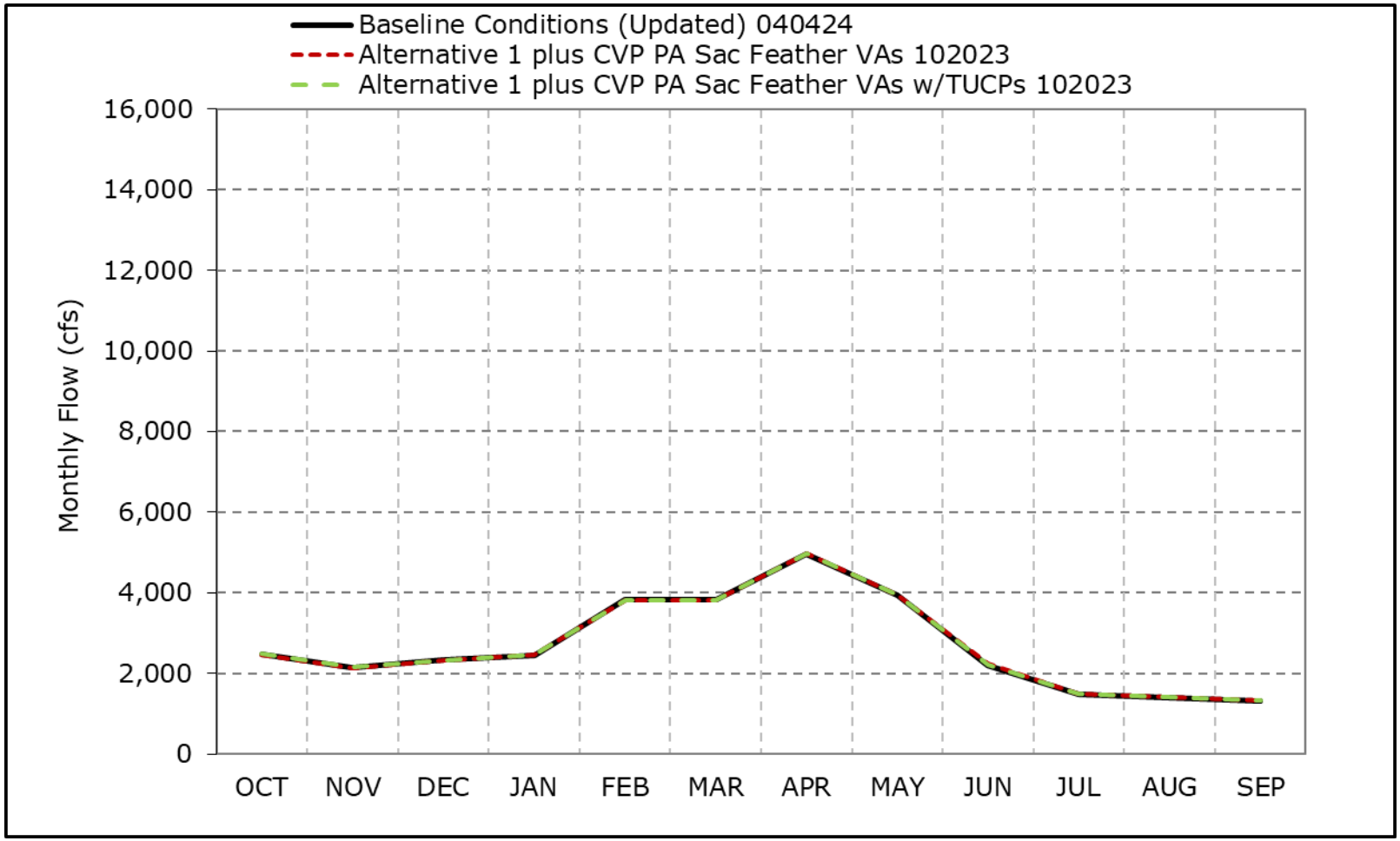
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-6c. San Joaquin River at Vernalis (60-20-20), Above Normal Year Average Flow



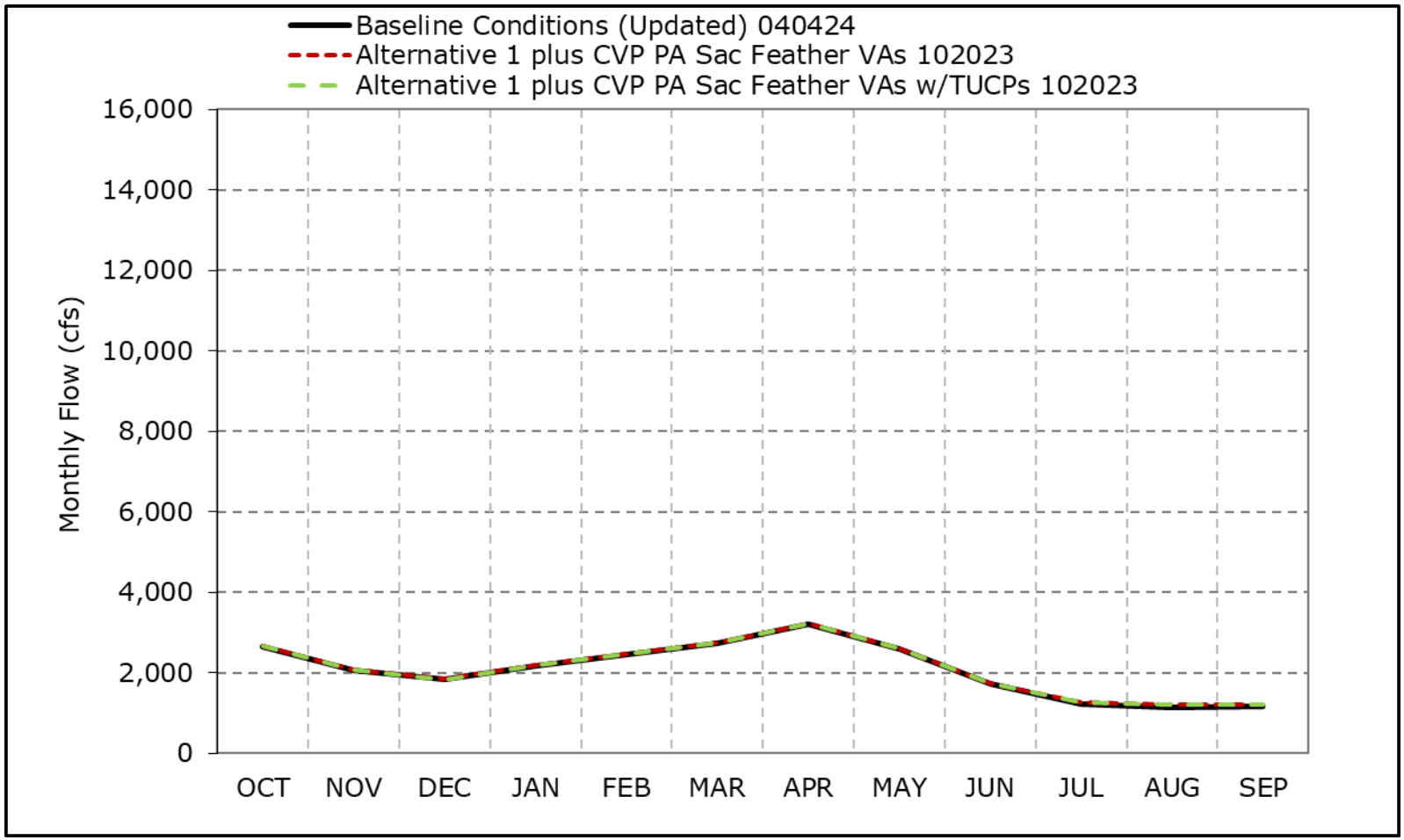
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-6d. San Joaquin River at Vernalis (60-20-20), Below Normal Year Average Flow



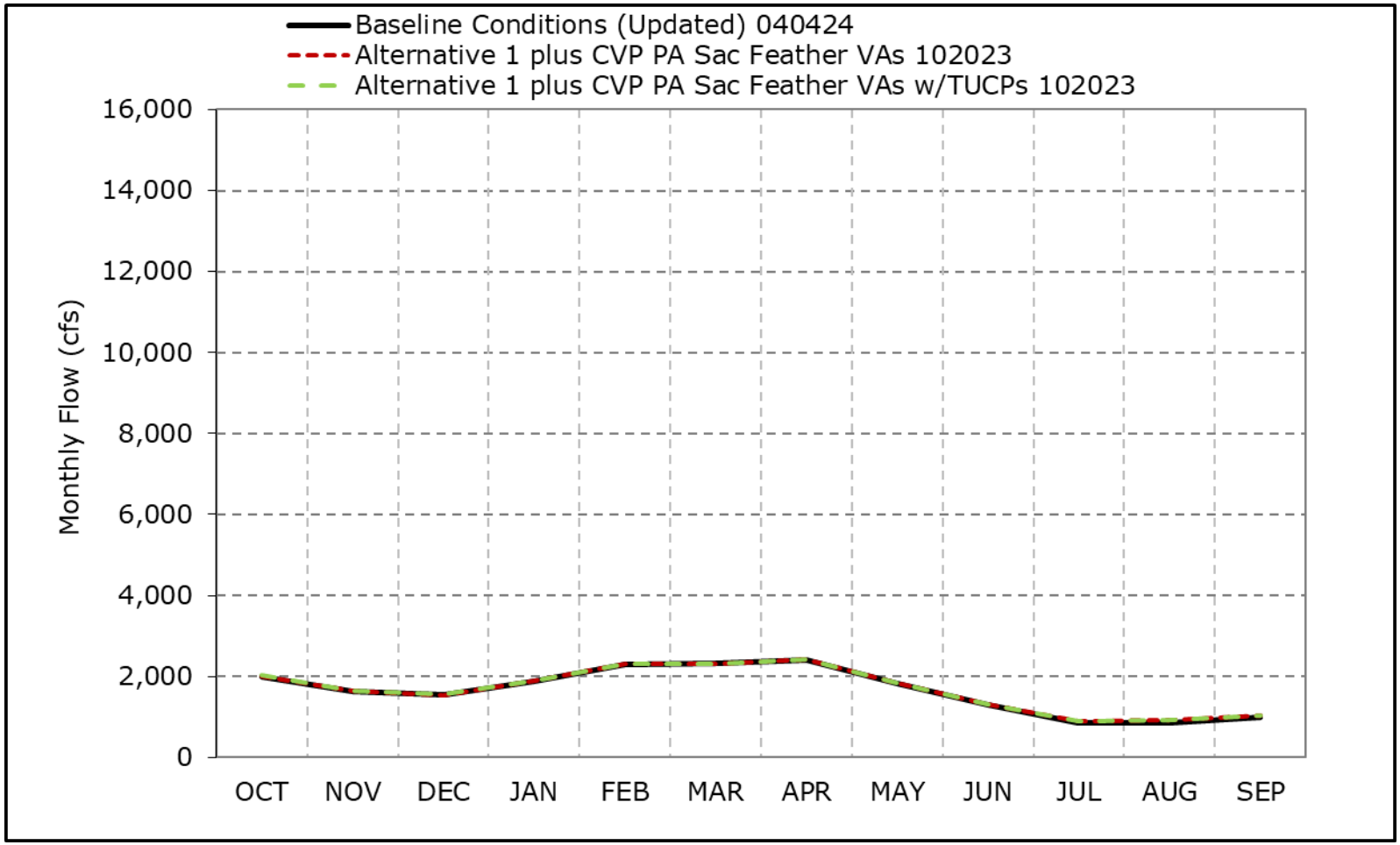
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-6e. 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 water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-6f. 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 water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-7-1a. Mokelumne River below Cosumnes, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	550	860	2,788	5,263	5,950	4,740	4,337	4,100	2,255	876	753	863
20% Exceedance	407	587	1,594	3,281	3,651	3,431	2,626	2,189	1,566	770	712	836
30% Exceedance	372	444	839	1,697	2,739	2,359	2,164	1,562	1,203	642	662	798
40% Exceedance	343	409	636	1,286	1,969	1,718	1,700	1,131	627	583	629	753
50% Exceedance	329	388	531	913	1,330	1,401	1,391	894	460	104	280	666
60% Exceedance	312	375	470	687	1,033	1,174	1,041	630	323	82	70	81
70% Exceedance	273	345	425	546	806	1,021	804	489	168	73	62	63
80% Exceedance	230	297	387	469	630	796	641	396	97	59	48	51
90% Exceedance	214	241	305	393	482	545	383	198	75	49	38	44
Full Simulation Period Average[a]	371	600	1,278	2,024	2,486	2,222	1,930	1,501	854	443	371	460
Wet Water Years (30%)	492	1,069	2,741	4,311	4,830	4,089	3,660	3,182	1,871	978	728	848
Above Normal Water Years (11%)	313	404	712	2,612	2,894	2,430	1,825	1,426	937	513	544	689
Below Normal Water Years (21%)	365	492	826	1,053	1,776	1,800	1,682	1,038	574	290	300	415
Dry Water Years (22%)	329	389	566	655	1,011	1,126	942	549	221	111	104	142
Critical Water Years (16%)	252	286	500	488	771	639	443	313	130	48	41	71

Table 4F-3-7-1b. Mokelumne River below Cosumnes, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	550	860	2,785	5,262	5,949	4,739	4,337	4,099	2,255	876	758	863
20% Exceedance	407	587	1,594	3,281	3,585	3,432	2,626	2,188	1,566	769	712	836
30% Exceedance	372	444	839	1,697	2,738	2,359	2,164	1,558	1,202	652	662	798
40% Exceedance	343	409	636	1,286	1,969	1,718	1,699	1,130	626	582	629	753
50% Exceedance	328	388	531	913	1,330	1,400	1,391	897	460	104	271	666
60% Exceedance	312	375	468	687	1,019	1,174	1,041	630	323	82	70	74
70% Exceedance	273	338	424	546	806	1,005	804	489	168	73	62	63
80% Exceedance	230	292	387	465	630	796	641	396	97	59	48	51
90% Exceedance	214	236	304	390	482	545	383	198	75	49	39	44
Full Simulation Period Average[a]	371	598	1,276	2,022	2,484	2,220	1,930	1,501	850	442	371	456
Wet Water Years (30%)	492	1,069	2,739	4,310	4,829	4,088	3,659	3,182	1,871	976	729	847
Above Normal Water Years (11%)	313	403	712	2,611	2,894	2,429	1,824	1,428	908	514	543	688
Below Normal Water Years (21%)	364	491	826	1,053	1,776	1,799	1,682	1,039	573	290	299	415
Dry Water Years (22%)	329	385	562	651	1,007	1,122	942	549	219	111	104	141
Critical Water Years (16%)	252	281	494	483	766	633	443	313	130	48	42	50

Table 4F-3-7-1c. Mokelumne River below Cosumnes, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	0	0	-3	0	-1	-1	0	0	0	0	5	0
20% Exceedance	0	0	0	0	-66	1	0	-1	0	0	0	-1
30% Exceedance	0	0	0	0	-1	0	0	-4	-1	10	0	0
40% Exceedance	0	0	0	0	0	0	0	-1	-1	0	0	0
50% Exceedance	0	0	0	0	0	0	0	3	0	0	-9	0
60% Exceedance	0	0	-2	0	-14	0	0	0	0	0	0	-7
70% Exceedance	0	-6	0	0	0	-16	0	0	0	0	0	0
80% Exceedance	0	-5	0	-4	0	0	0	0	0	0	0	0
90% Exceedance	0	-4	0	-3	0	0	0	0	0	0	1	0
Full Simulation Period Average[a]	0	-2	-2	-2	-2	-2	0	0	-4	0	0	-4
Wet Water Years (30%)	0	0	-1	0	-1	-1	0	-1	0	-1	0	0
Above Normal Water Years (11%)	-1	0	0	0	0	-1	0	2	-29	1	0	0
Below Normal Water Years (21%)	0	0	0	0	0	0	0	0	0	1	-1	0
Dry Water Years (22%)	0	-4	-4	-4	-4	-4	0	0	-2	0	0	0
Critical Water Years (16%)	0	-5	-5	-5	-5	-5	0	0	0	0	1	-21

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-7-2a. Mokelumne River below Cosumnes, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	550	860	2,788	5,263	5,950	4,740	4,337	4,100	2,255	876	753	863
20% Exceedance	407	587	1,594	3,281	3,651	3,431	2,626	2,189	1,566	770	712	836
30% Exceedance	372	444	839	1,697	2,739	2,359	2,164	1,562	1,203	642	662	798
40% Exceedance	343	409	636	1,286	1,969	1,718	1,700	1,131	627	583	629	753
50% Exceedance	329	388	531	913	1,330	1,401	1,391	894	460	104	280	666
60% Exceedance	312	375	470	687	1,033	1,174	1,041	630	323	82	70	81
70% Exceedance	273	345	425	546	806	1,021	804	489	168	73	62	63
80% Exceedance	230	297	387	469	630	796	641	396	97	59	48	51
90% Exceedance	214	241	305	393	482	545	383	198	75	49	38	44
Full Simulation Period Average[a]	371	600	1,278	2,024	2,486	2,222	1,930	1,501	854	443	371	460
Wet Water Years (30%)	492	1,069	2,741	4,311	4,830	4,089	3,660	3,182	1,871	978	728	848
Above Normal Water Years (11%)	313	404	712	2,612	2,894	2,430	1,825	1,426	937	513	544	689
Below Normal Water Years (21%)	365	492	826	1,053	1,776	1,800	1,682	1,038	574	290	300	415
Dry Water Years (22%)	329	389	566	655	1,011	1,126	942	549	221	111	104	142
Critical Water Years (16%)	252	286	500	488	771	639	443	313	130	48	41	71

Table 4F-3-7-2b. Mokelumne River below Cosumnes, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	550	860	2,785	5,262	5,949	4,738	4,337	4,099	2,255	876	753	863
20% Exceedance	407	587	1,594	3,281	3,585	3,432	2,626	2,188	1,566	769	712	836
30% Exceedance	372	444	839	1,697	2,738	2,359	2,164	1,558	1,202	652	662	797
40% Exceedance	343	409	636	1,286	1,969	1,718	1,699	1,130	626	582	629	753
50% Exceedance	328	388	531	913	1,330	1,400	1,390	897	460	104	271	666
60% Exceedance	312	375	468	687	1,033	1,174	1,041	630	323	82	70	74
70% Exceedance	273	338	424	546	806	1,005	804	489	168	73	62	63
80% Exceedance	230	292	387	465	630	796	641	396	97	59	48	51
90% Exceedance	214	241	304	390	482	545	383	198	75	49	38	44
Full Simulation Period Average[a]	371	599	1,277	2,023	2,485	2,220	1,930	1,500	850	442	370	456
Wet Water Years (30%)	492	1,069	2,740	4,310	4,829	4,088	3,659	3,182	1,871	976	728	847
Above Normal Water Years (11%)	313	403	712	2,611	2,894	2,429	1,824	1,427	908	513	543	688
Below Normal Water Years (21%)	364	491	826	1,053	1,775	1,799	1,682	1,039	573	290	299	415
Dry Water Years (22%)	329	385	562	651	1,007	1,122	942	549	219	111	104	141
Critical Water Years (16%)	252	286	500	488	771	639	443	313	129	48	41	50

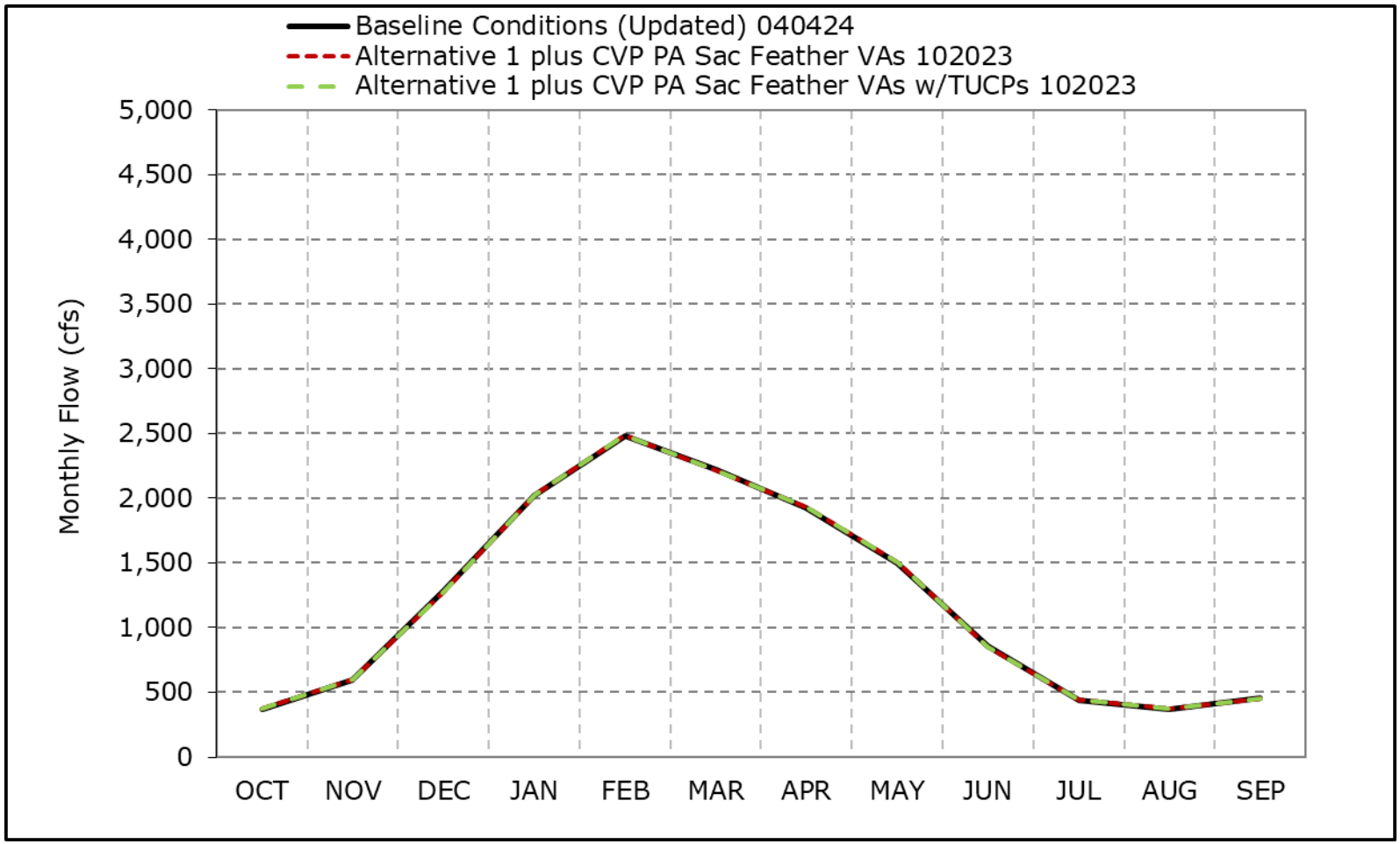
Table 4F-3-7-2c. Mokelumne River below Cosumnes, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	0	0	-4	0	-1	-1	0	0	0	0	0	0
20% Exceedance	0	0	0	0	-66	1	0	-1	0	0	0	-1
30% Exceedance	0	0	0	0	-1	0	0	-4	-1	10	0	0
40% Exceedance	0	0	0	0	0	0	0	-2	-1	0	0	0
50% Exceedance	0	0	0	0	0	0	0	3	0	0	-9	-1
60% Exceedance	0	0	-2	0	0	0	0	0	0	0	0	-7
70% Exceedance	0	-6	0	0	0	-16	0	0	0	0	0	0
80% Exceedance	0	-5	0	-4	0	0	0	0	0	0	0	0
90% Exceedance	0	0	0	-3	0	0	0	0	0	0	0	0
Full Simulation Period Average[a]	0	-1	-1	-1	-1	-1	0	0	-4	0	0	-4
Wet Water Years (30%)	0	0	-1	0	-1	-1	-1	-1	0	-1	0	0
Above Normal Water Years (11%)	0	0	0	0	0	-1	0	1	-29	1	0	0
Below Normal Water Years (21%)	0	0	0	0	0	0	0	0	0	1	-1	0
Dry Water Years (22%)	0	-4	-4	-4	-4	-4	0	0	-2	0	0	0
Critical Water Years (16%)	0	0	0	0	0	0	0	0	0	0	0	-21

[a] Based on the 100-year simulation period.

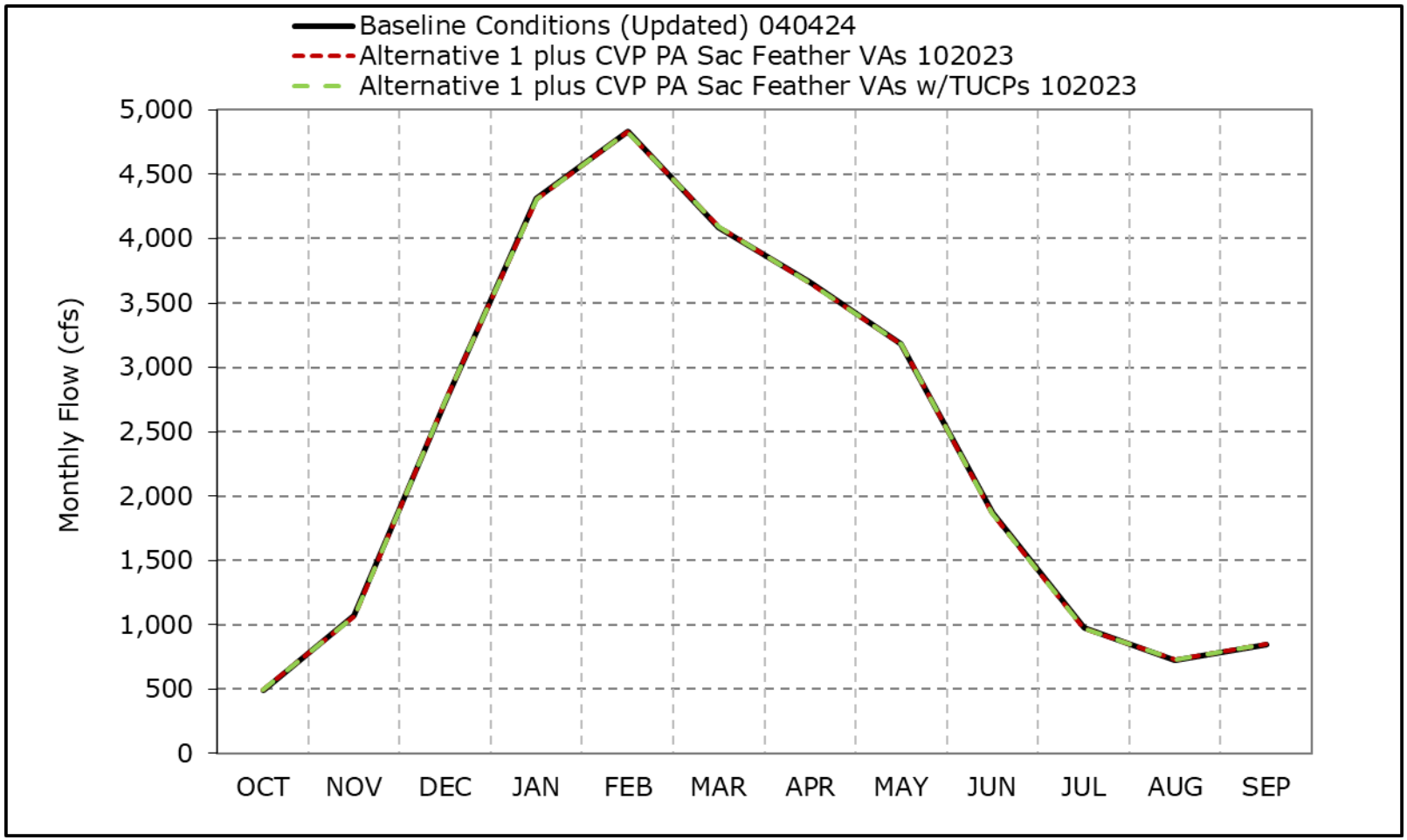
* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-7a. Mokelumne River below Cosumnes, Long-Term Average Flow



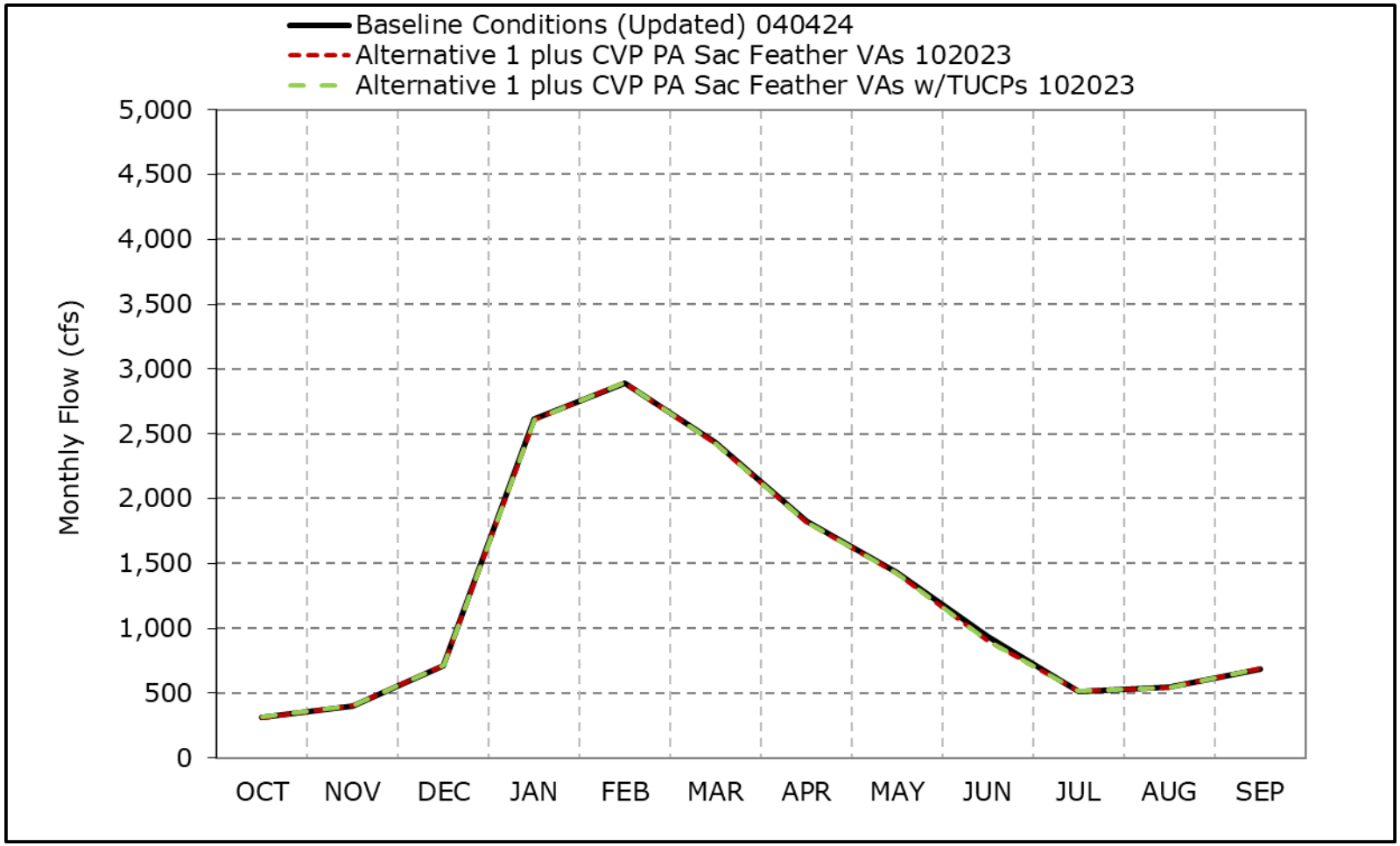
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7b. Mokelumne River below Cosumnes, Wet Year Average Flow



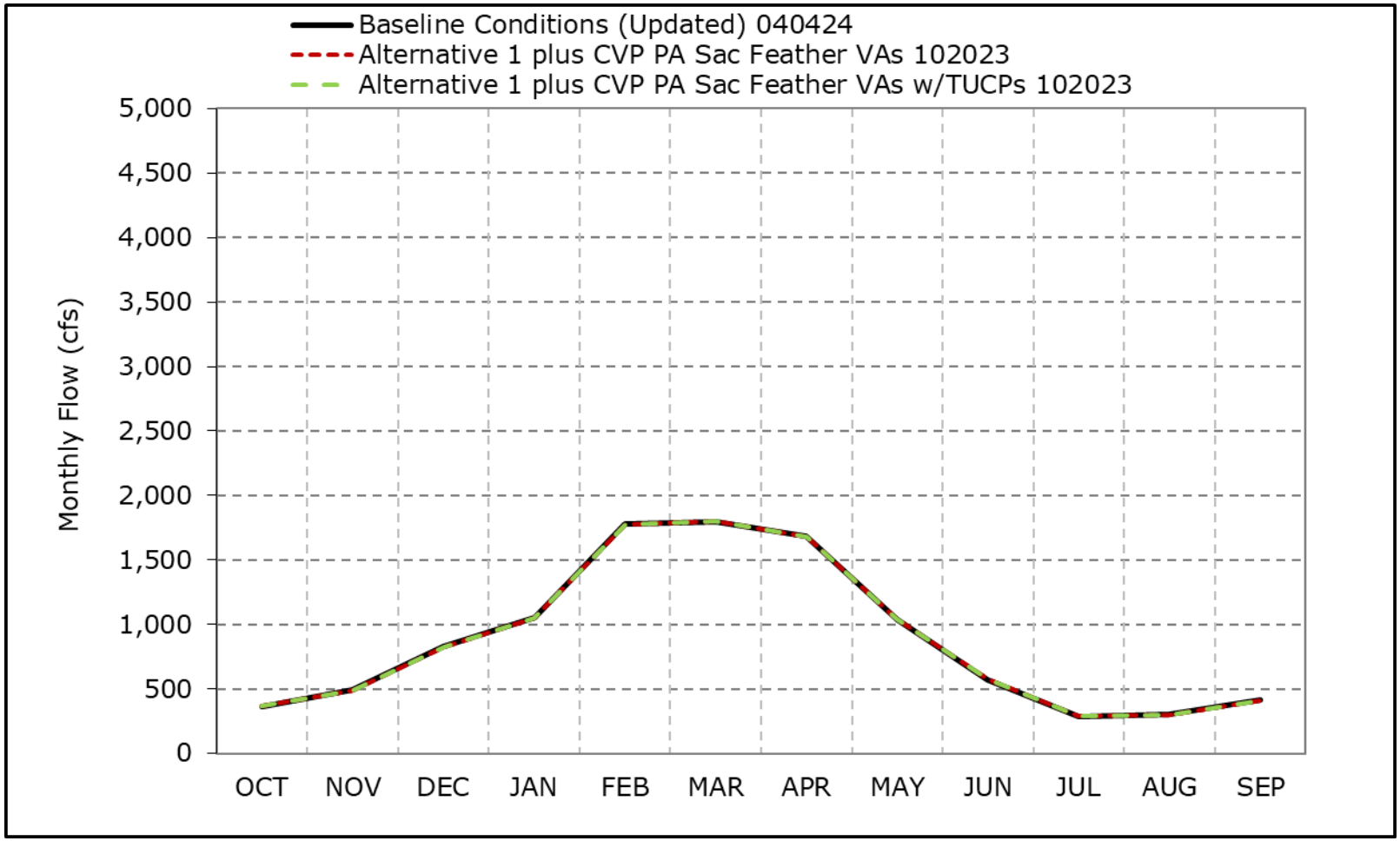
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7c. Mokelumne River below Cosumnes, Above Normal Year Average Flow



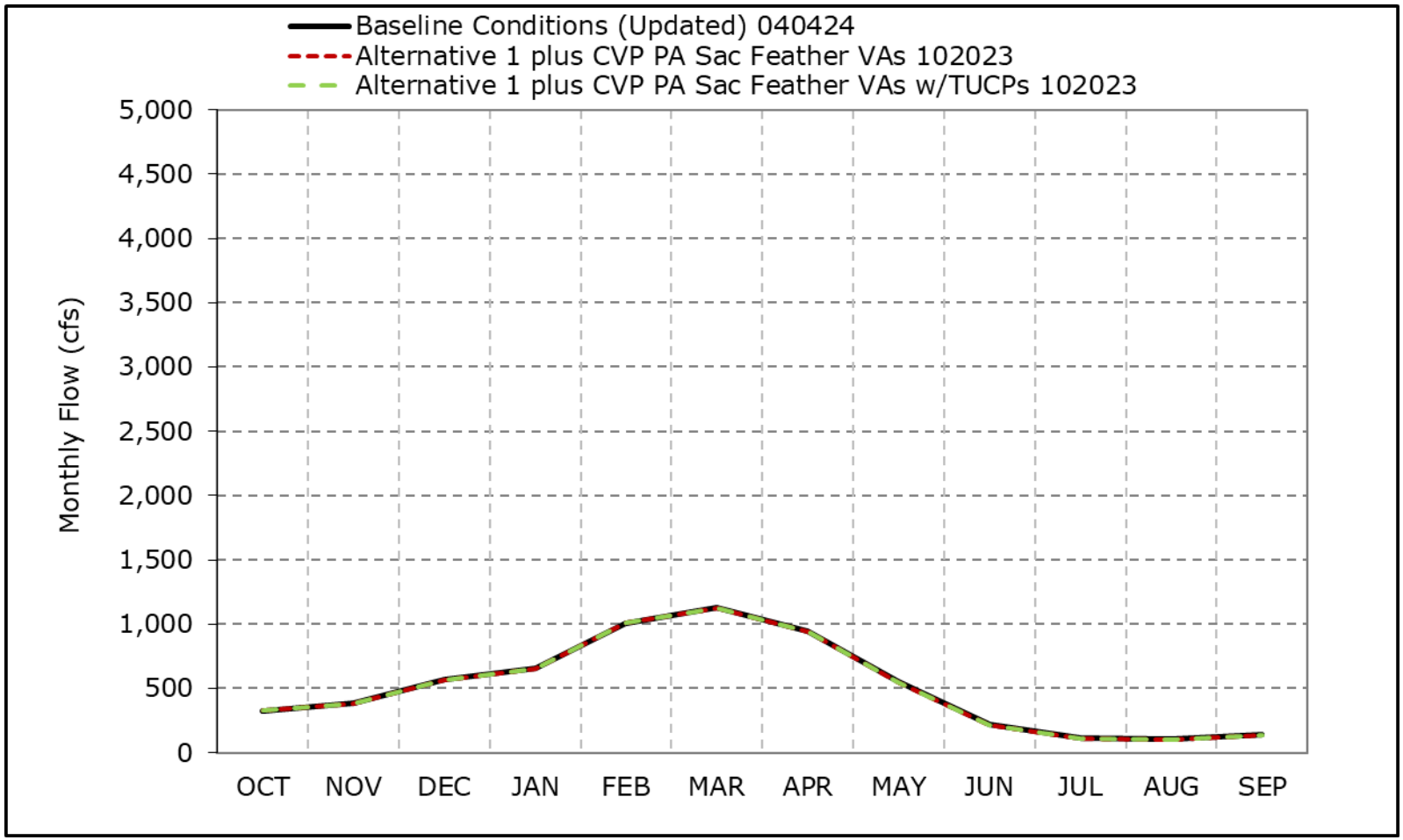
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7d. Mokelumne River below Cosumnes, Below Normal Year Average Flow



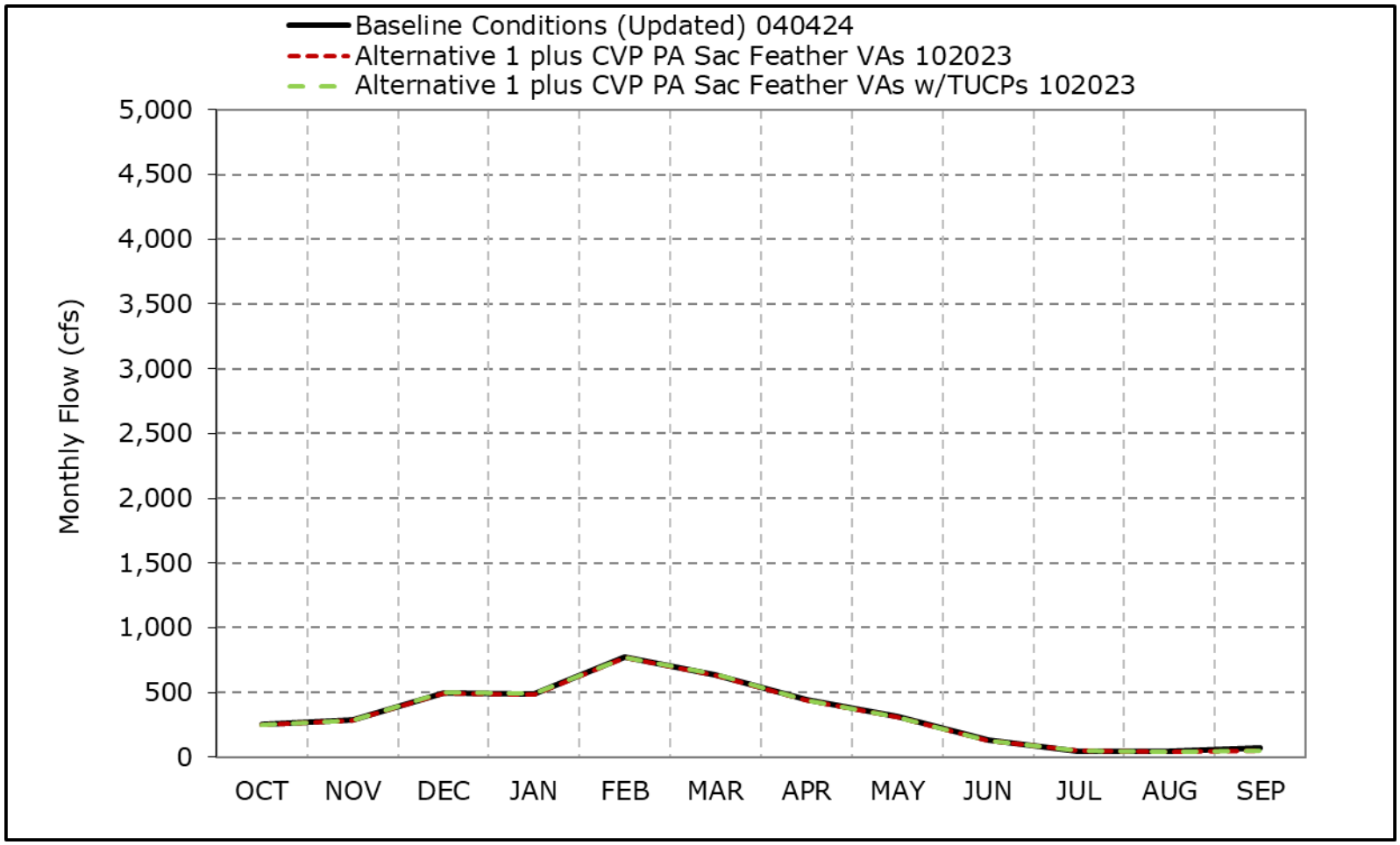
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7e. Mokelumne River below Cosumnes, Dry Year Average Flow



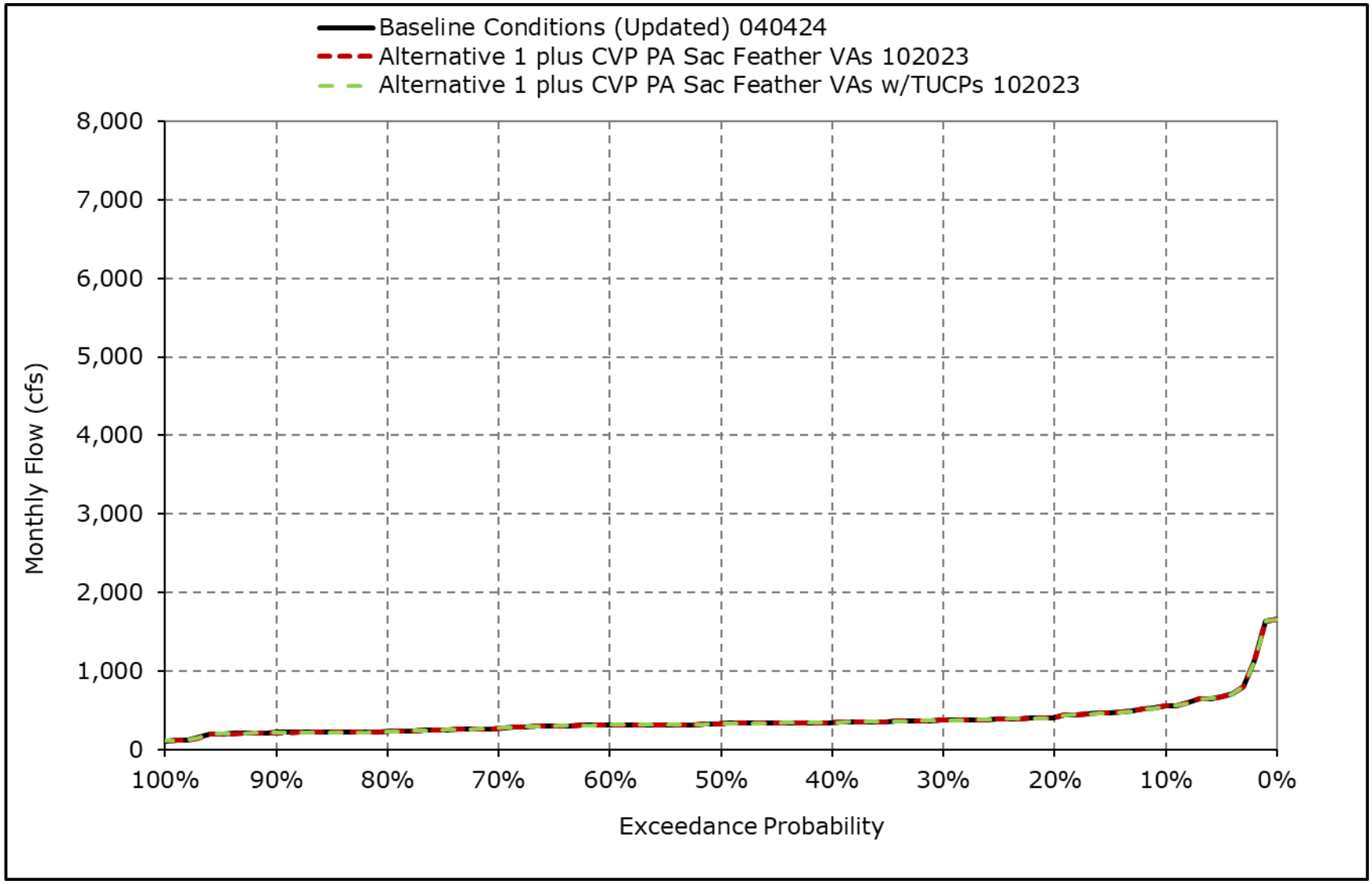
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7f. Mokelumne River below Cosumnes, Critical Year Average Flow



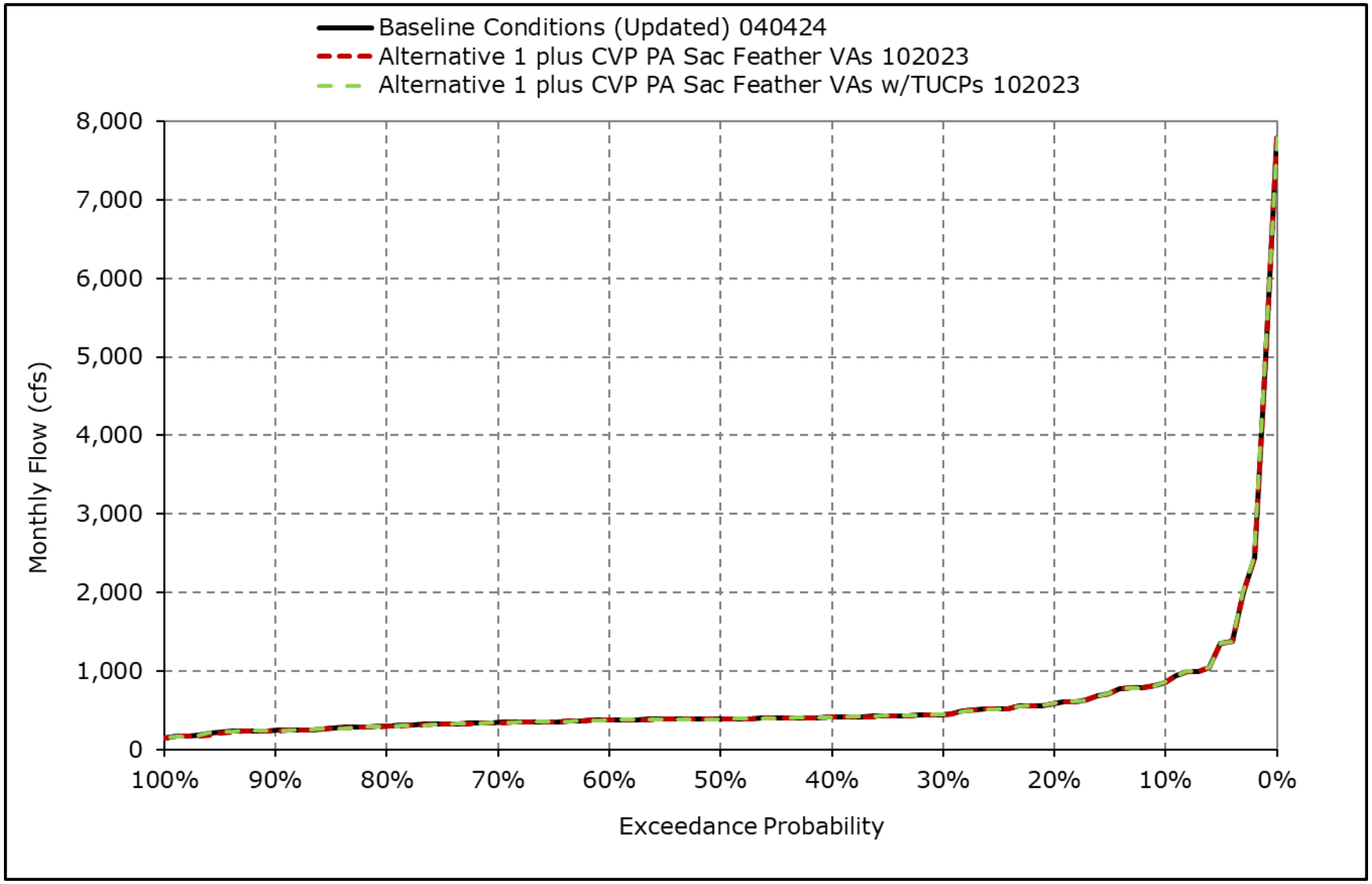
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7g. Mokelumne River below Cosumnes, October



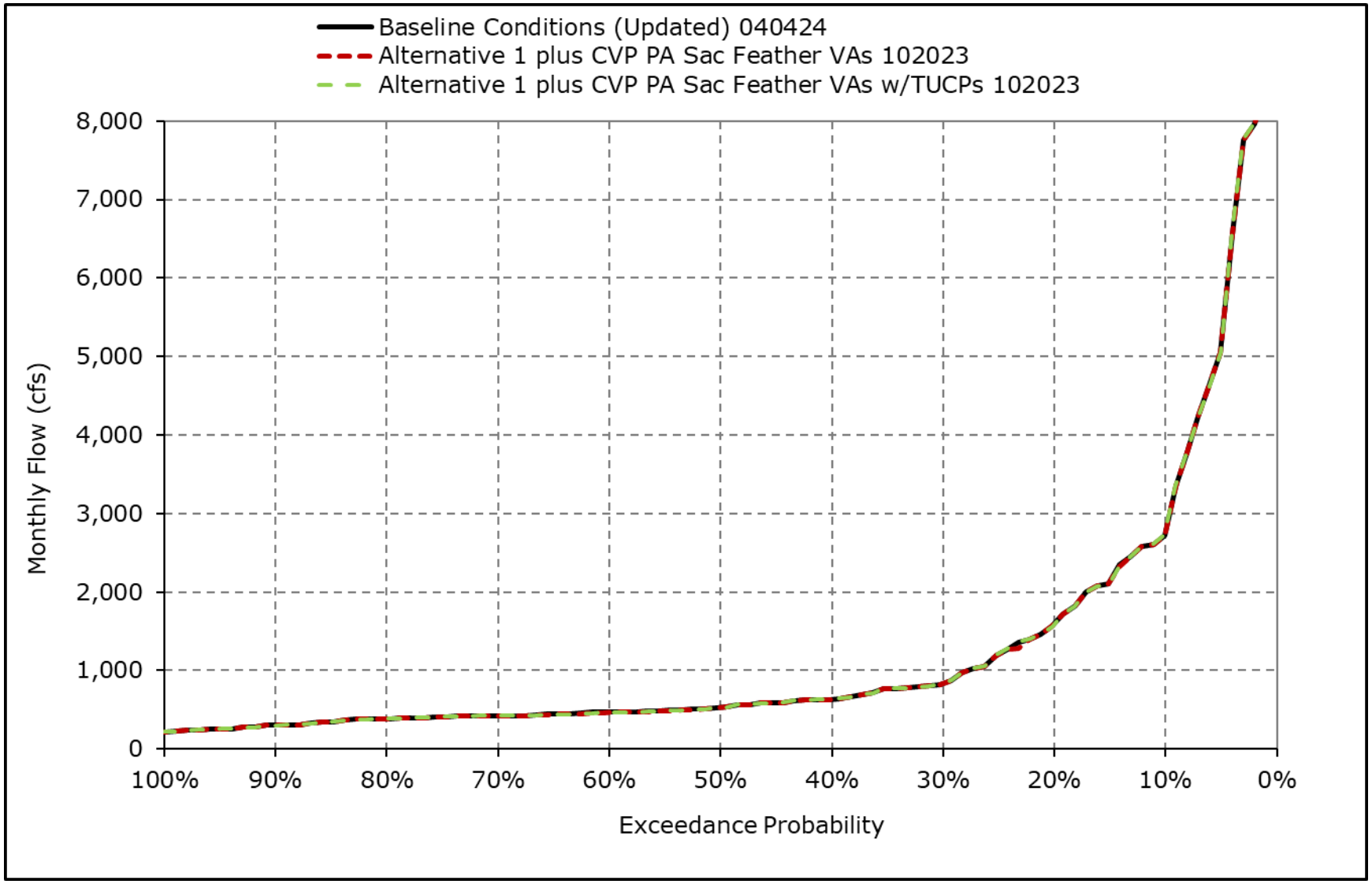
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7h. Mokelumne River below Cosumnes, November



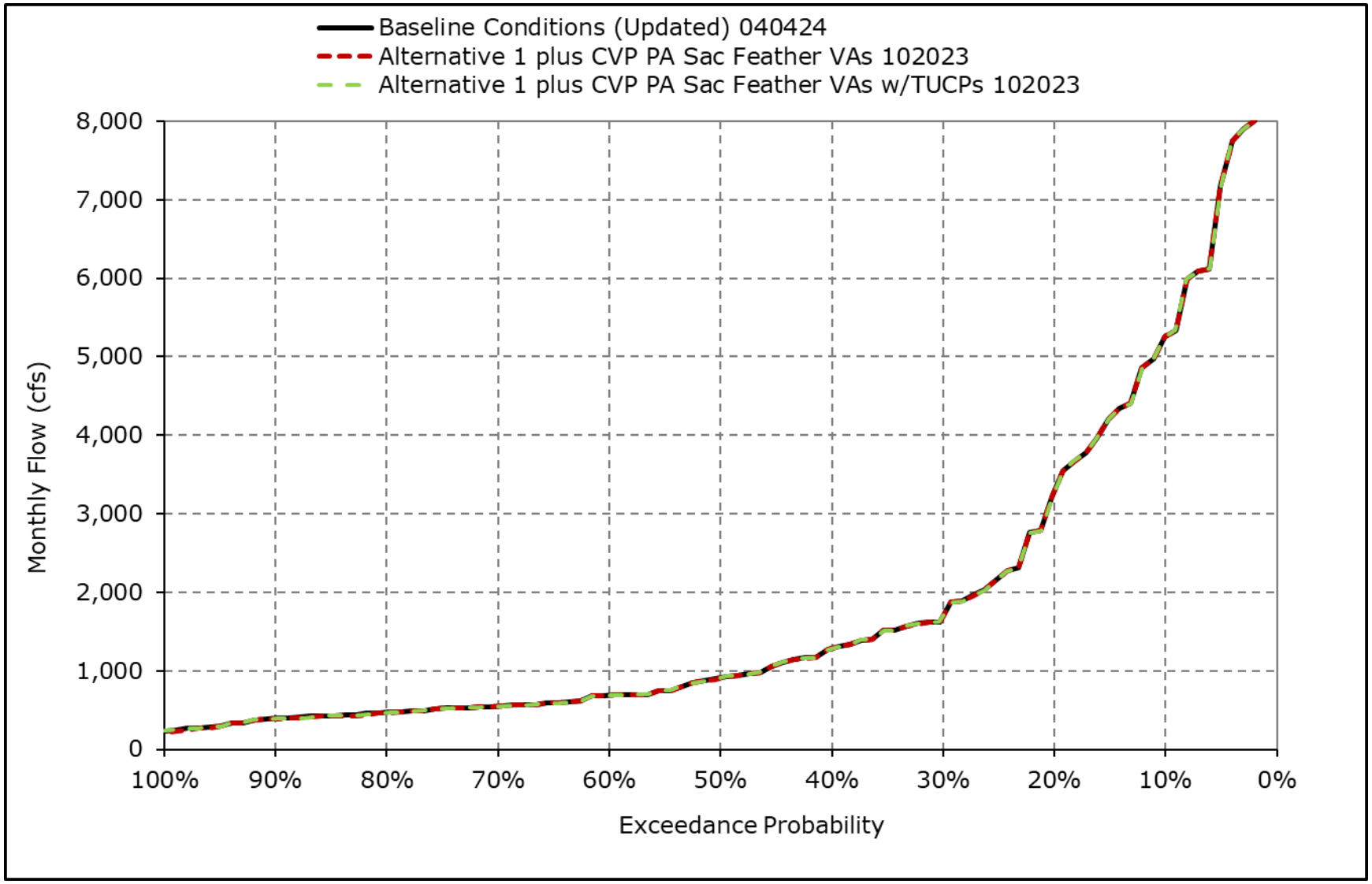
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7i. Mokelumne River below Cosumnes, December



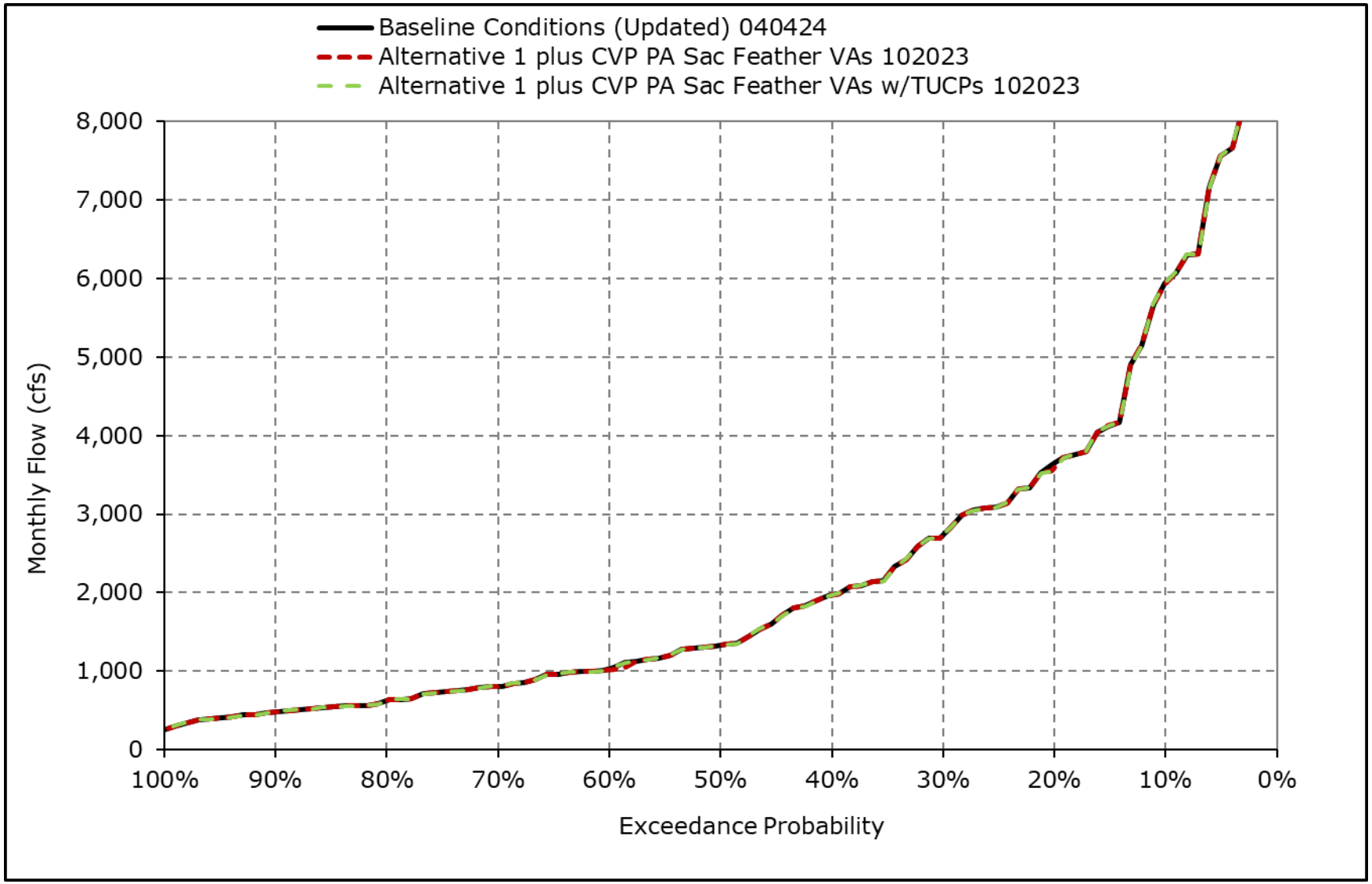
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7j. Mokelumne River below Cosumnes, January



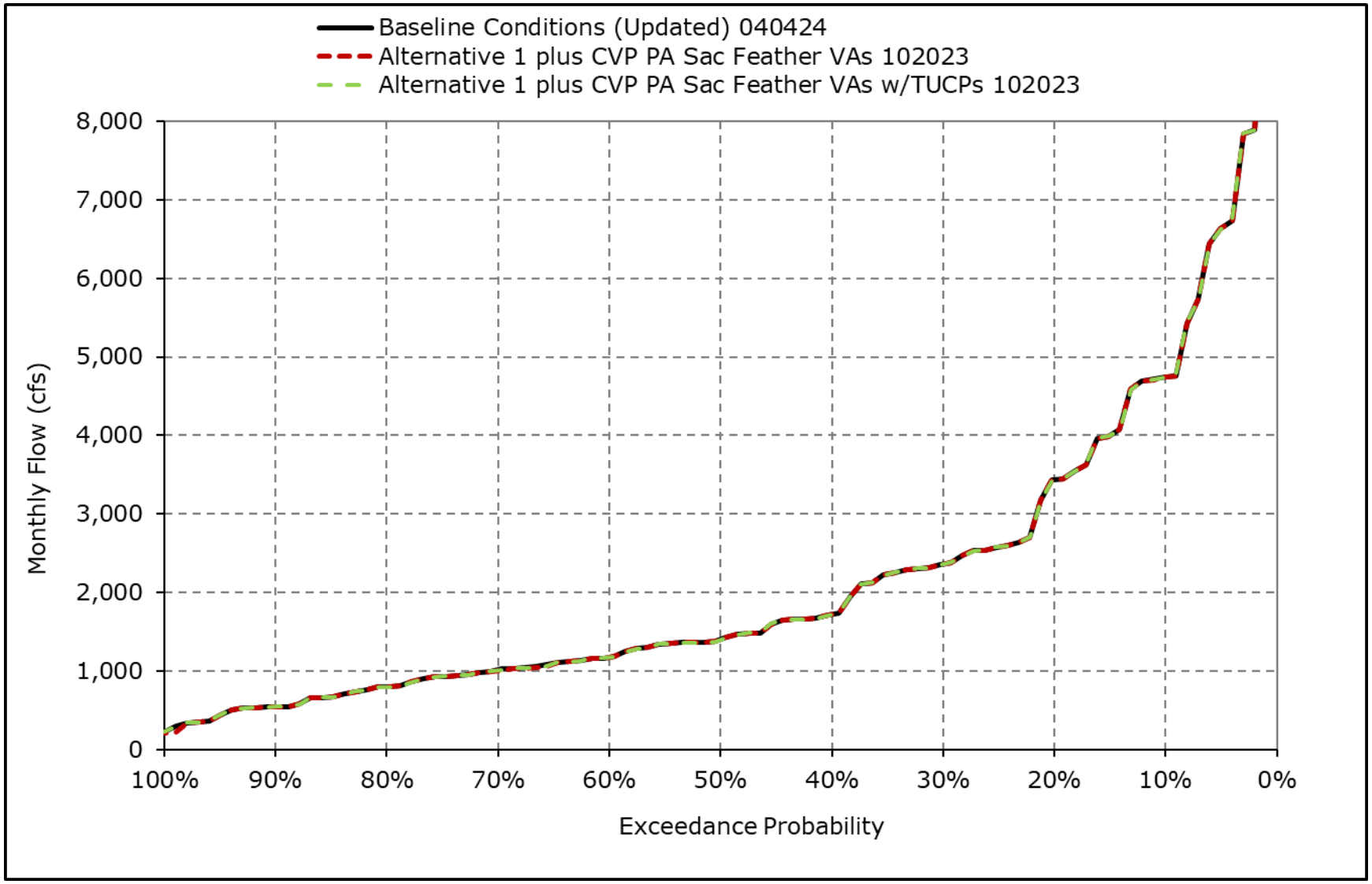
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7k. Mokelumne River below Cosumnes, February



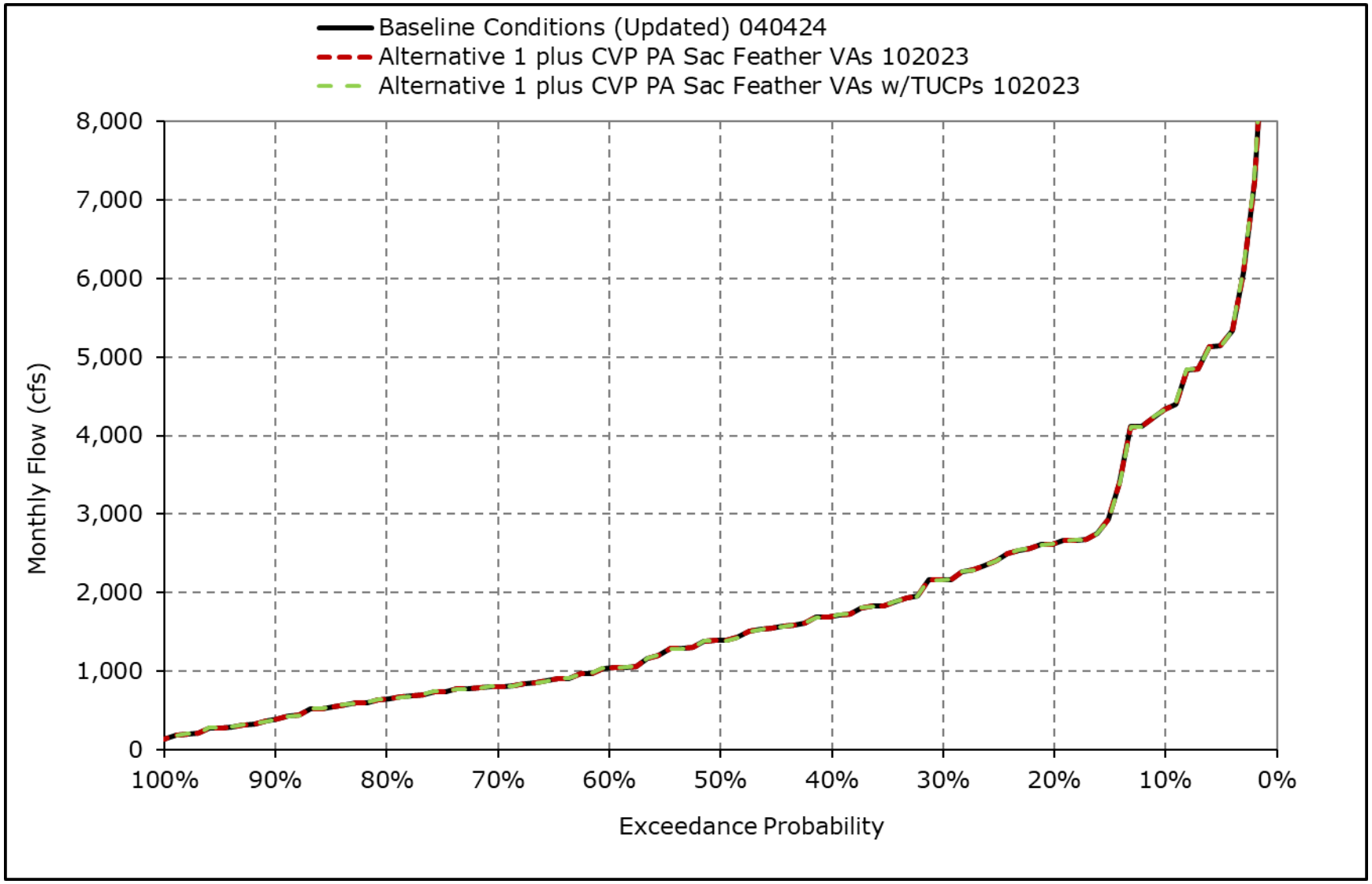
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7l. Mokelumne River below Cosumnes, March



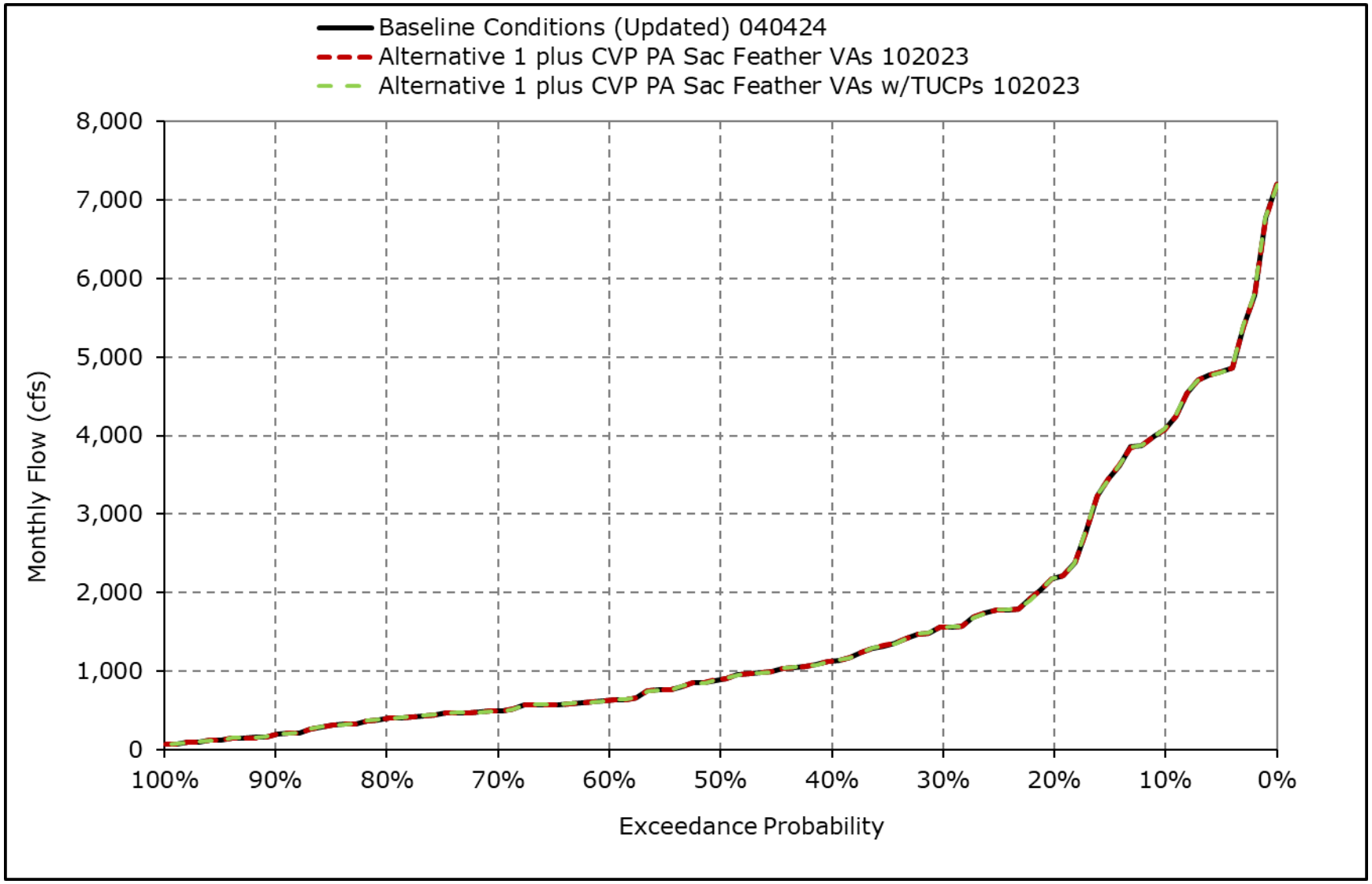
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7m. Mokelumne River below Cosumnes, April



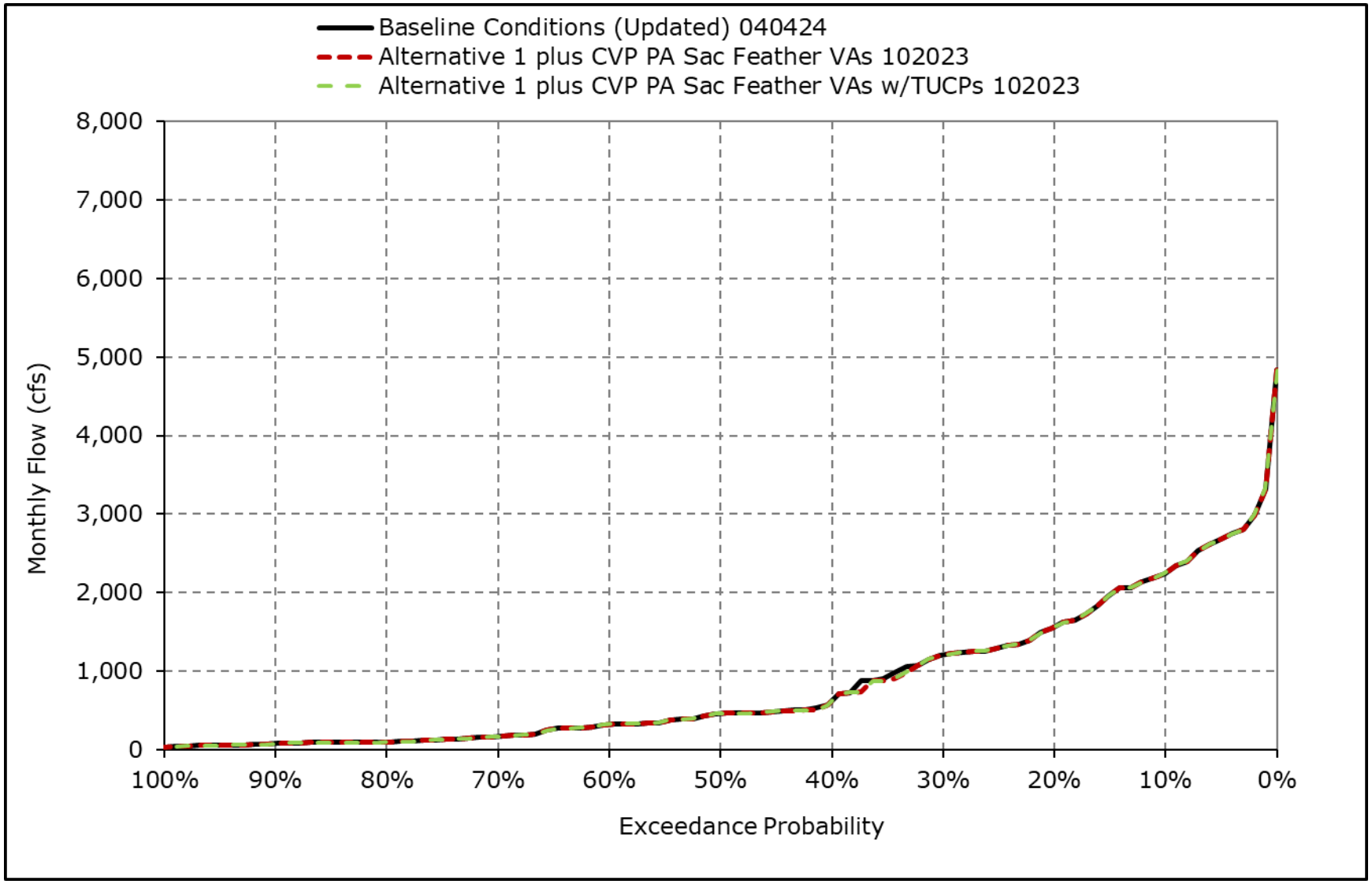
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7n. Mokelumne River below Cosumnes, May



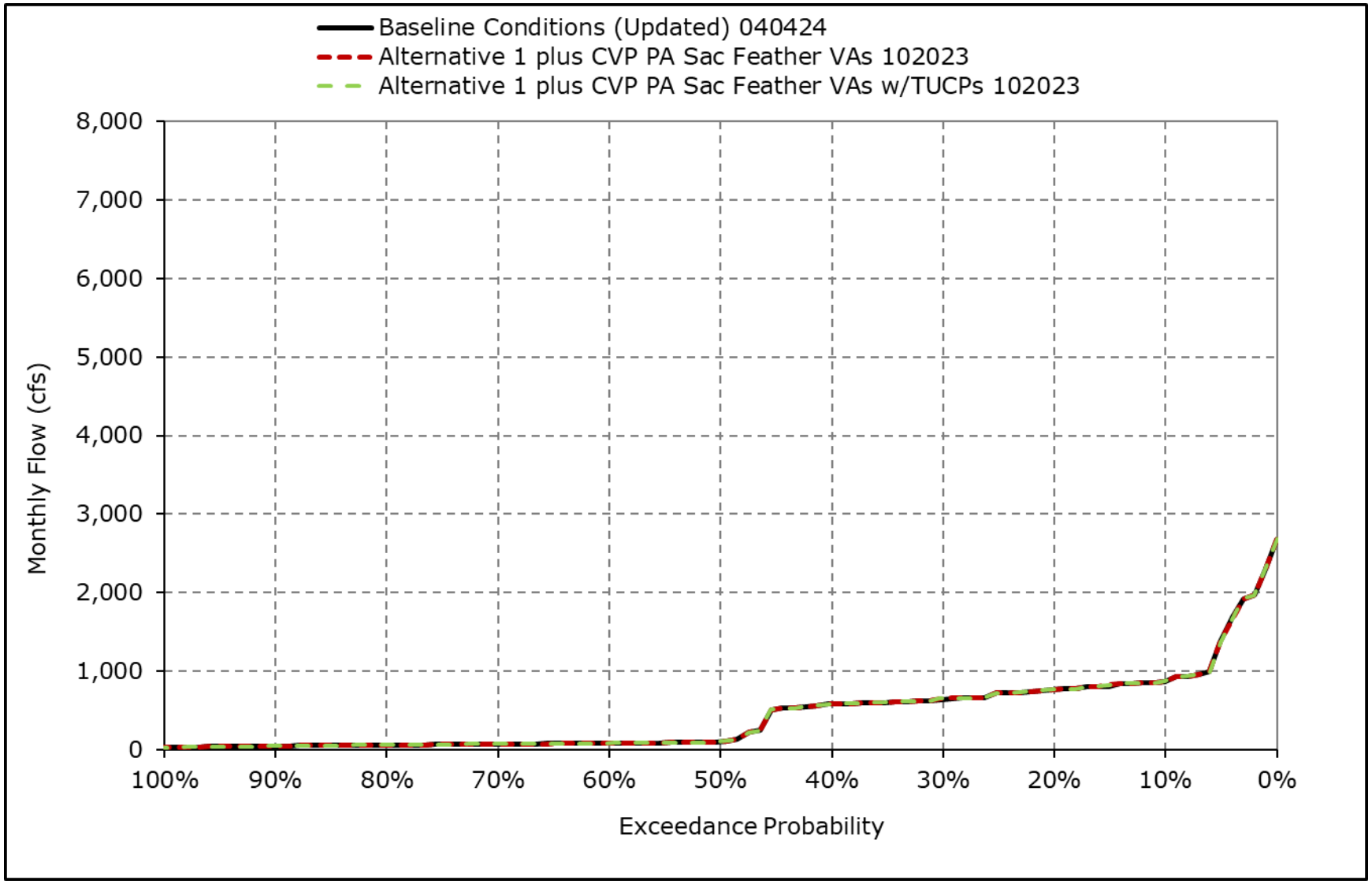
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7o. Mokelumne River below Cosumnes, June



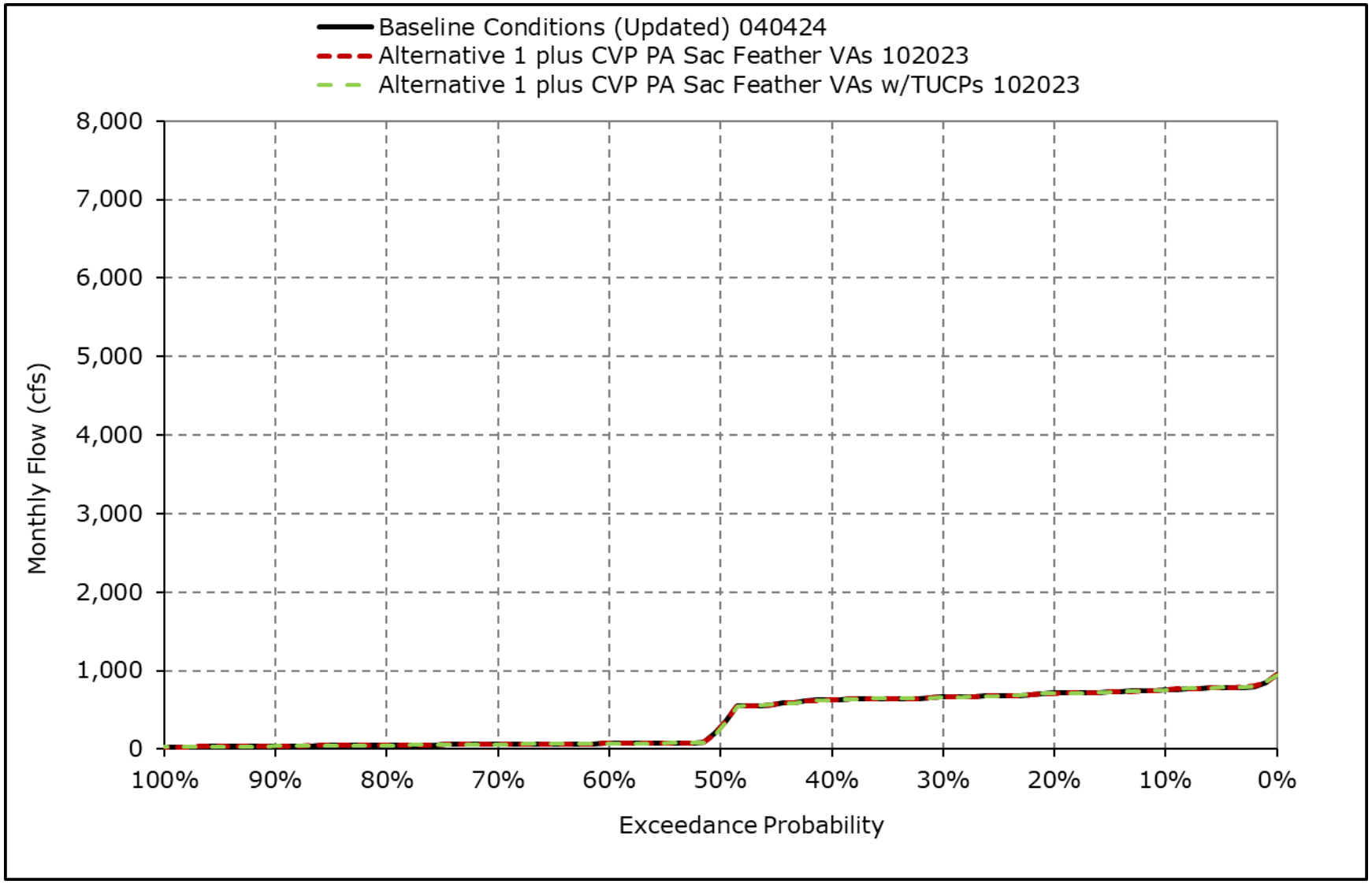
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7p. Mokelumne River below Cosumnes, July



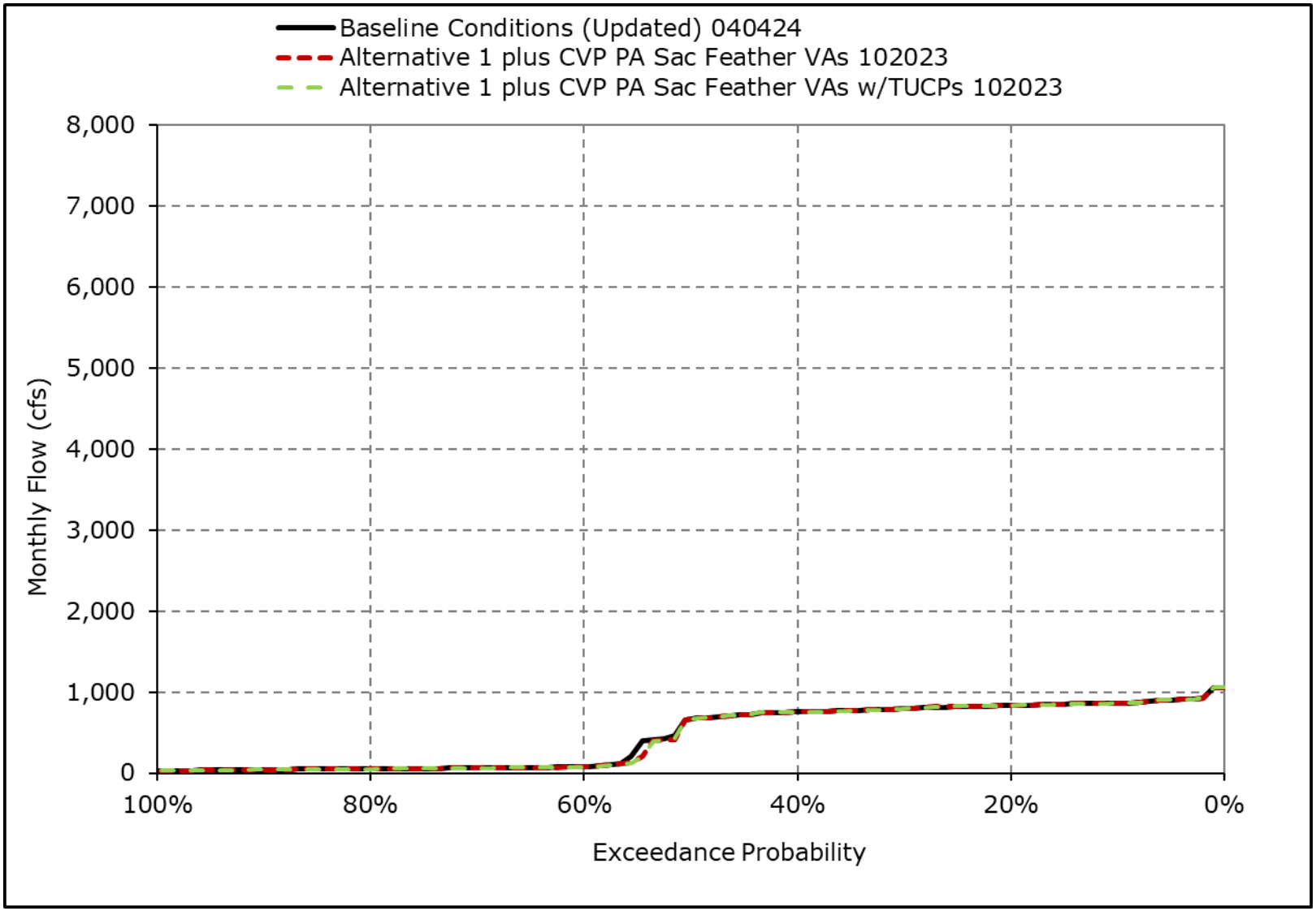
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7q. Mokelumne River below Cosumnes, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-7r. Mokelumne River below Cosumnes, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-8-1a. Old and Middle River Flow, Baseline Conditions (Updated) 040424, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-2,558	-2,102	-3,022	-3,521	-2,786	-1,051	1,471	142	-2,287	-4,141	-3,389	-4,129
20% Exceedance	-3,293	-3,082	-4,338	-3,645	-4,021	-3,138	319	-398	-4,091	-7,536	-5,671	-5,134
30% Exceedance	-3,976	-4,463	-5,290	-3,645	-4,144	-3,370	-88	-734	-4,306	-9,151	-7,298	-5,669
40% Exceedance	-4,891	-5,636	-5,290	-4,280	-4,144	-3,414	-395	-1,071	-4,504	-9,700	-9,244	-6,811
50% Exceedance	-5,615	-7,823	-5,290	-4,516	-4,272	-3,421	-685	-1,457	-4,851	-10,147	-9,785	-8,033
60% Exceedance	-6,120	-8,465	-5,290	-4,516	-4,316	-3,425	-934	-1,636	-4,995	-10,773	-10,508	-8,808
70% Exceedance	-6,901	-8,911	-6,713	-4,516	-4,415	-3,429	-1,152	-1,865	-5,000	-10,960	-10,744	-9,151
80% Exceedance	-7,486	-9,295	-8,457	-5,000	-4,464	-3,908	-1,265	-2,039	-5,000	-11,239	-10,972	-9,643
90% Exceedance	-8,817	-9,486	-9,380	-5,000	-4,611	-3,994	-1,573	-2,876	-5,000	-11,493	-11,311	-10,052
Full Simulation Period Average[a]	-5,589	-6,488	-5,790	-3,834	-3,717	-2,758	-389	-1,287	-4,203	-9,211	-8,601	-7,507
Wet Water Years (30%)	-6,738	-7,548	-5,693	-3,224	-2,830	-1,355	-569	-1,795	-3,974	-9,633	-9,906	-8,807
Above Normal Water Years (11%)	-4,852	-6,729	-6,461	-4,085	-3,682	-3,066	-672	-2,257	-4,755	-10,010	-10,848	-7,898
Below Normal Water Years (21%)	-5,847	-7,077	-6,206	-4,194	-4,170	-3,600	563	-462	-4,862	-11,195	-10,939	-9,580
Dry Water Years (22%)	-5,568	-6,451	-6,284	-4,265	-4,178	-3,683	-605	-977	-4,849	-10,128	-7,240	-6,057
Critical Water Years (16%)	-3,631	-3,610	-4,287	-3,743	-4,176	-2,799	-810	-1,178	-2,504	-4,008	-3,412	-4,075

Table 4F-3-8-1b. Old and Middle River Flow, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-2,611	-2,290	-3,075	-3,122	-3,087	-943	1,228	-1,516	-1,958	-3,735	-3,102	-4,016
20% Exceedance	-3,371	-3,430	-4,589	-3,505	-3,605	-1,202	-85	-2,018	-3,752	-6,879	-4,875	-5,332
30% Exceedance	-4,246	-4,441	-5,290	-3,645	-3,741	-1,398	-577	-2,436	-4,301	-8,486	-7,613	-6,022
40% Exceedance	-4,807	-5,977	-5,290	-3,840	-3,974	-1,463	-1,076	-2,847	-4,395	-9,526	-9,298	-6,763
50% Exceedance	-5,536	-7,823	-5,290	-4,055	-4,030	-2,339	-1,318	-3,050	-4,400	-9,921	-9,835	-8,228
60% Exceedance	-6,042	-8,651	-5,290	-4,352	-4,188	-3,443	-1,517	-3,155	-4,403	-10,369	-10,460	-9,059
70% Exceedance	-6,564	-8,986	-6,421	-4,516	-4,230	-3,637	-1,812	-3,467	-4,475	-10,830	-10,738	-9,932
80% Exceedance	-7,443	-9,292	-8,408	-4,625	-4,416	-3,725	-2,008	-3,799	-4,475	-11,186	-11,000	-10,516
90% Exceedance	-8,540	-9,482	-9,373	-4,775	-4,483	-3,950	-2,152	-4,009	-4,490	-11,421	-11,212	-10,945
Full Simulation Period Average[a]	-5,466	-6,567	-5,788	-3,644	-3,545	-2,037	-879	-2,787	-3,837	-8,991	-8,519	-7,830
Wet Water Years (30%)	-6,617	-7,702	-5,624	-3,069	-2,908	-945	-90	-3,065	-3,722	-9,657	-10,214	-9,816
Above Normal Water Years (11%)	-4,485	-6,729	-6,699	-3,944	-3,558	-1,821	-438	-3,065	-4,370	-10,214	-10,949	-8,320
Below Normal Water Years (21%)	-5,696	-7,106	-6,380	-3,982	-3,928	-2,112	-1,311	-2,995	-4,457	-10,970	-10,690	-9,355
Dry Water Years (22%)	-5,496	-6,594	-6,211	-4,028	-3,802	-3,017	-1,325	-2,544	-4,393	-9,398	-6,841	-6,201
Critical Water Years (16%)	-3,638	-3,581	-4,109	-3,545	-3,874	-2,789	-1,479	-2,138	-2,105	-3,746	-3,130	-4,008

Table 4F-3-8-1c. Old and Middle River Flow, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-53	-188	-53	399	-300	108	-242	-1,658	329	406	286	113
20% Exceedance	-79	-348	-251	140	416	1,936	-403	-1,620	339	657	796	-198
30% Exceedance	-270	21	0	0	403	1,972	-489	-1,701	5	665	-316	-353
40% Exceedance	84	-341	0	440	170	1,951	-681	-1,775	109	174	-55	48
50% Exceedance	79	0	0	461	242	1,083	-633	-1,593	451	226	-50	-195
60% Exceedance	78	-186	0	165	128	-18	-584	-1,519	592	404	49	-251
70% Exceedance	337	-75	292	0	185	-208	-660	-1,602	525	130	6	-781
80% Exceedance	44	3	48	375	48	183	-743	-1,760	525	53	-28	-873
90% Exceedance	276	3	7	225	128	45	-578	-1,133	510	72	98	-894
Full Simulation Period Average[a]	123	-79	2	190	172	720	-490	-1,500	367	220	82	-323
Wet Water Years (30%)	121	-154	69	155	-78	410	479	-1,270	251	-24	-308	-1,009
Above Normal Water Years (11%)	367	-1	-238	141	125	1,244	234	-808	385	-205	-101	-423
Below Normal Water Years (21%)	150	-29	-174	212	242	1,488	-1,875	-2,533	405	226	249	224
Dry Water Years (22%)	72	-143	73	237	376	666	-721	-1,566	455	730	398	-144
Critical Water Years (16%)	-7	29	178	198	302	10	-669	-960	399	261	282	67

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-8-2a. Old and Middle River Flow, Baseline Conditions (Updated) 040424, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-2,558	-2,102	-3,022	-3,521	-2,786	-1,051	1,471	142	-2,287	-4,141	-3,389	-4,129
20% Exceedance	-3,293	-3,082	-4,338	-3,645	-4,021	-3,138	319	-398	-4,091	-7,536	-5,671	-5,134
30% Exceedance	-3,976	-4,463	-5,290	-3,645	-4,144	-3,370	-88	-734	-4,306	-9,151	-7,298	-5,669
40% Exceedance	-4,891	-5,636	-5,290	-4,280	-4,144	-3,414	-395	-1,071	-4,504	-9,700	-9,244	-6,811
50% Exceedance	-5,615	-7,823	-5,290	-4,516	-4,272	-3,421	-685	-1,457	-4,851	-10,147	-9,785	-8,033
60% Exceedance	-6,120	-8,465	-5,290	-4,516	-4,316	-3,425	-934	-1,636	-4,995	-10,773	-10,508	-8,808
70% Exceedance	-6,901	-8,911	-6,713	-4,516	-4,415	-3,429	-1,152	-1,865	-5,000	-10,960	-10,744	-9,151
80% Exceedance	-7,486	-9,295	-8,457	-5,000	-4,464	-3,908	-1,265	-2,039	-5,000	-11,239	-10,972	-9,643
90% Exceedance	-8,817	-9,486	-9,380	-5,000	-4,611	-3,994	-1,573	-2,876	-5,000	-11,493	-11,311	-10,052
Full Simulation Period Average[a]	-5,589	-6,488	-5,790	-3,834	-3,717	-2,758	-389	-1,287	-4,203	-9,211	-8,601	-7,507
Wet Water Years (30%)	-6,738	-7,548	-5,693	-3,224	-2,830	-1,355	-569	-1,795	-3,974	-9,633	-9,906	-8,807
Above Normal Water Years (11%)	-4,852	-6,729	-6,461	-4,085	-3,682	-3,066	-672	-2,257	-4,755	-10,010	-10,848	-7,898
Below Normal Water Years (21%)	-5,847	-7,077	-6,206	-4,194	-4,170	-3,600	563	-462	-4,862	-11,195	-10,939	-9,580
Dry Water Years (22%)	-5,568	-6,451	-6,284	-4,265	-4,178	-3,683	-605	-977	-4,849	-10,128	-7,240	-6,057
Critical Water Years (16%)	-3,631	-3,610	-4,287	-3,743	-4,176	-2,799	-810	-1,178	-2,504	-4,008	-3,412	-4,075

Table 4F-3-8-2b. Old and Middle River Flow, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-2,575	-2,527	-3,090	-3,122	-3,090	-470	1,228	-1,516	-1,573	-3,389	-3,032	-3,928
20% Exceedance	-3,585	-3,429	-4,420	-3,505	-3,622	-1,202	-211	-1,962	-3,819	-6,891	-4,996	-5,273
30% Exceedance	-4,496	-4,572	-5,290	-3,645	-3,741	-1,398	-550	-2,370	-4,301	-8,550	-7,682	-5,961
40% Exceedance	-4,859	-5,977	-5,290	-3,876	-3,974	-1,566	-835	-2,767	-4,395	-9,545	-9,296	-6,788
50% Exceedance	-5,601	-7,878	-5,290	-4,055	-4,030	-2,514	-1,302	-3,050	-4,400	-9,997	-9,835	-8,231
60% Exceedance	-6,129	-8,657	-5,290	-4,352	-4,188	-3,460	-1,515	-3,167	-4,402	-10,374	-10,471	-9,058
70% Exceedance	-6,658	-8,985	-6,427	-4,516	-4,230	-3,637	-1,812	-3,491	-4,475	-10,913	-10,740	-9,959
80% Exceedance	-7,588	-9,293	-8,410	-4,625	-4,416	-3,725	-2,007	-3,799	-4,475	-11,190	-11,002	-10,629
90% Exceedance	-8,815	-9,488	-9,374	-4,775	-4,483	-3,950	-2,151	-4,008	-4,492	-11,421	-11,211	-10,964
Full Simulation Period Average[a]	-5,586	-6,623	-5,797	-3,646	-3,545	-2,054	-853	-2,780	-3,841	-8,933	-8,483	-7,795
Wet Water Years (30%)	-6,636	-7,711	-5,617	-3,073	-2,911	-937	-91	-3,073	-3,723	-9,659	-10,215	-9,820
Above Normal Water Years (11%)	-4,513	-6,766	-6,958	-3,944	-3,556	-1,821	-537	-3,064	-4,338	-10,254	-10,953	-8,317
Below Normal Water Years (21%)	-5,840	-7,193	-6,367	-3,984	-3,929	-2,112	-1,345	-2,963	-4,457	-10,984	-10,714	-9,437
Dry Water Years (22%)	-5,516	-6,606	-6,239	-4,015	-3,802	-3,018	-1,325	-2,543	-4,393	-9,414	-6,910	-6,218
Critical Water Years (16%)	-4,120	-3,759	-3,981	-3,567	-3,871	-2,909	-1,203	-2,123	-2,151	-3,312	-2,768	-3,653

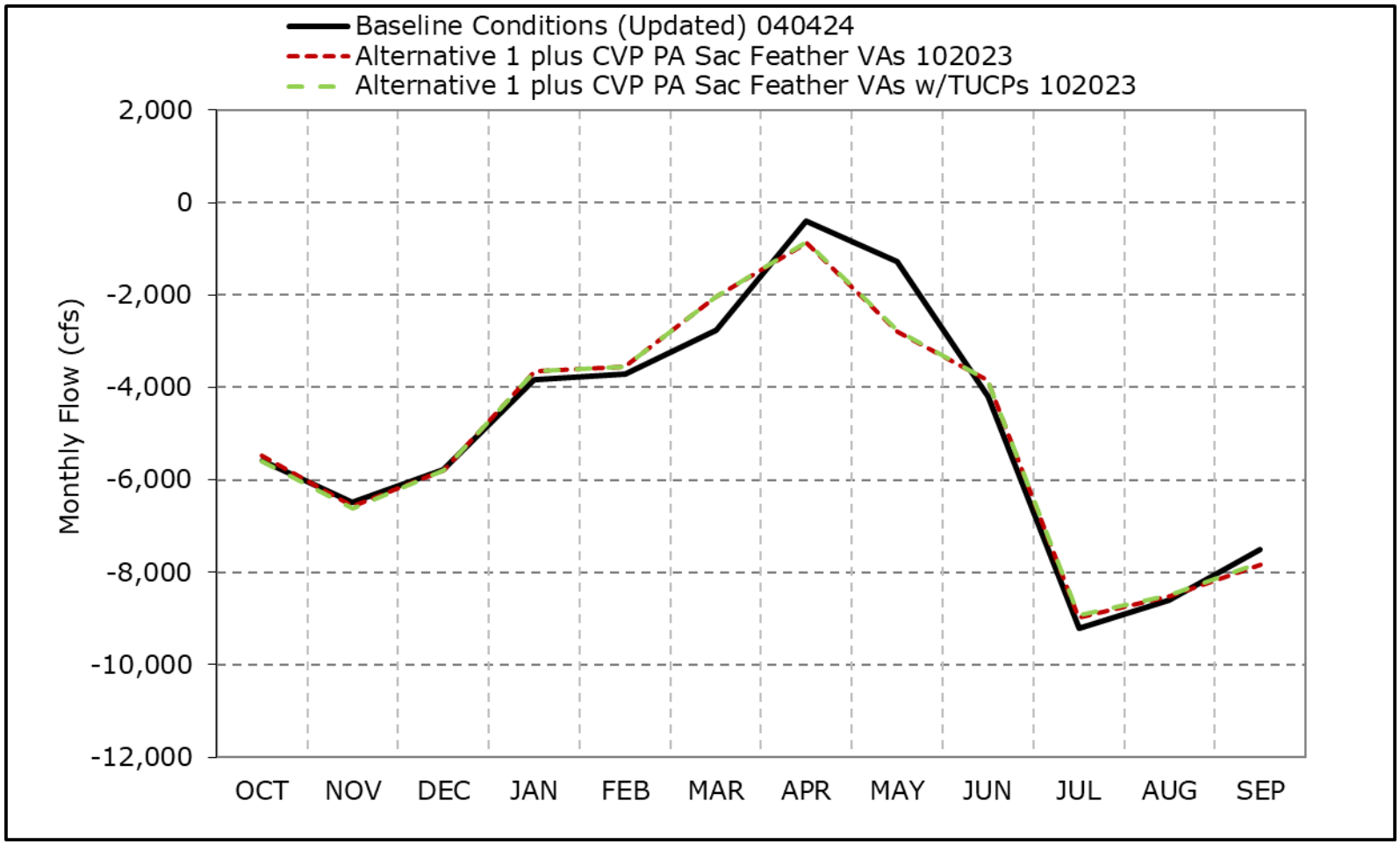
Table 4F-3-8-2c. Old and Middle River Flow, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (combined flows)(cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-17	-425	-68	399	-303	581	-242	-1,658	714	752	356	201
20% Exceedance	-292	-347	-82	140	399	1,936	-530	-1,563	272	644	675	-140
30% Exceedance	-520	-110	0	0	403	1,972	-462	-1,636	5	601	-384	-292
40% Exceedance	31	-341	0	404	170	1,848	-440	-1,696	109	155	-52	23
50% Exceedance	14	-55	0	461	242	907	-617	-1,593	451	150	-50	-199
60% Exceedance	-9	-191	0	165	128	-35	-581	-1,531	593	399	38	-251
70% Exceedance	243	-75	286	0	185	-208	-660	-1,626	525	47	5	-808
80% Exceedance	-102	2	46	375	48	183	-742	-1,760	525	49	-29	-986
90% Exceedance	2	-3	7	225	128	45	-578	-1,132	509	72	99	-912
Full Simulation Period Average[a]	2	-135	-7	188	172	703	-464	-1,493	363	278	118	-288
Wet Water Years (30%)	102	-163	76	151	-80	417	478	-1,278	251	-27	-309	-1,013
Above Normal Water Years (11%)	339	-37	-497	141	127	1,244	135	-807	417	-244	-105	-420
Below Normal Water Years (21%)	7	-116	-161	210	241	1,488	-1,908	-2,501	405	211	225	143
Dry Water Years (22%)	52	-155	45	250	376	666	-721	-1,565	455	714	329	-161
Critical Water Years (16%)	-490	-149	306	176	306	-110	-393	-944	352	696	644	422

[a] Based on the 100-year simulation period.

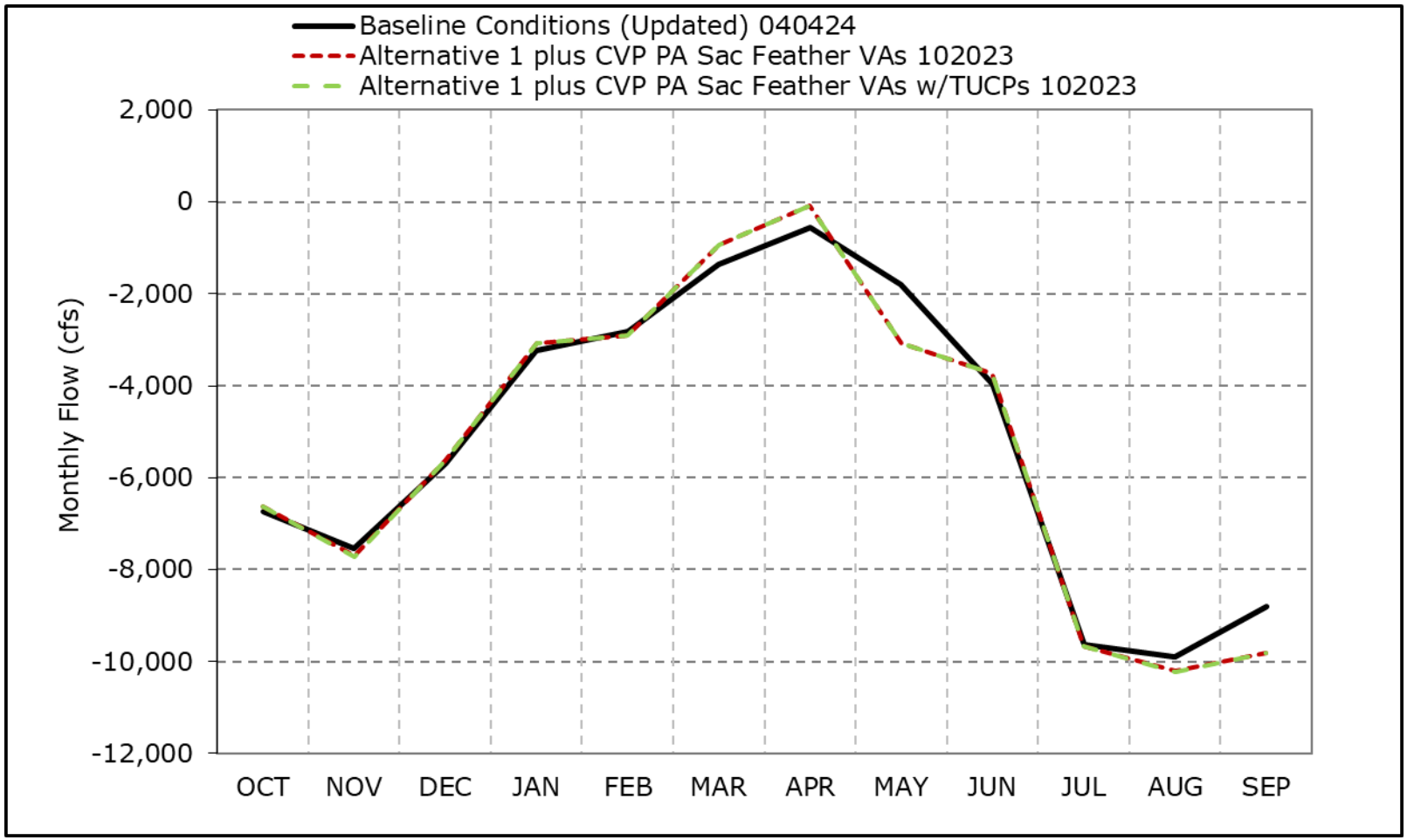
* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-8a. Old and Middle River Flow, Long-Term Average Flow



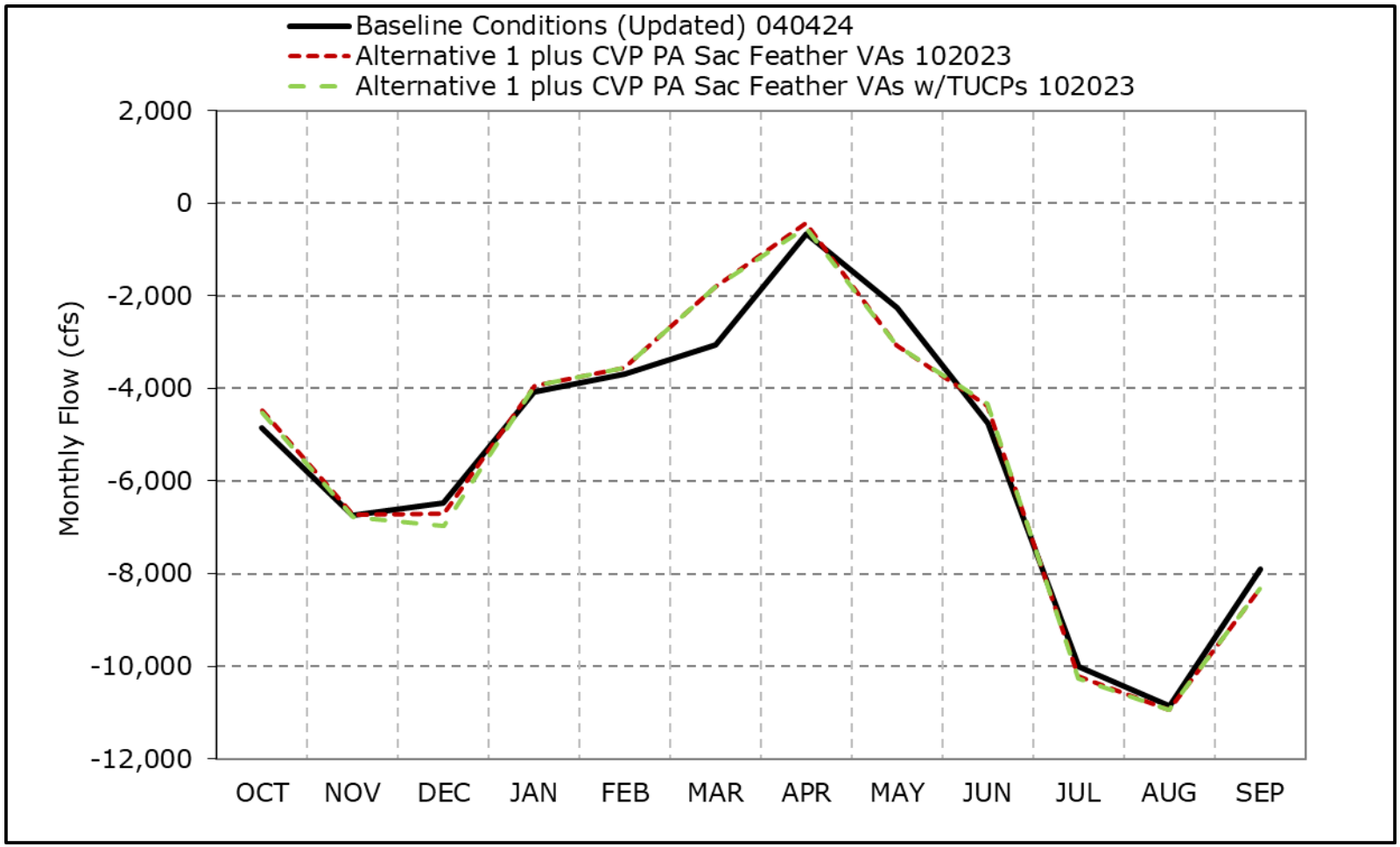
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8b. Old and Middle River Flow, Wet Year Average Flow



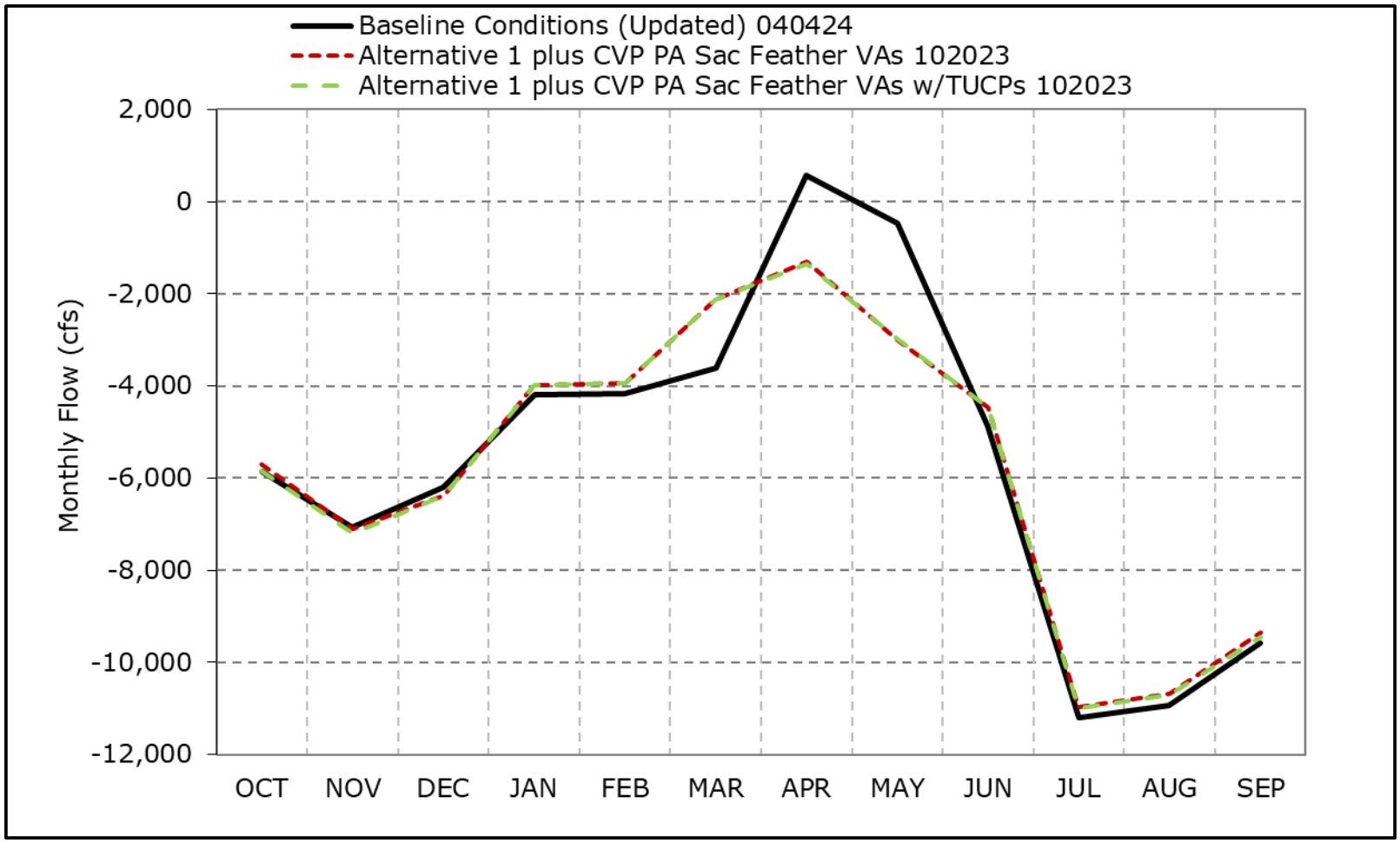
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8c. Old and Middle River Flow, Above Normal Year Average Flow



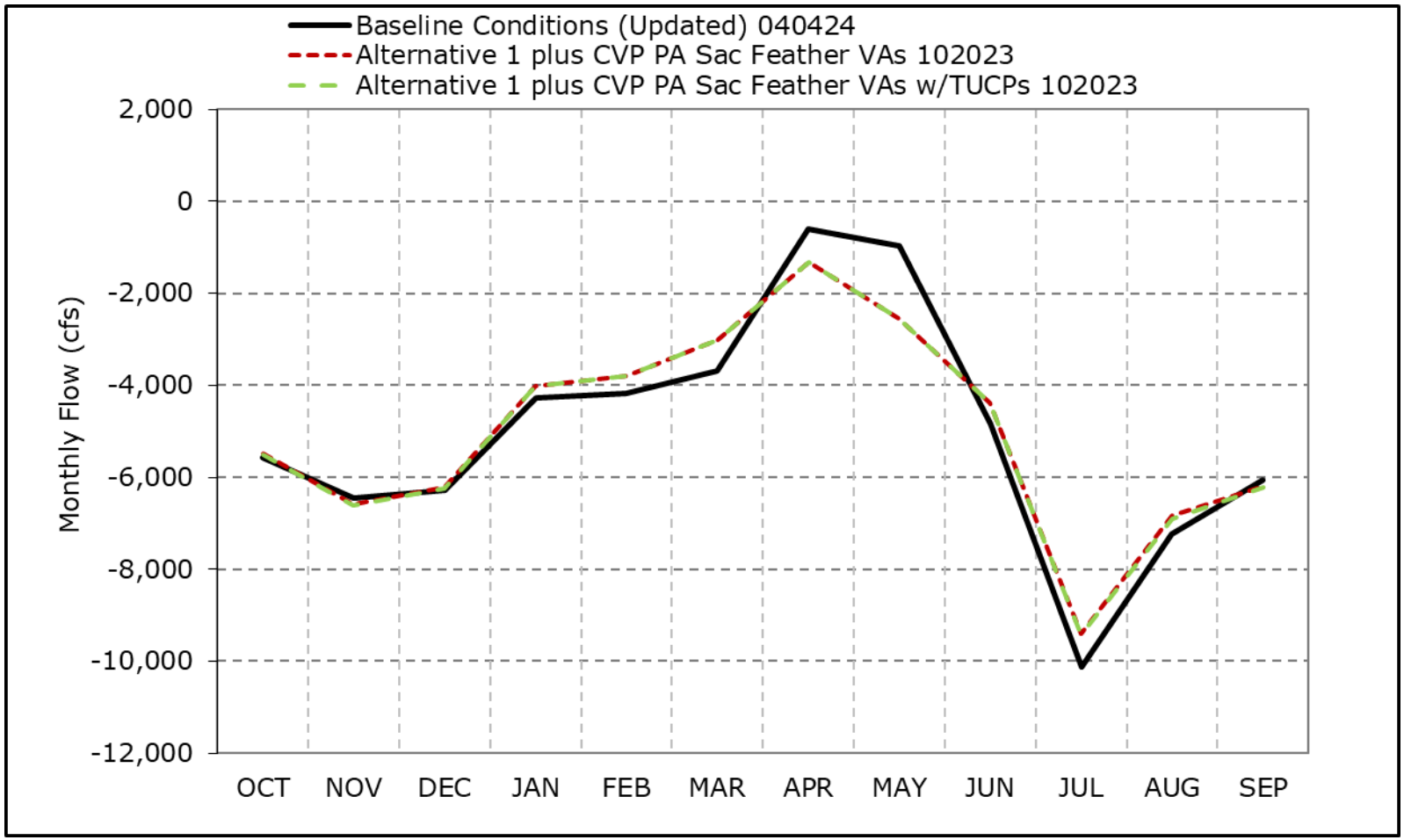
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8d. Old and Middle River Flow, Below Normal Year Average Flow



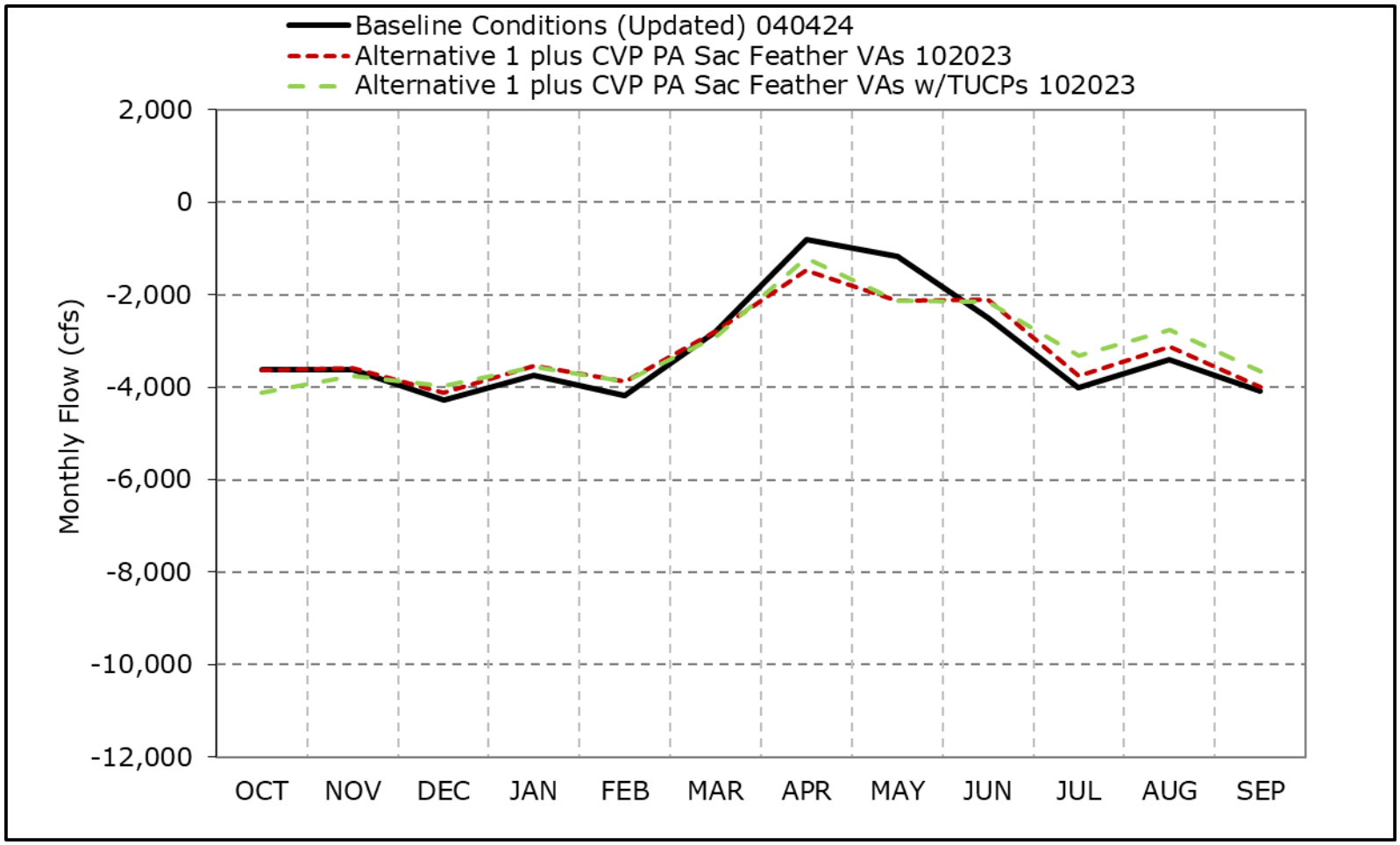
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8e. Old and Middle River Flow, Dry Year Average Flow



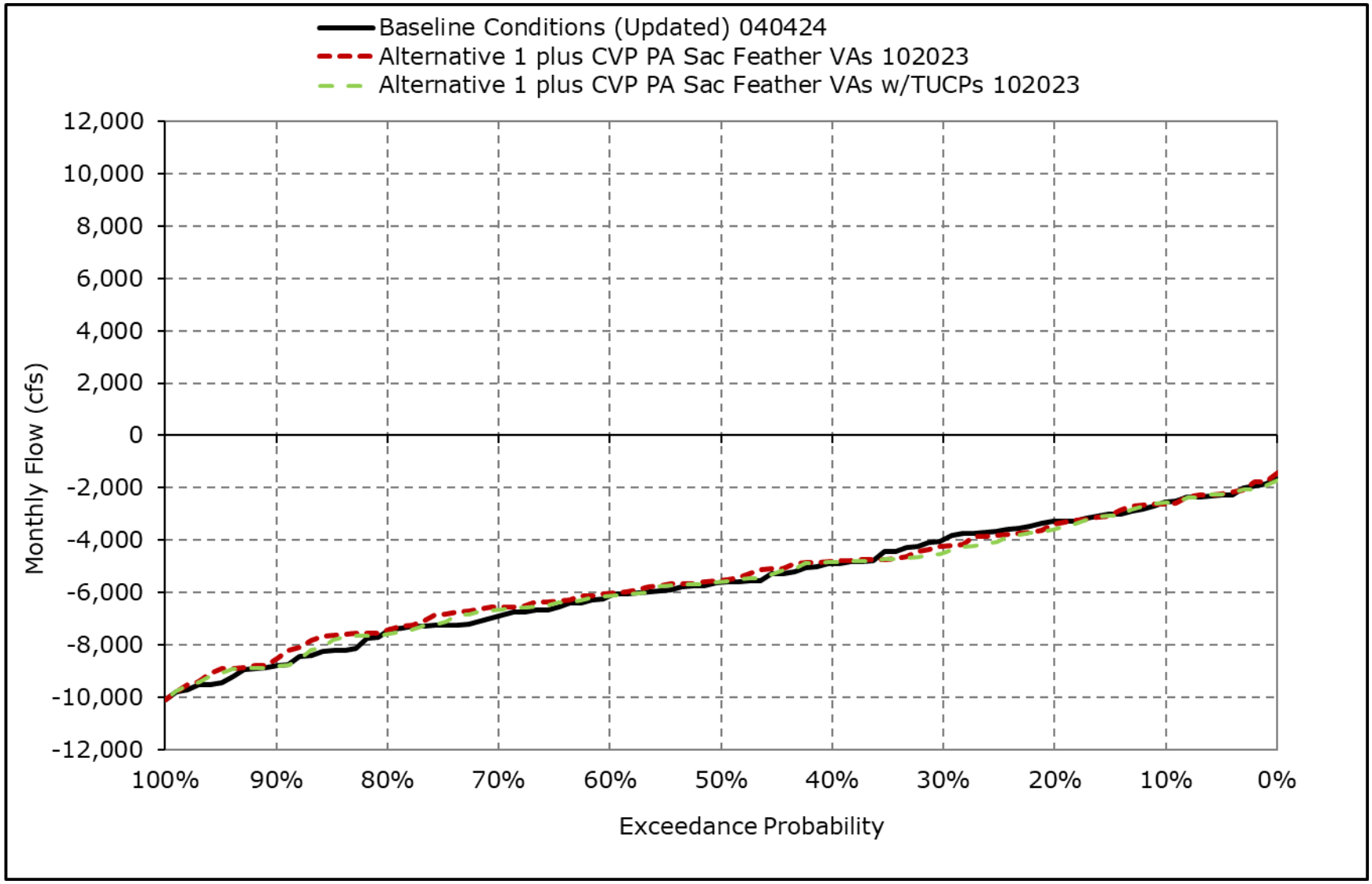
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8f. Old and Middle River Flow, Critical Year Average Flow



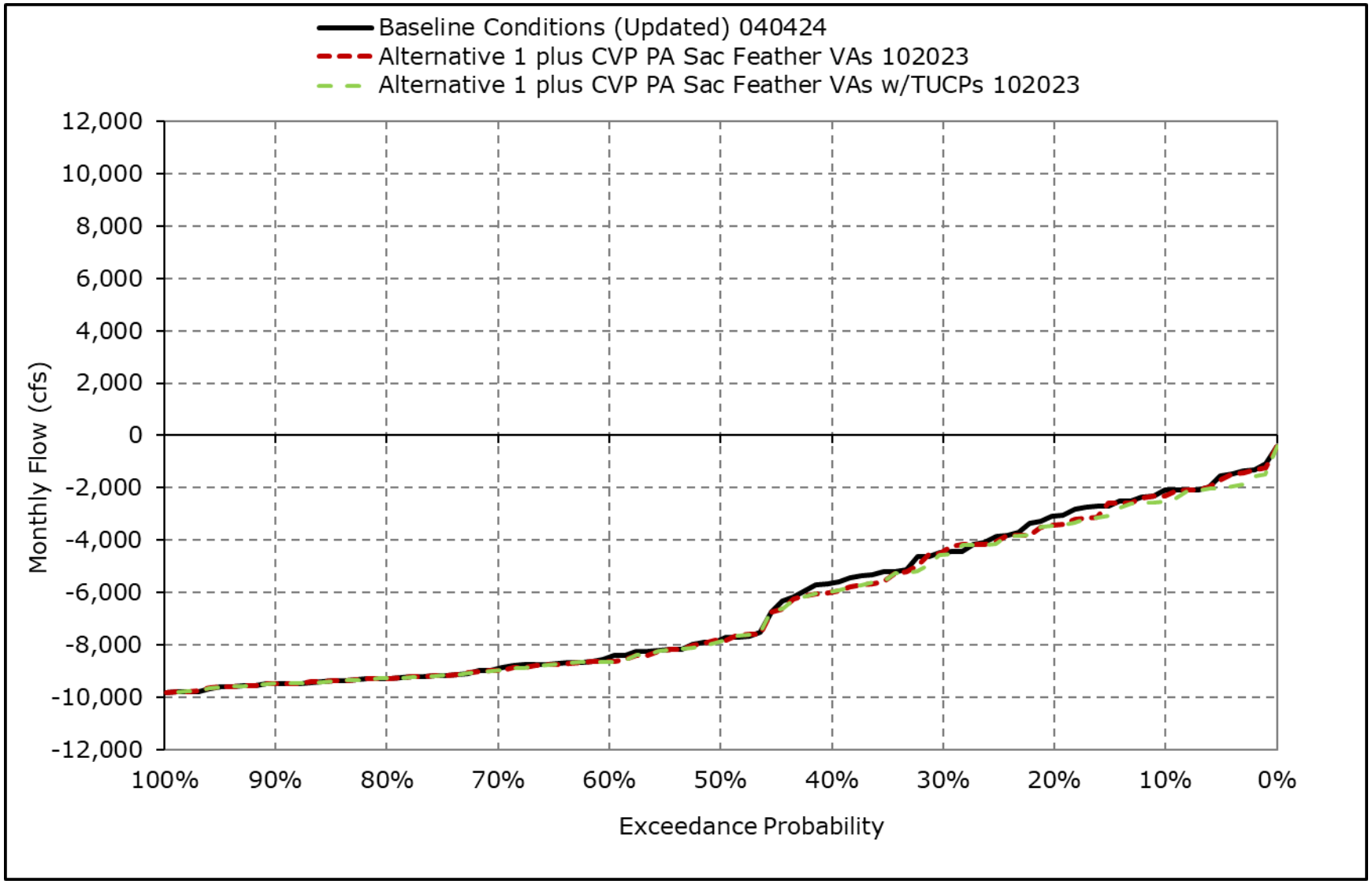
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8g. Old and Middle River Flow, October



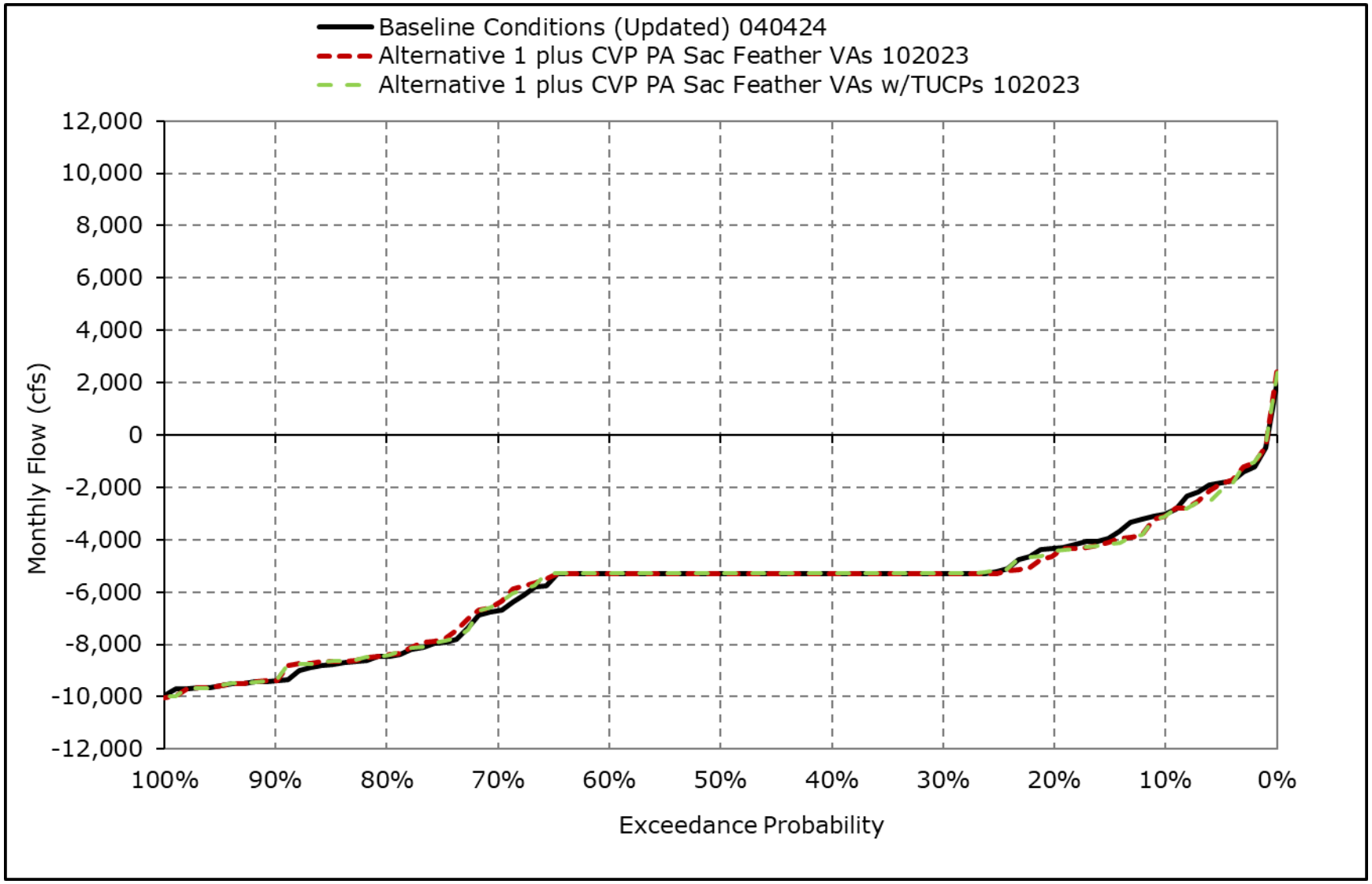
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8h. Old and Middle River Flow, November



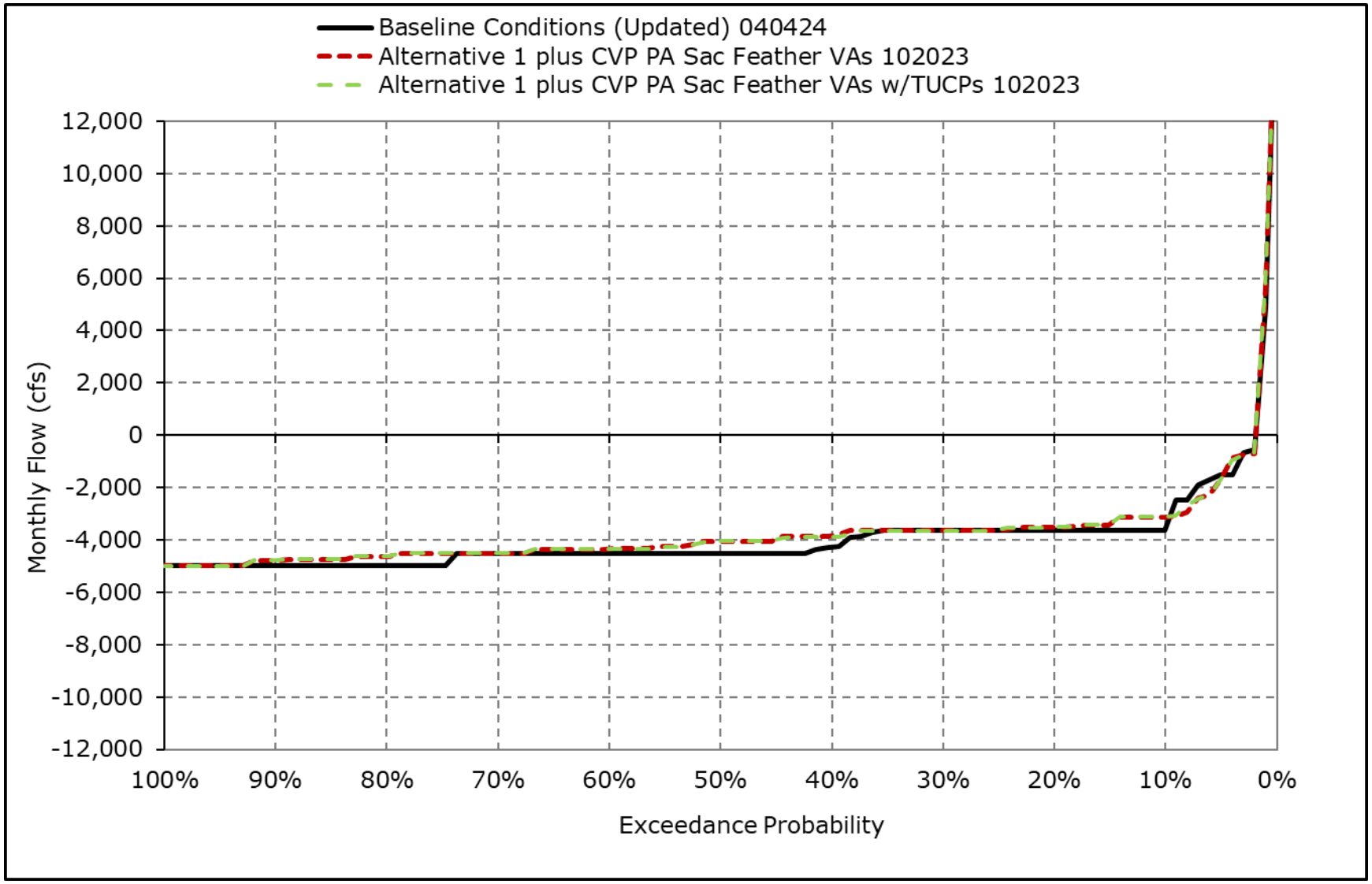
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8i. Old and Middle River Flow, December



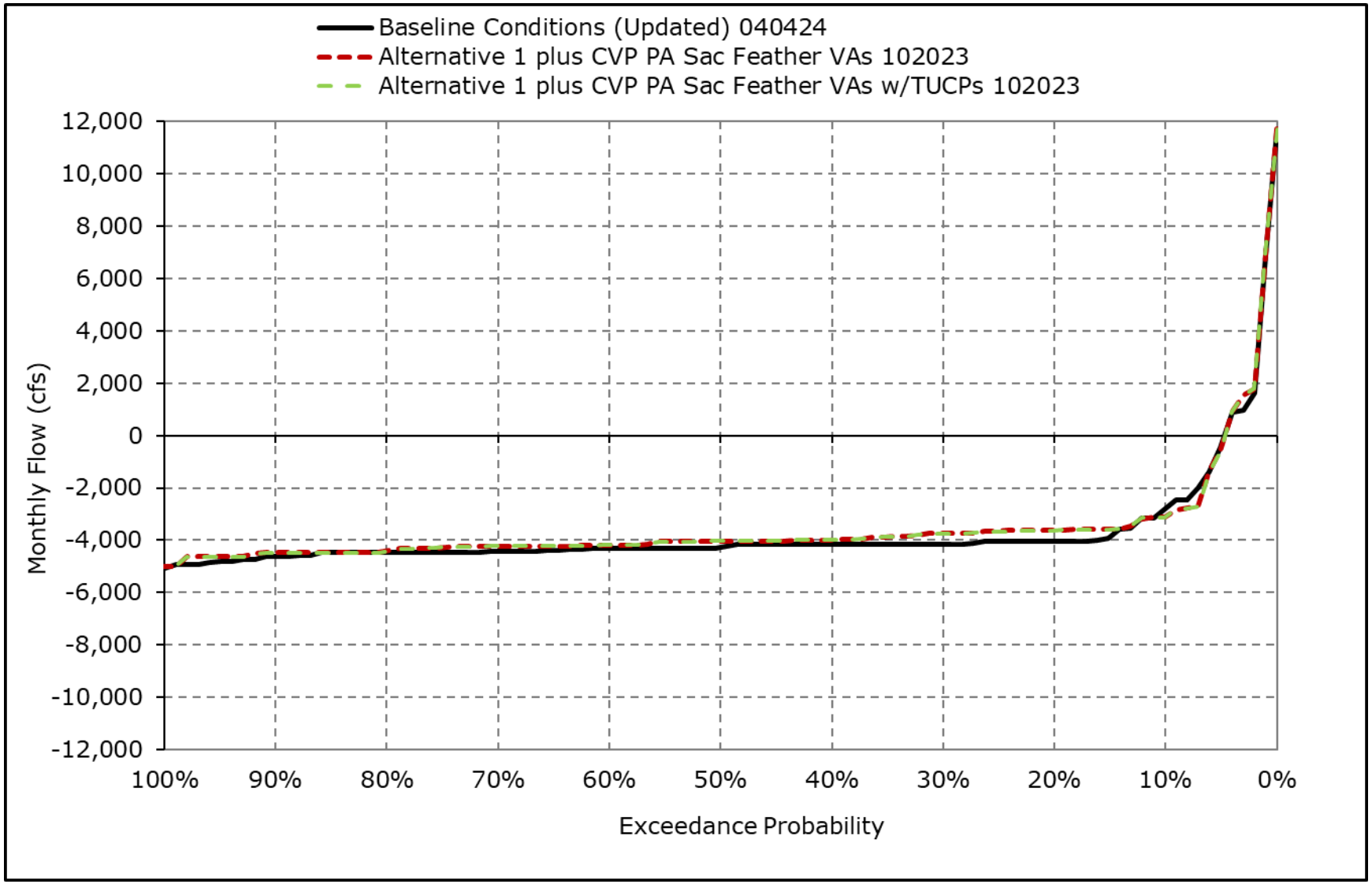
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8j. Old and Middle River Flow, January



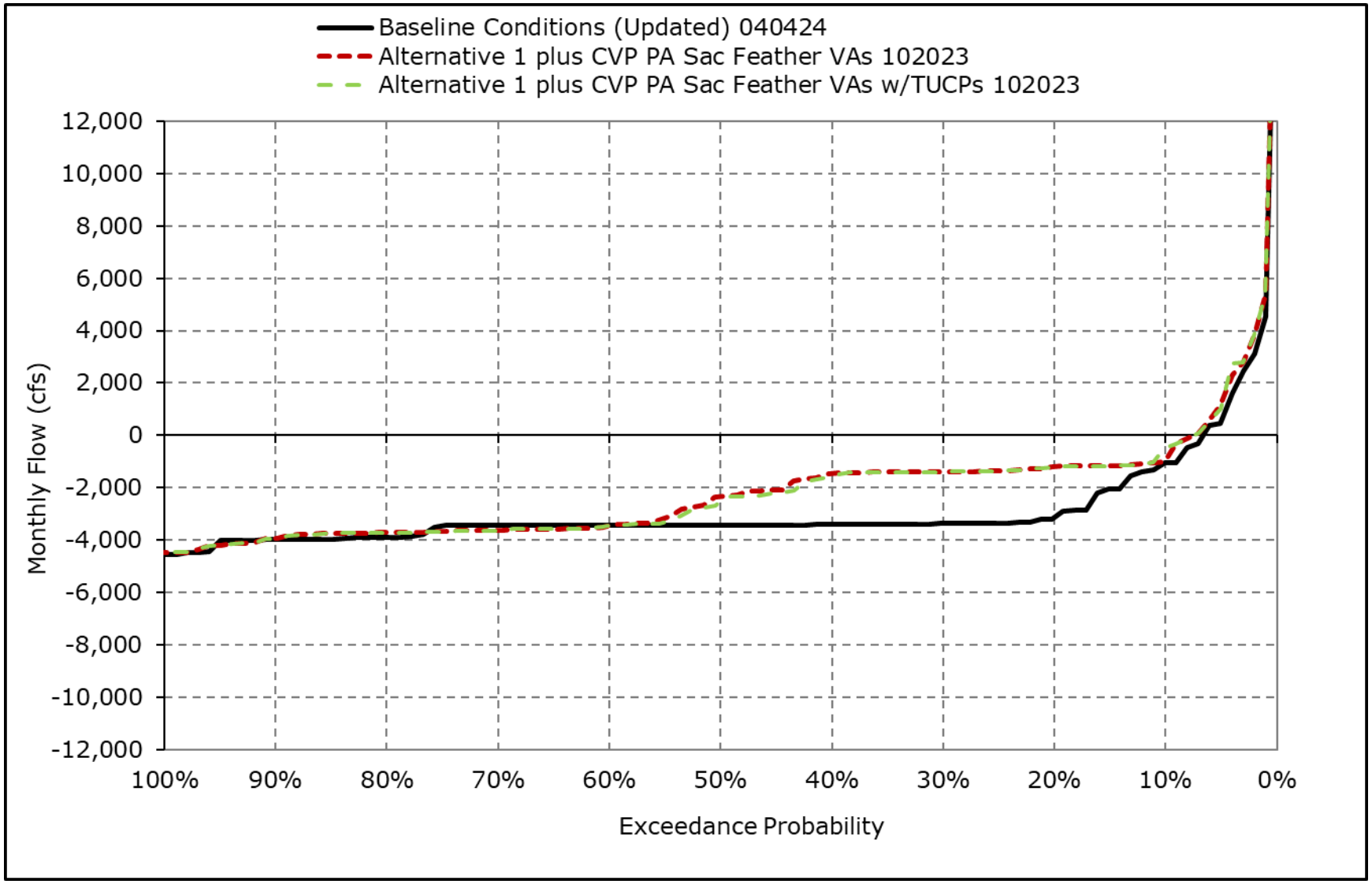
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8k. Old and Middle River Flow, February



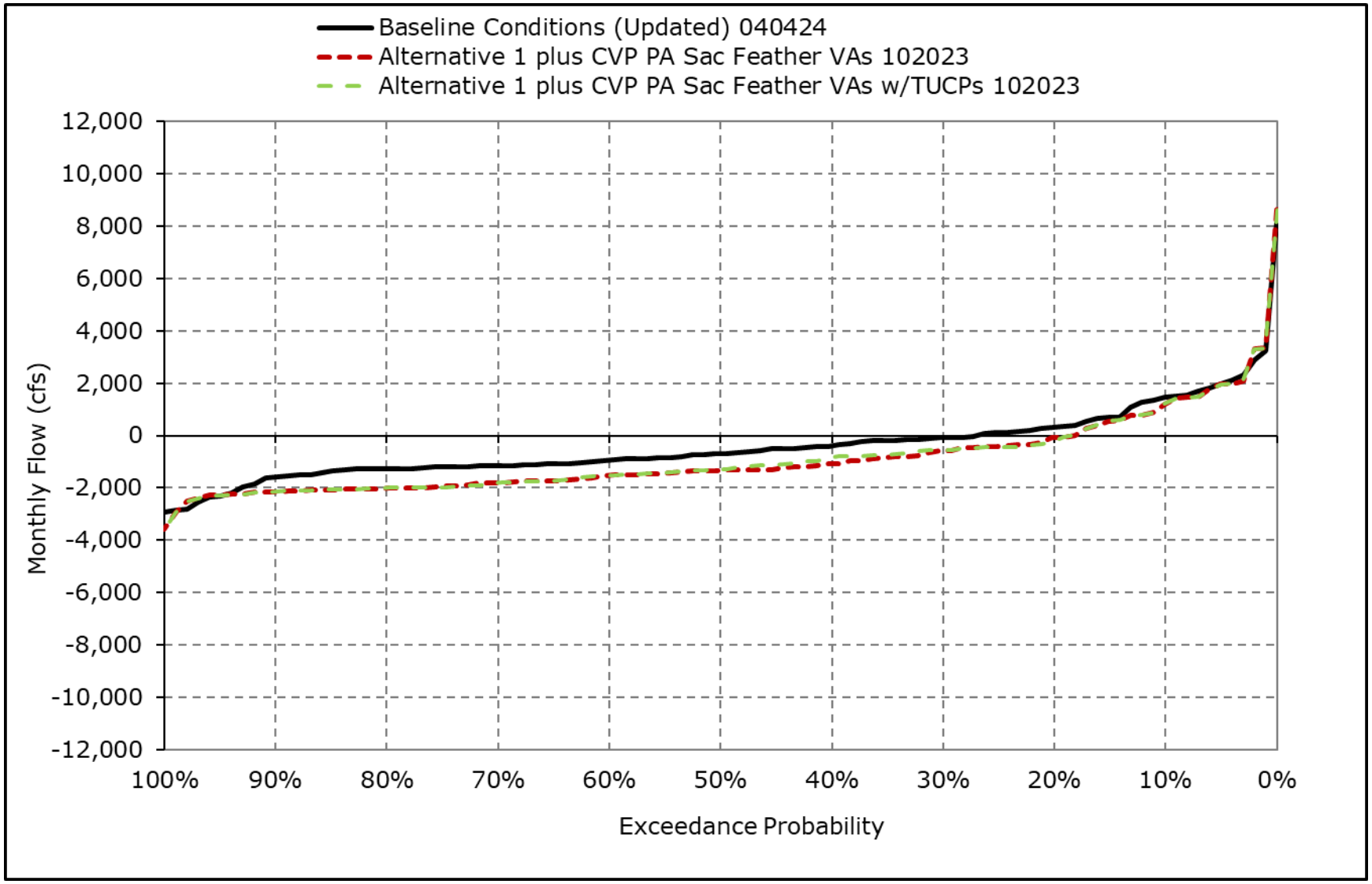
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8l. Old and Middle River Flow, March



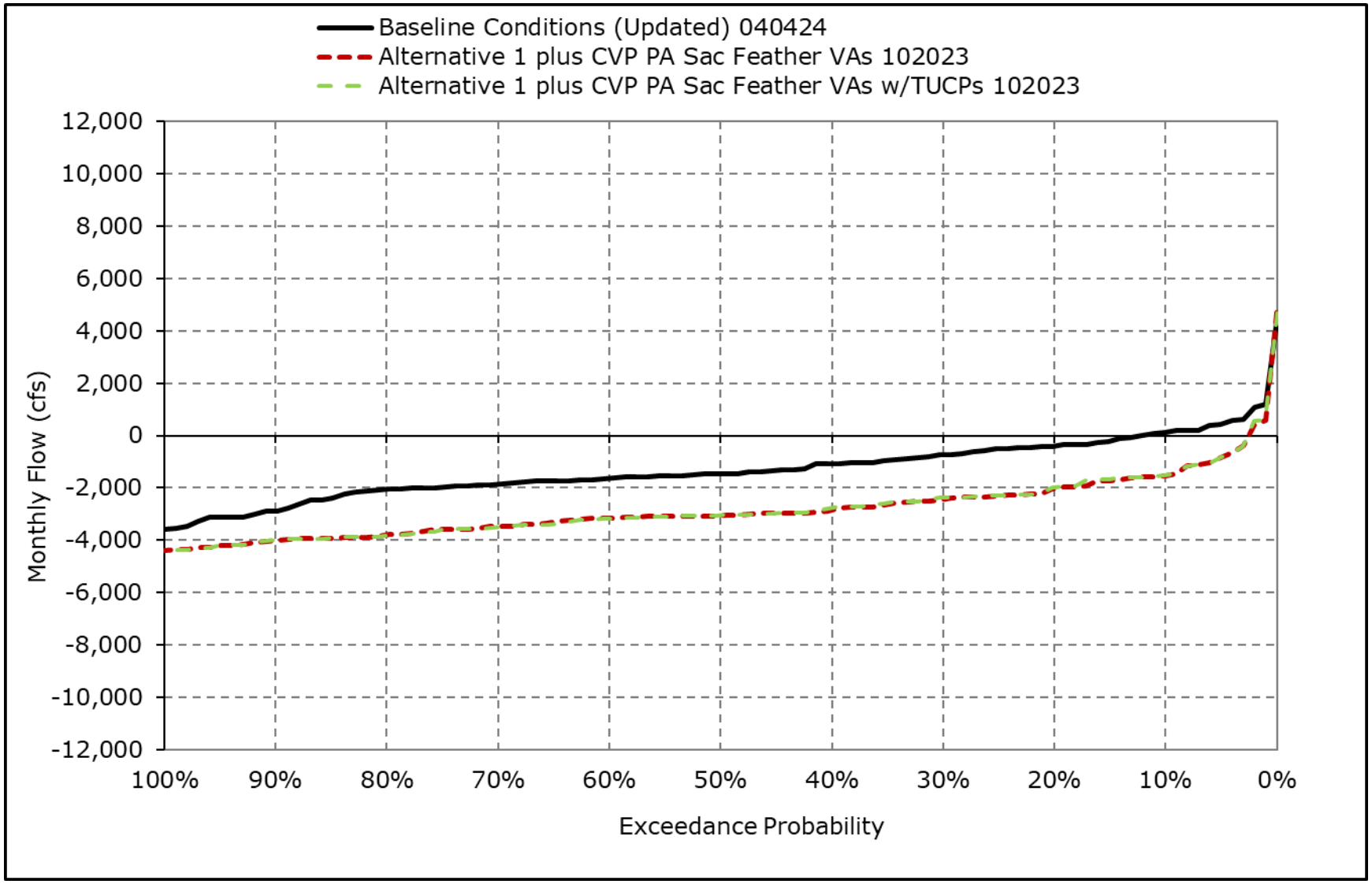
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8m. Old and Middle River Flow, April



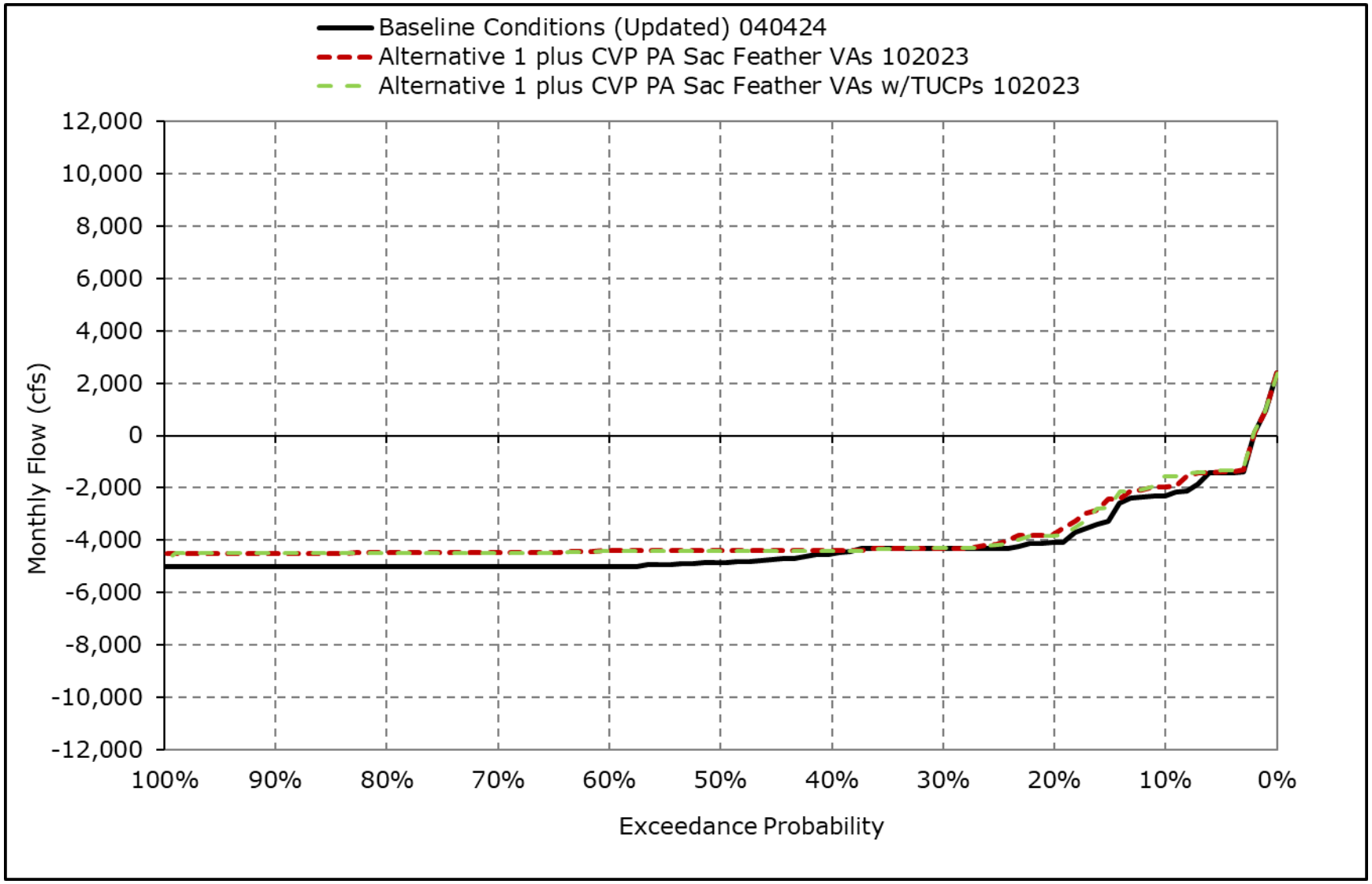
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8n. Old and Middle River Flow, May



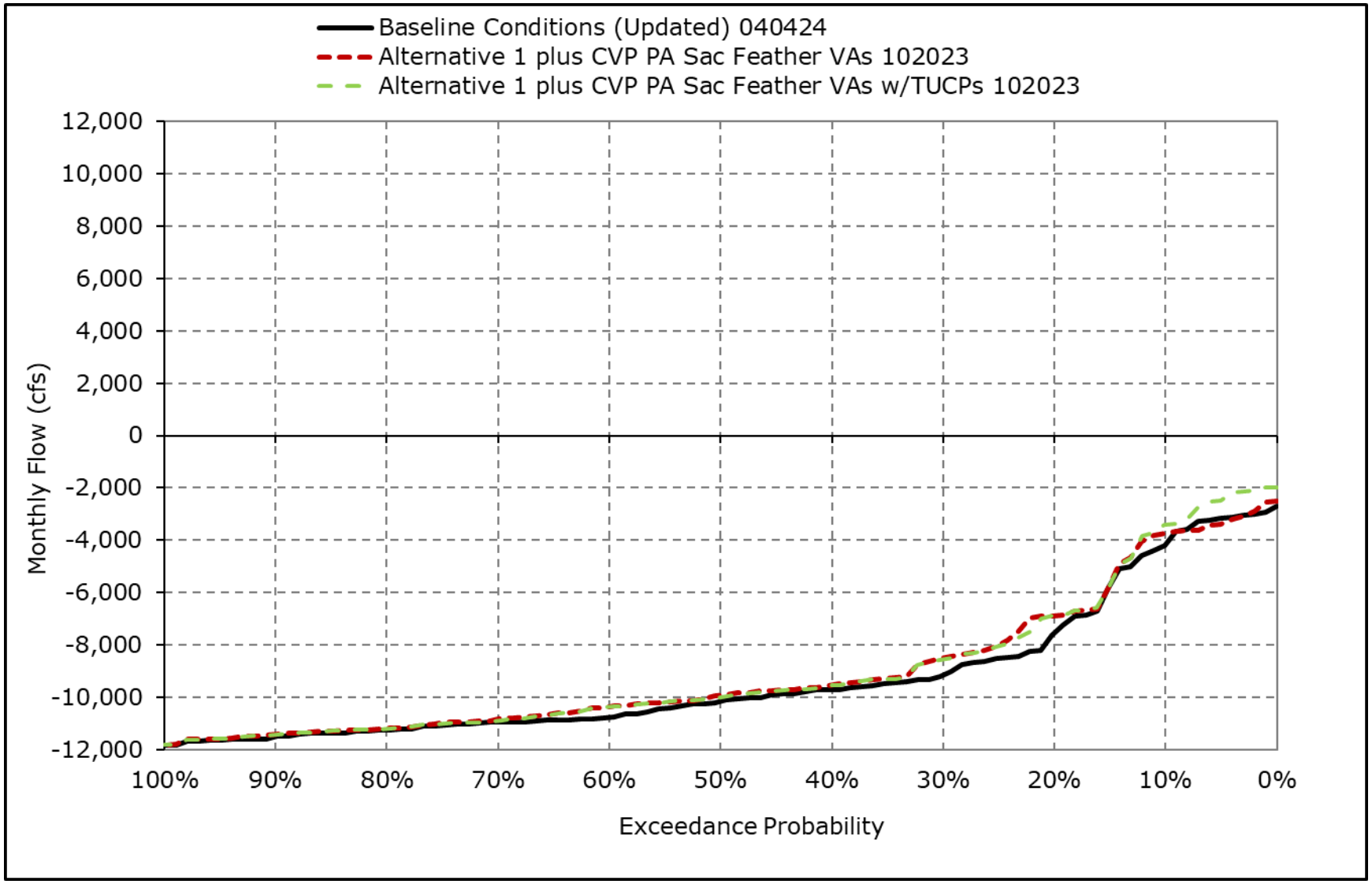
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8o. Old and Middle River Flow, June



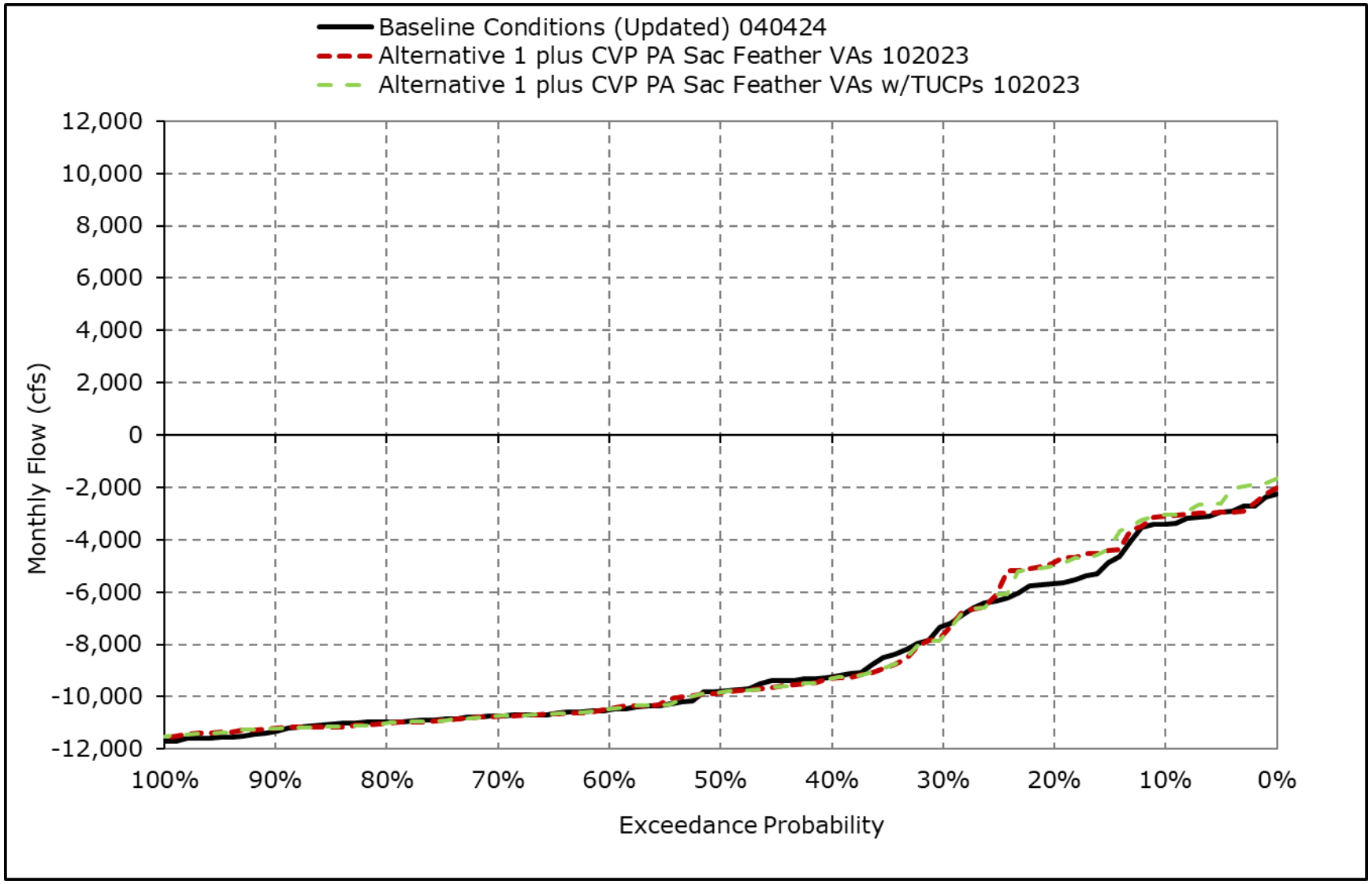
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8p. Old and Middle River Flow, July



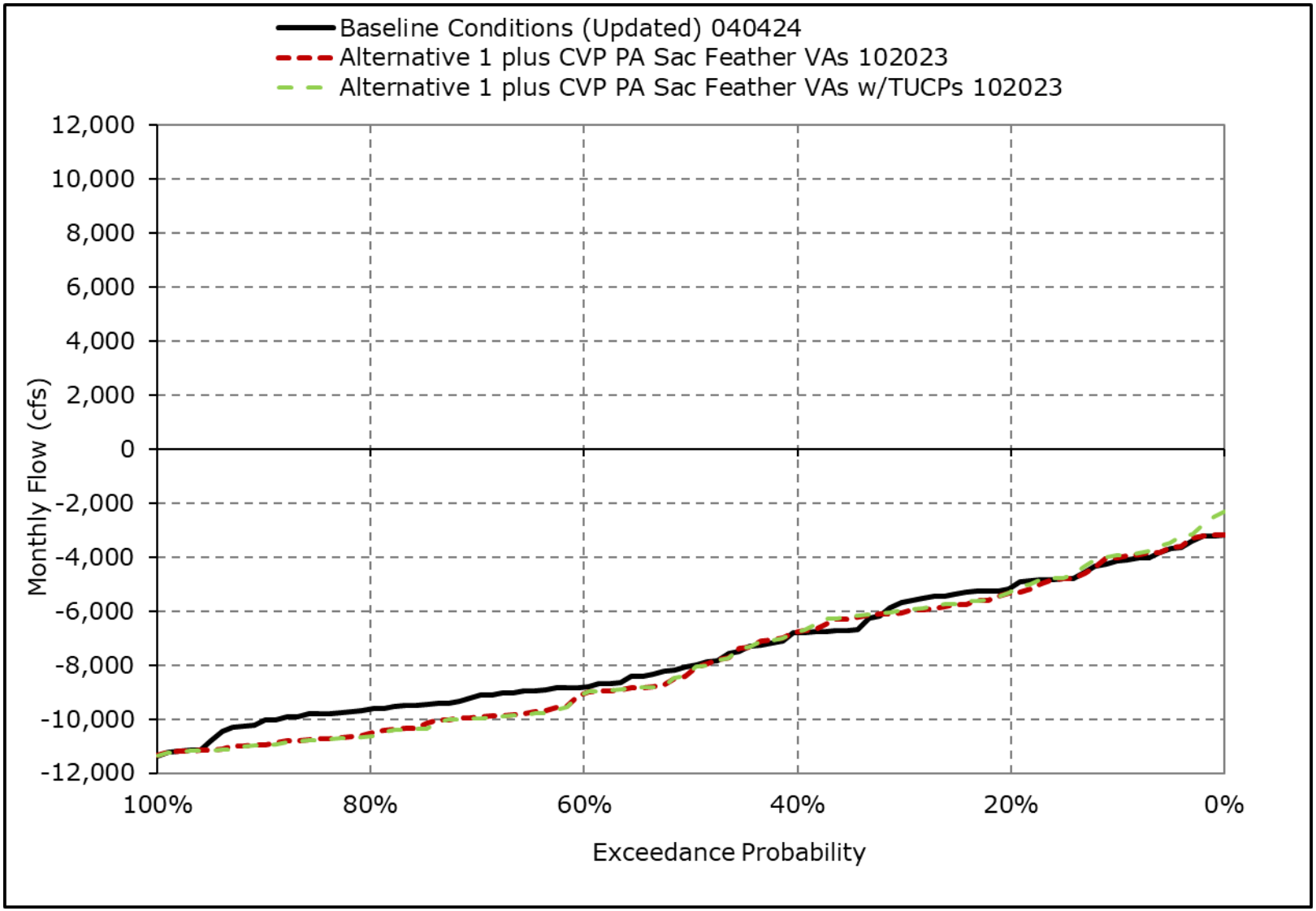
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8q. Old and Middle River Flow, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-8r. Old and Middle River Flow, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-9-1a. Qwest, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	1,041	359	8,369	15,346	20,961	20,523	16,713	13,257	9,911	1,244	862	1,086
20% Exceedance	708	-182	3,810	9,899	12,856	12,923	12,291	7,924	4,392	311	297	600
30% Exceedance	383	-670	1,041	4,871	9,991	8,500	10,274	6,172	2,841	-467	-621	144
40% Exceedance	117	-1,019	-73	3,125	6,612	5,830	8,103	5,197	2,127	-1,135	-1,301	-202
50% Exceedance	-165	-1,538	-874	2,214	4,299	4,212	6,220	4,219	1,499	-1,978	-2,454	-393
60% Exceedance	-290	-2,592	-1,793	640	2,192	2,849	5,273	3,479	1,099	-2,730	-2,975	-716
70% Exceedance	-591	-3,245	-3,712	-479	1,471	2,268	3,995	2,732	738	-3,123	-3,152	-988
80% Exceedance	-1,202	-3,638	-5,073	-1,471	556	1,693	3,058	2,058	427	-3,360	-3,442	-1,949
90% Exceedance	-2,177	-4,349	-5,695	-2,068	-359	582	2,234	1,721	262	-4,141	-4,049	-2,918
Full Simulation Period Average[a]	-257	-1,524	506	5,049	8,144	7,893	8,546	6,066	3,286	-1,427	-1,794	-612
Wet Water Years (30%)	-758	-822	5,869	13,436	17,795	17,086	15,391	11,230	7,624	254	-1,316	367
Above Normal Water Years (11%)	322	-2,690	-1,688	7,259	10,551	9,386	8,678	5,228	2,549	-1,372	-3,012	608
Below Normal Water Years (21%)	-127	-2,052	-1,822	1,680	5,202	4,933	7,920	5,584	1,476	-3,246	-3,922	-2,914
Dry Water Years (22%)	-388	-2,021	-2,425	-338	2,019	2,103	4,034	2,994	533	-3,440	-1,598	-965
Critical Water Years (16%)	292	-660	-956	-365	678	1,474	2,644	1,819	1,822	538	673	219

Table 4F-3-9-1b. Qwest, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	1,156	340	8,407	15,380	20,894	20,286	18,379	11,670	9,930	1,210	1,053	876
20% Exceedance	698	-213	3,955	10,157	12,996	13,695	12,587	6,525	4,804	507	149	339
30% Exceedance	492	-684	1,191	5,130	10,115	9,345	9,085	4,461	3,292	-615	-299	-198
40% Exceedance	382	-1,098	-173	3,368	6,977	6,889	7,282	3,348	2,470	-1,209	-1,459	-557
50% Exceedance	147	-1,588	-963	2,361	4,739	5,105	5,331	2,316	1,859	-1,740	-2,671	-897
60% Exceedance	-163	-2,608	-1,896	910	2,650	4,360	4,601	1,577	1,630	-2,337	-3,044	-1,184
70% Exceedance	-463	-3,355	-3,441	-293	1,697	2,935	3,262	1,152	1,249	-2,854	-3,333	-1,435
80% Exceedance	-938	-3,594	-4,863	-986	879	1,943	2,320	821	965	-3,119	-3,562	-1,808
90% Exceedance	-1,541	-4,356	-5,555	-1,784	-105	681	1,674	540	749	-3,702	-4,003	-2,910
Full Simulation Period Average[a]	-76	-1,582	537	5,279	8,364	8,681	8,117	4,532	3,702	-1,277	-1,809	-842
Wet Water Years (30%)	-511	-976	6,014	13,637	17,738	17,524	15,955	9,865	7,922	220	-1,658	-434
Above Normal Water Years (11%)	697	-2,689	-1,917	7,423	10,780	10,723	9,156	4,525	2,971	-1,645	-3,298	547
Below Normal Water Years (21%)	49	-2,090	-1,980	1,958	5,495	6,571	6,093	2,985	2,046	-3,117	-3,783	-2,760
Dry Water Years (22%)	-342	-2,091	-2,340	-66	2,400	2,860	3,350	1,463	1,026	-2,867	-1,377	-1,071
Critical Water Years (16%)	408	-593	-784	-156	1,090	1,471	1,915	790	2,147	771	930	272

Table 4F-3-9-1c. Qwest, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	114	-19	38	34	-67	-237	1,666	-1,588	19	-34	191	-210
20% Exceedance	-10	-31	145	257	140	772	296	-1,399	412	197	-148	-261
30% Exceedance	108	-15	149	259	124	845	-1,188	-1,711	451	-148	322	-343
40% Exceedance	265	-78	-100	242	365	1,059	-821	-1,849	343	-74	-158	-355
50% Exceedance	312	-50	-89	147	440	893	-889	-1,903	360	238	-217	-504
60% Exceedance	126	-16	-103	270	458	1,511	-672	-1,902	531	394	-69	-468
70% Exceedance	128	-110	272	186	226	667	-732	-1,580	510	268	-181	-447
80% Exceedance	263	44	210	485	323	250	-738	-1,237	538	241	-121	141
90% Exceedance	635	-7	140	284	254	99	-560	-1,182	487	438	46	8
Full Simulation Period Average[a]	181	-58	31	230	219	789	-429	-1,534	416	150	-15	-230
Wet Water Years (30%)	246	-154	144	201	-57	438	564	-1,365	298	-35	-343	-801
Above Normal Water Years (11%)	375	1	-228	164	229	1,338	478	-703	421	-273	-286	-61
Below Normal Water Years (21%)	176	-38	-158	279	293	1,637	-1,826	-2,599	570	129	139	153
Dry Water Years (22%)	46	-70	84	271	381	757	-685	-1,531	492	573	221	-106
Critical Water Years (16%)	116	68	172	209	412	-3	-729	-1,029	325	233	257	53

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-9-2a. Qwest, Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	1,041	359	8,369	15,346	20,961	20,523	16,713	13,257	9,911	1,244	862	1,086
20% Exceedance	708	-182	3,810	9,899	12,856	12,923	12,291	7,924	4,392	311	297	600
30% Exceedance	383	-670	1,041	4,871	9,991	8,500	10,274	6,172	2,841	-467	-621	144
40% Exceedance	117	-1,019	-73	3,125	6,612	5,830	8,103	5,197	2,127	-1,135	-1,301	-202
50% Exceedance	-165	-1,538	-874	2,214	4,299	4,212	6,220	4,219	1,499	-1,978	-2,454	-393
60% Exceedance	-290	-2,592	-1,793	640	2,192	2,849	5,273	3,479	1,099	-2,730	-2,975	-716
70% Exceedance	-591	-3,245	-3,712	-479	1,471	2,268	3,995	2,732	738	-3,123	-3,152	-988
80% Exceedance	-1,202	-3,638	-5,073	-1,471	556	1,693	3,058	2,058	427	-3,360	-3,442	-1,949
90% Exceedance	-2,177	-4,349	-5,695	-2,068	-359	582	2,234	1,721	262	-4,141	-4,049	-2,918
Full Simulation Period Average[a]	-257	-1,524	506	5,049	8,144	7,893	8,546	6,066	3,286	-1,427	-1,794	-612
Wet Water Years (30%)	-758	-822	5,869	13,436	17,795	17,086	15,391	11,230	7,624	254	-1,316	367
Above Normal Water Years (11%)	322	-2,690	-1,688	7,259	10,551	9,386	8,678	5,228	2,549	-1,372	-3,012	608
Below Normal Water Years (21%)	-127	-2,052	-1,822	1,680	5,202	4,933	7,920	5,584	1,476	-3,246	-3,922	-2,914
Dry Water Years (22%)	-388	-2,021	-2,425	-338	2,019	2,103	4,034	2,994	533	-3,440	-1,598	-965
Critical Water Years (16%)	292	-660	-956	-365	678	1,474	2,644	1,819	1,822	538	673	219

Table 4F-3-9-2b. Qwest, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	1,151	303	8,406	15,382	20,896	20,306	18,380	11,669	9,910	1,591	1,219	1,219
20% Exceedance	648	-183	4,028	10,217	12,994	13,697	11,868	6,523	4,960	801	280	386
30% Exceedance	478	-697	1,205	5,172	10,115	9,346	8,982	4,559	3,280	-596	-632	-159
40% Exceedance	335	-1,161	-282	3,370	6,977	6,886	7,283	3,349	2,471	-1,212	-1,463	-526
50% Exceedance	127	-1,590	-962	2,360	4,739	5,104	5,332	2,317	1,855	-1,750	-2,681	-869
60% Exceedance	-179	-2,610	-1,815	909	2,641	4,360	4,349	1,577	1,586	-2,356	-3,048	-1,142
70% Exceedance	-587	-3,376	-3,264	-311	1,714	2,897	3,262	1,151	1,194	-2,863	-3,334	-1,400
80% Exceedance	-1,008	-3,621	-4,862	-985	889	1,581	2,320	821	949	-3,184	-3,565	-1,814
90% Exceedance	-1,888	-4,367	-5,556	-1,784	-106	643	1,869	548	744	-3,714	-4,035	-2,933
Full Simulation Period Average[a]	-148	-1,606	526	5,284	8,370	8,650	8,111	4,542	3,682	-1,254	-1,783	-799
Wet Water Years (30%)	-525	-986	6,020	13,633	17,735	17,532	15,953	9,856	7,922	216	-1,659	-437
Above Normal Water Years (11%)	531	-2,650	-2,204	7,447	10,791	10,723	9,009	4,512	3,045	-1,671	-3,300	550
Below Normal Water Years (21%)	-48	-2,137	-1,973	1,966	5,509	6,574	6,059	3,023	2,047	-3,123	-3,798	-2,804
Dry Water Years (22%)	-364	-2,098	-2,367	-50	2,405	2,852	3,356	1,467	1,023	-2,878	-1,430	-1,077
Critical Water Years (16%)	257	-677	-638	-170	1,101	1,269	2,018	824	1,977	963	1,186	605

Table 4F-3-9-2c. Qwest, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Flow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	110	-57	38	36	-65	-217	1,667	-1,589	0	346	357	132
20% Exceedance	-60	-1	217	318	138	775	-424	-1,401	568	490	-17	-214
30% Exceedance	94	-27	164	301	124	845	-1,291	-1,614	438	-129	-11	-303
40% Exceedance	218	-142	-209	244	365	1,057	-820	-1,849	344	-77	-162	-324
50% Exceedance	291	-52	-88	146	439	892	-889	-1,902	356	228	-227	-476
60% Exceedance	111	-18	-22	269	449	1,511	-925	-1,902	487	375	-73	-426
70% Exceedance	4	-132	448	168	243	628	-733	-1,580	455	259	-182	-412
80% Exceedance	194	16	211	485	334	-112	-739	-1,237	522	176	-123	134
90% Exceedance	288	-18	139	284	253	61	-366	-1,173	482	426	15	-15
Full Simulation Period Average[a]	109	-82	20	234	225	758	-435	-1,524	396	173	11	-188
Wet Water Years (30%)	233	-163	151	197	-60	446	562	-1,373	298	-38	-343	-805
Above Normal Water Years (11%)	210	39	-515	188	239	1,337	331	-717	496	-299	-287	-58
Below Normal Water Years (21%)	79	-85	-151	286	307	1,641	-1,861	-2,561	571	123	124	110
Dry Water Years (22%)	24	-76	57	288	386	750	-678	-1,527	489	562	169	-112
Critical Water Years (16%)	-35	-17	317	195	423	-205	-626	-995	155	425	512	386

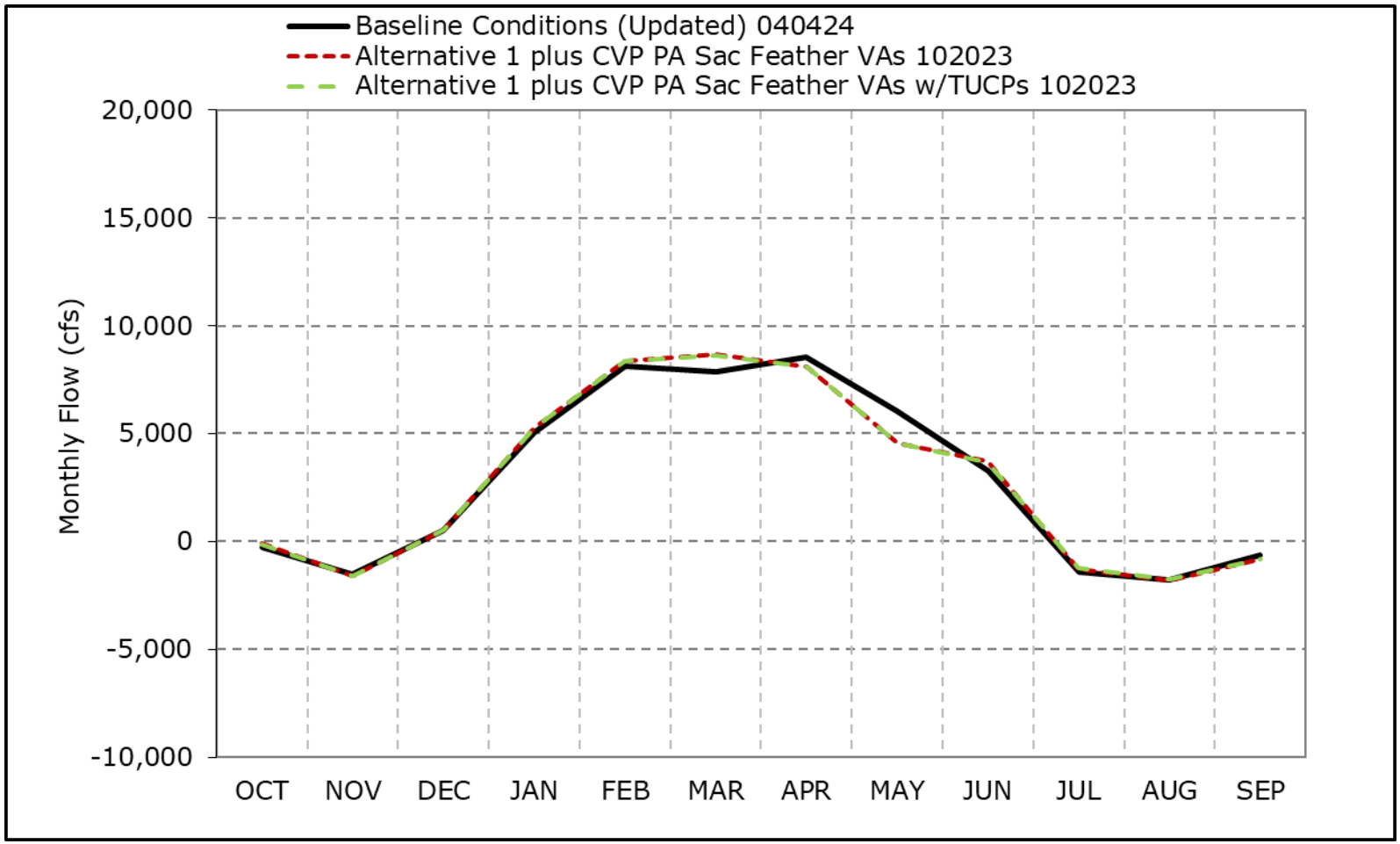
[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.

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

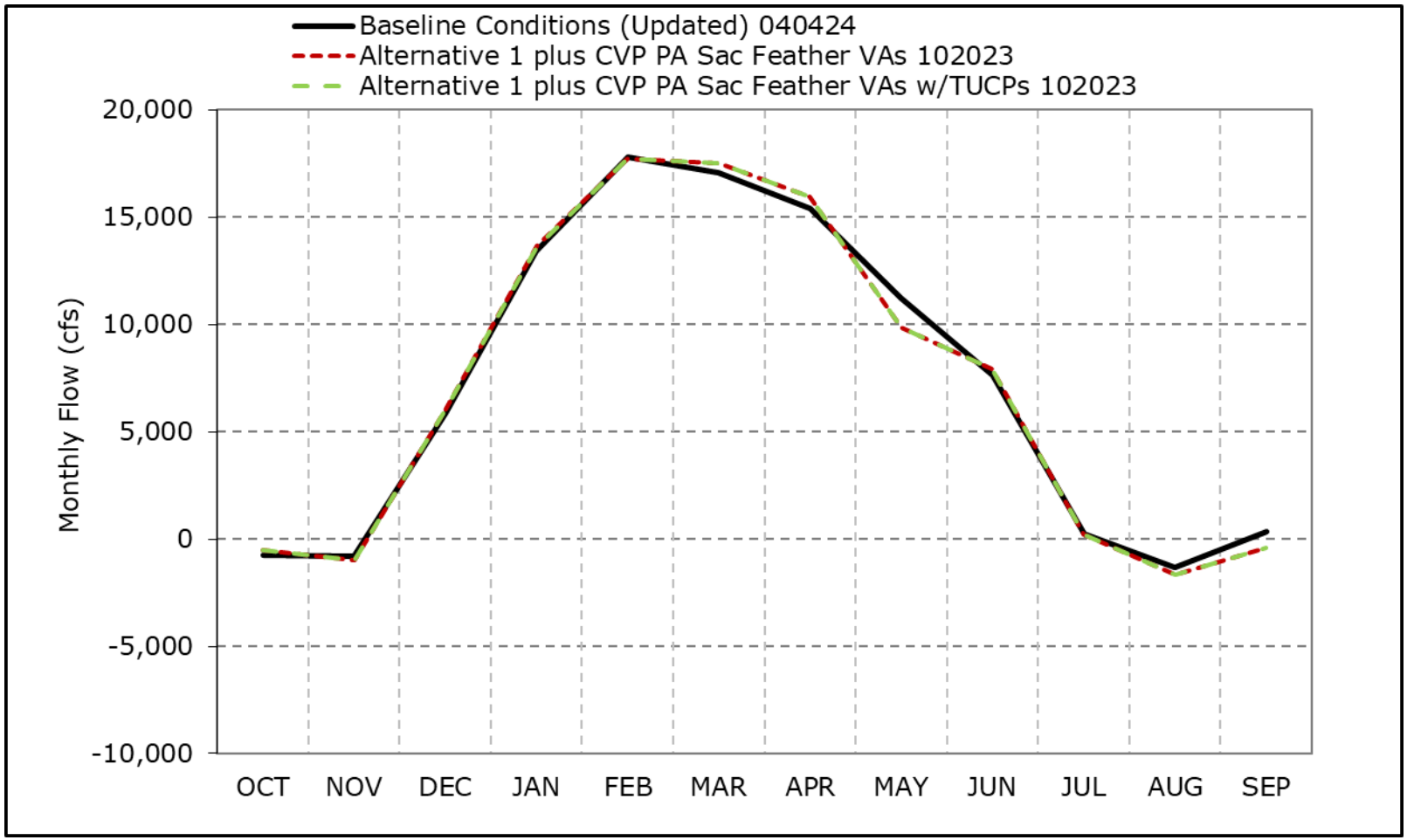
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-9a. Qwest, Long-Term Average Flow



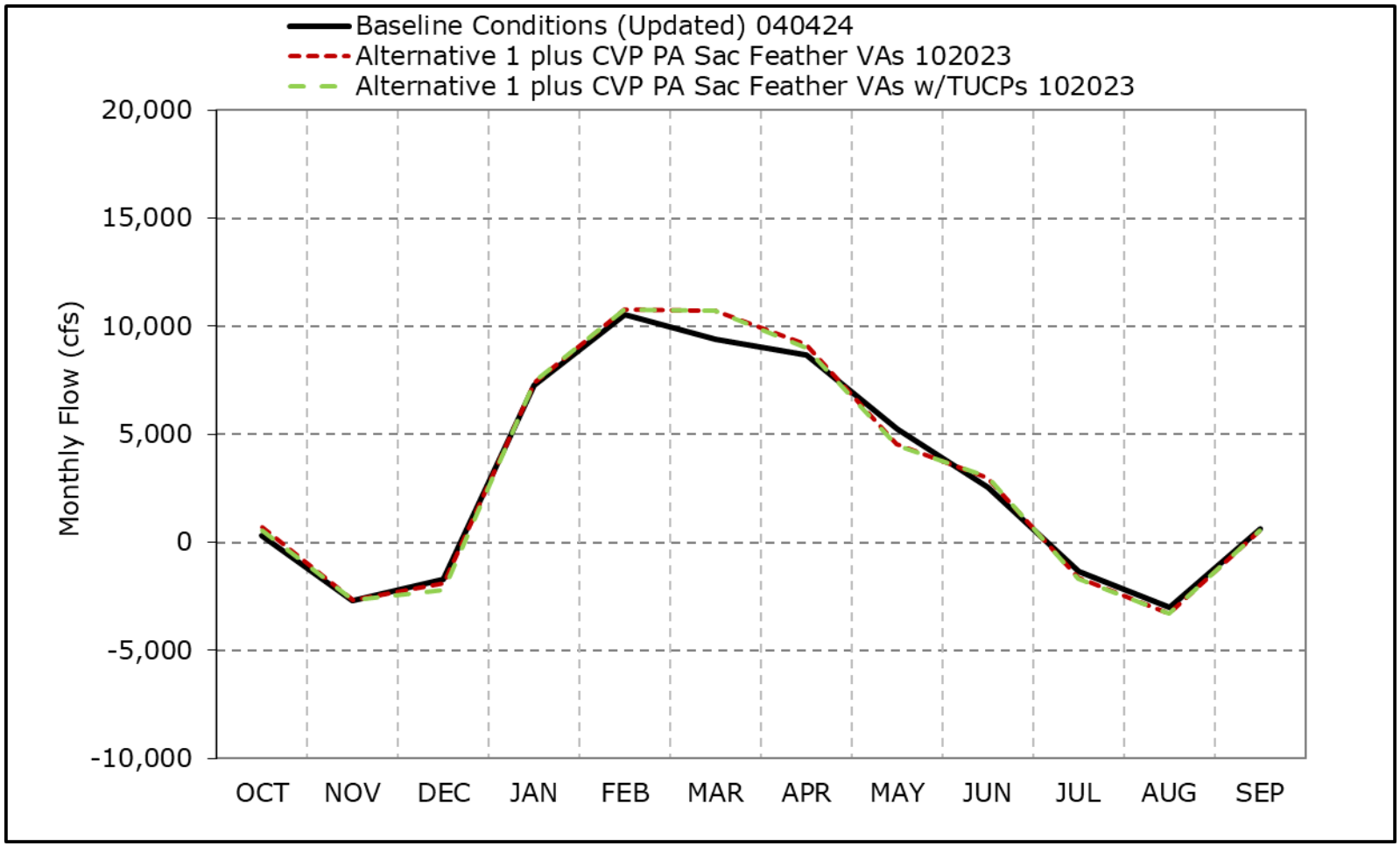
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9b. Qwest, Wet Year Average Flow



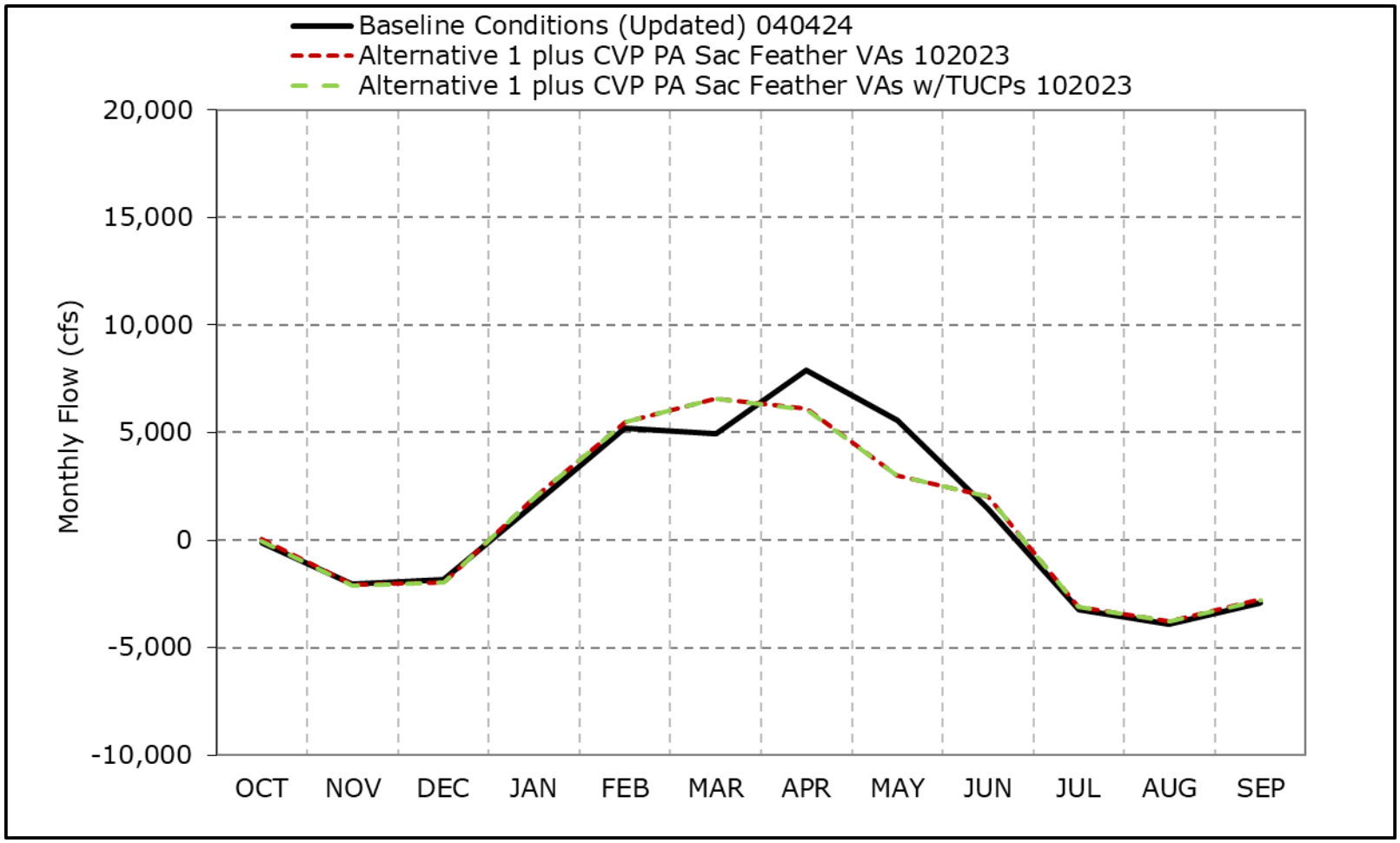
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9c. Qwest, Above Normal Year Average Flow



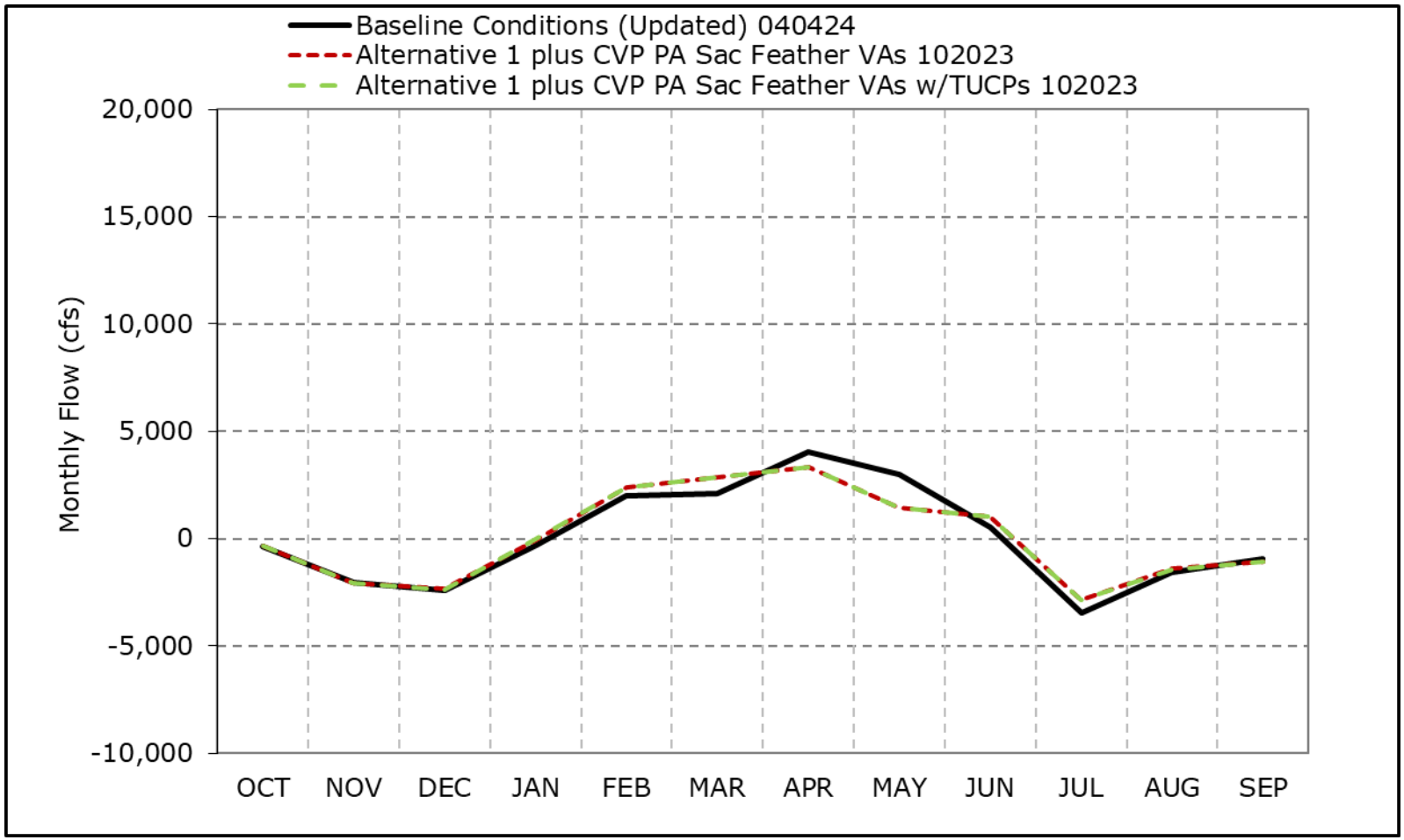
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9d. Qwest, Below Normal Year Average Flow



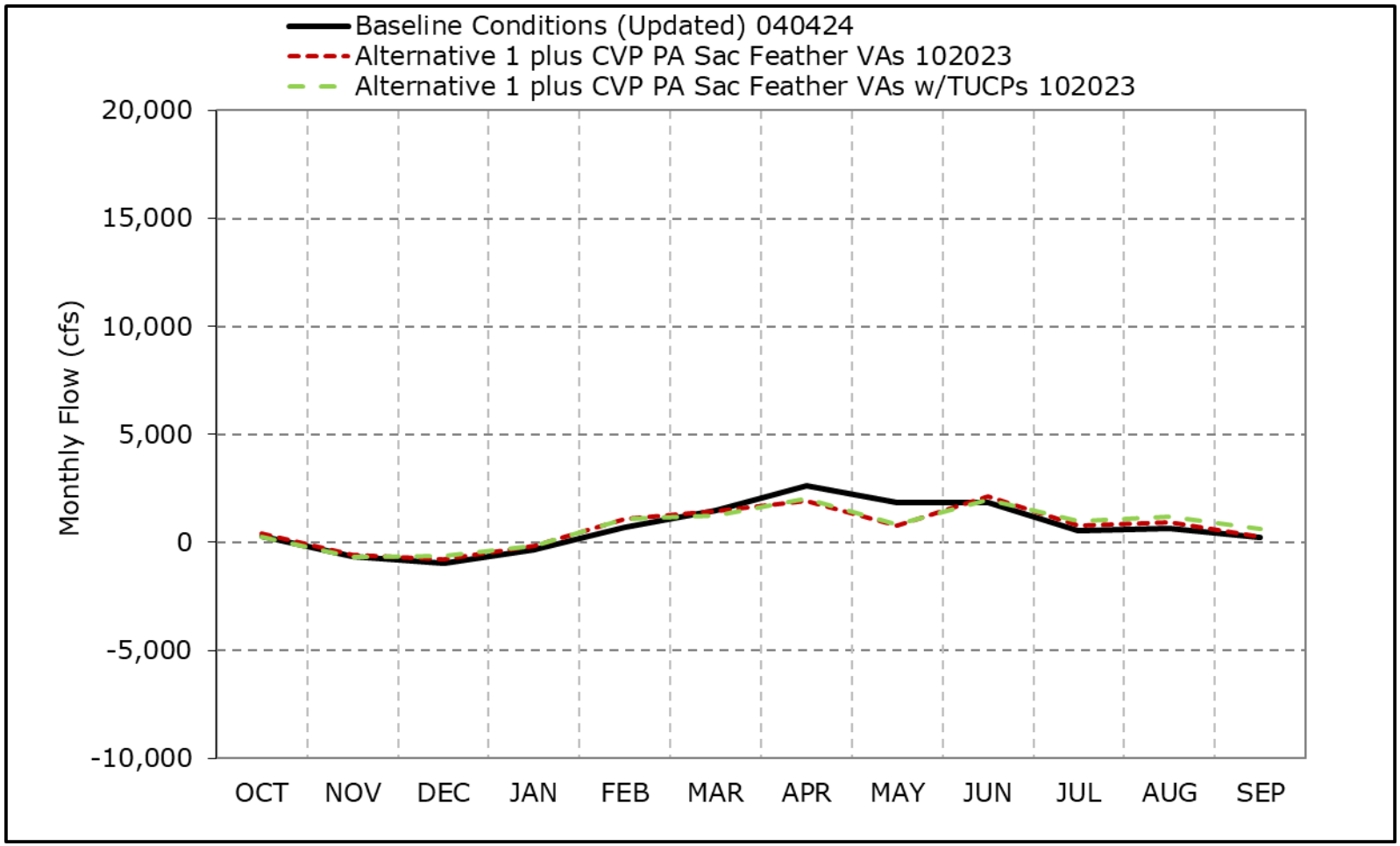
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9e. Qwest, Dry Year Average Flow



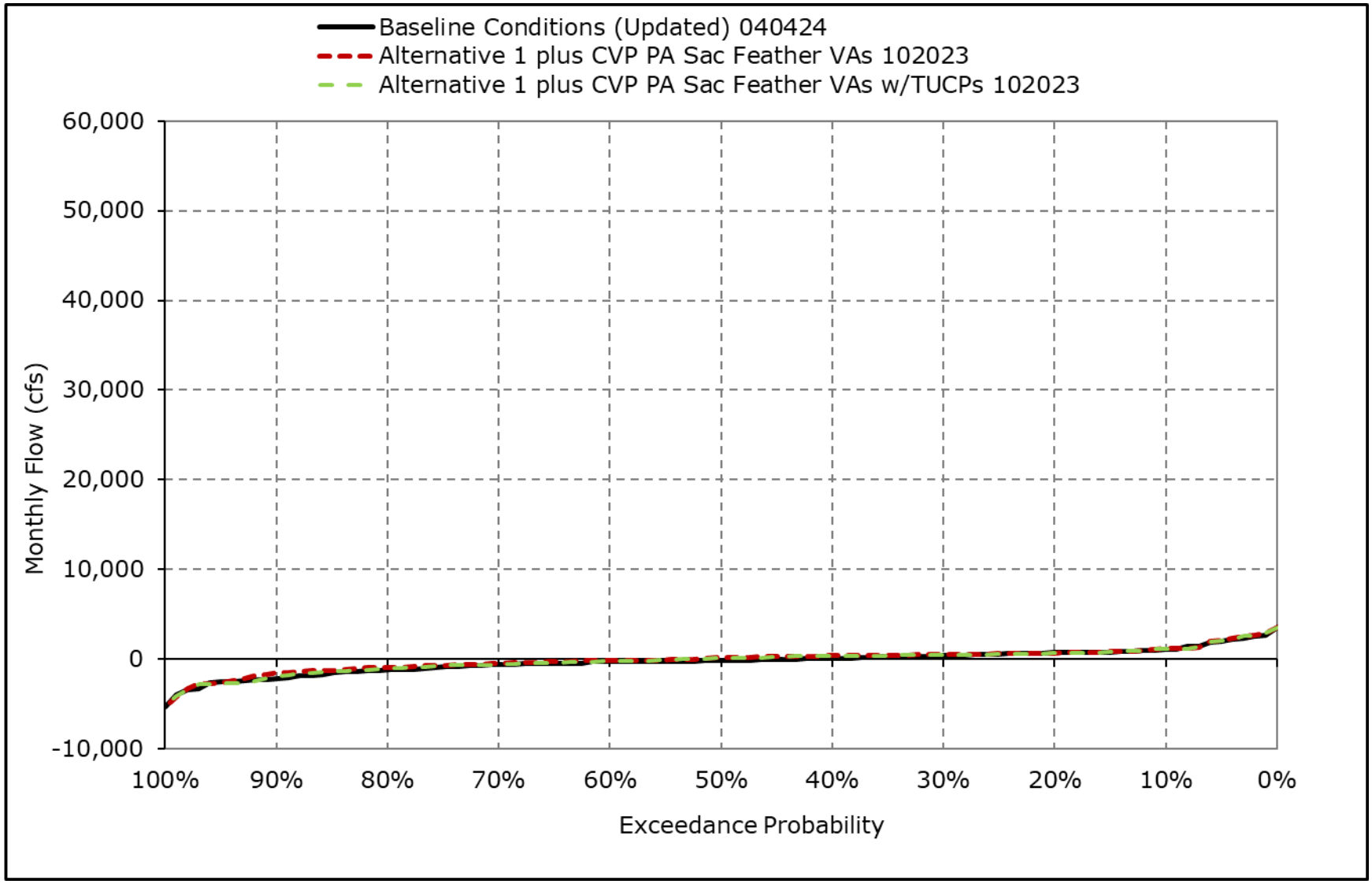
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9f. Qwest, Critical Year Average Flow



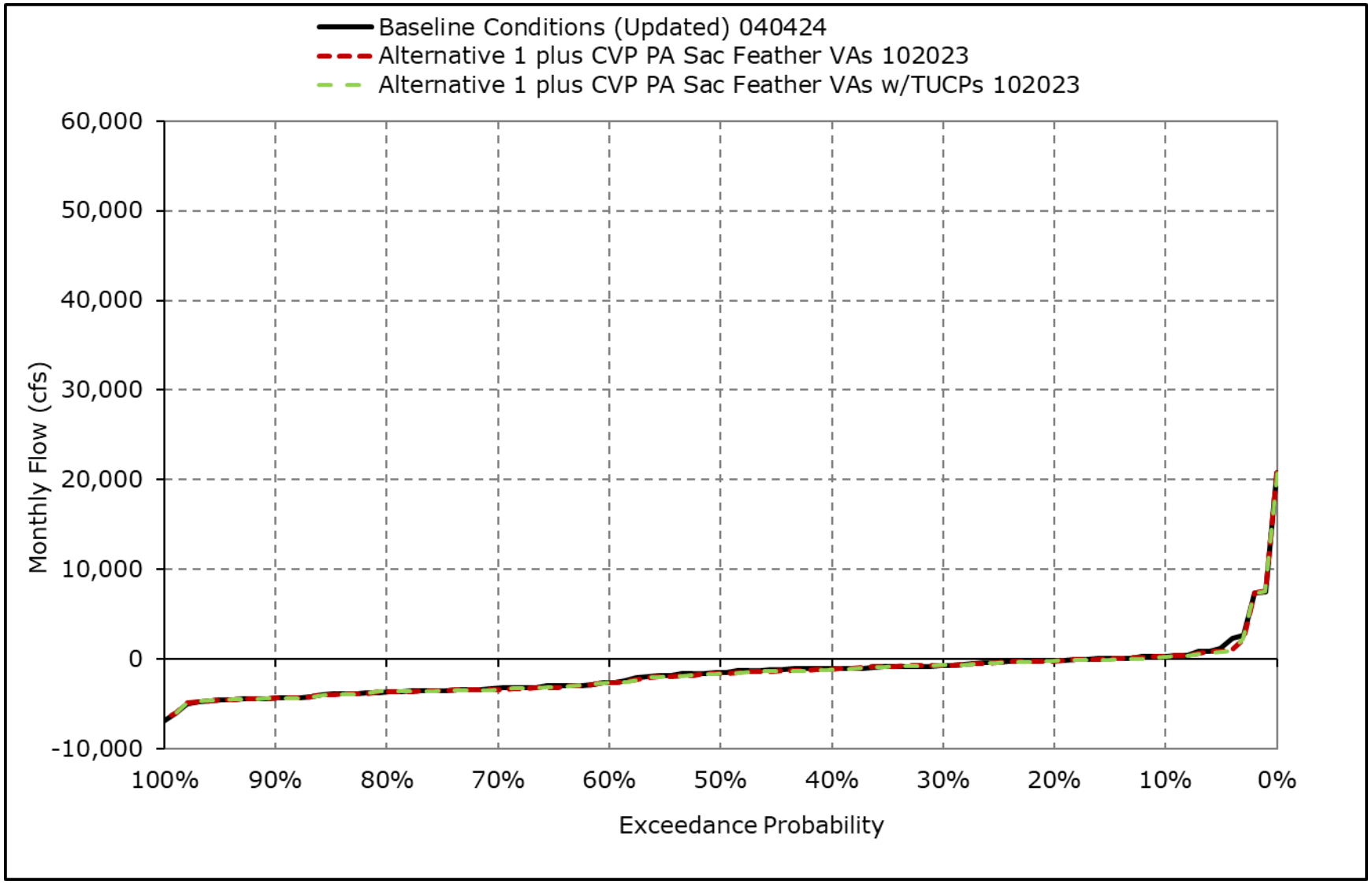
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9g. Qwest, October



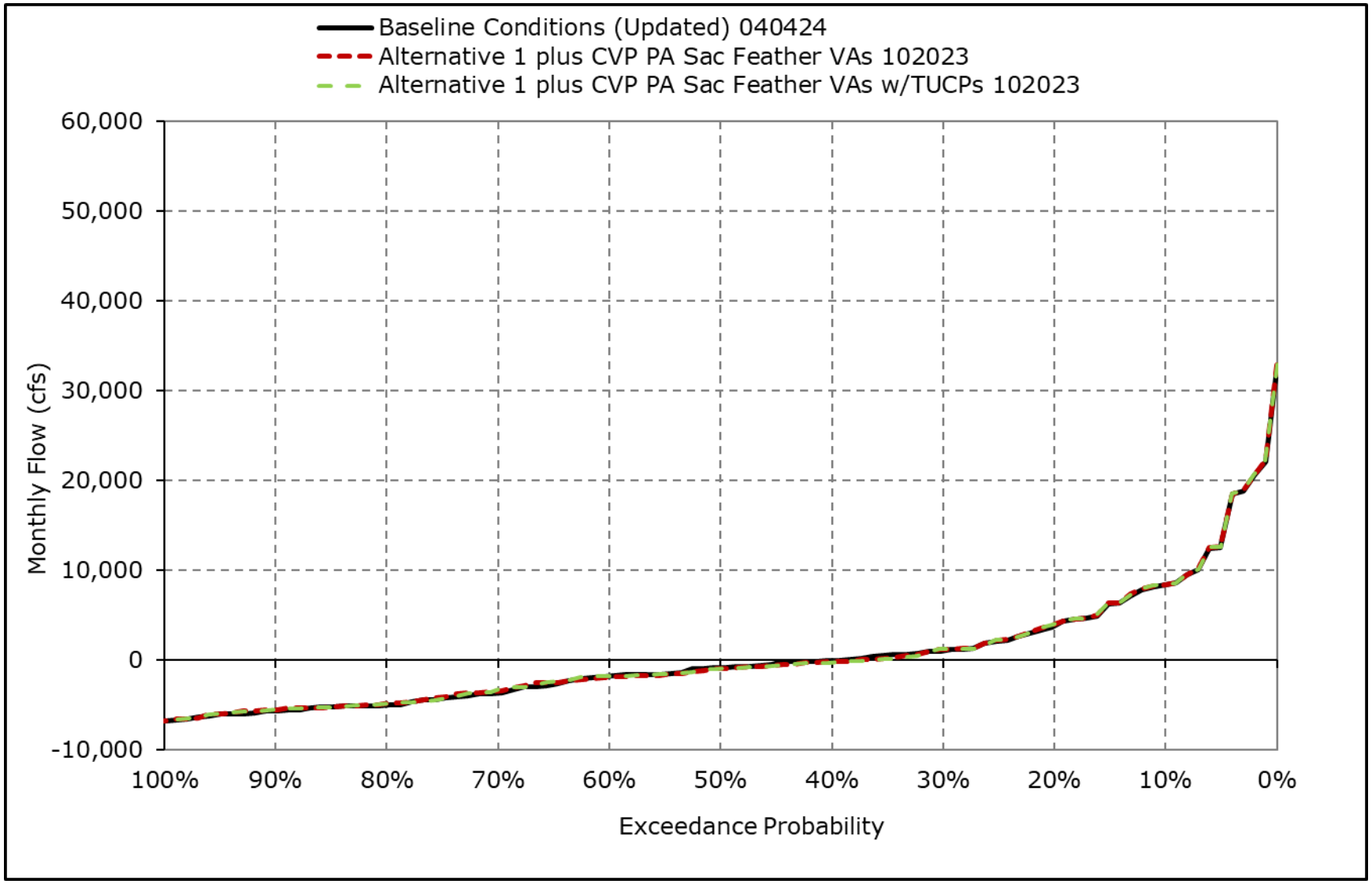
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9h. Qwest, November



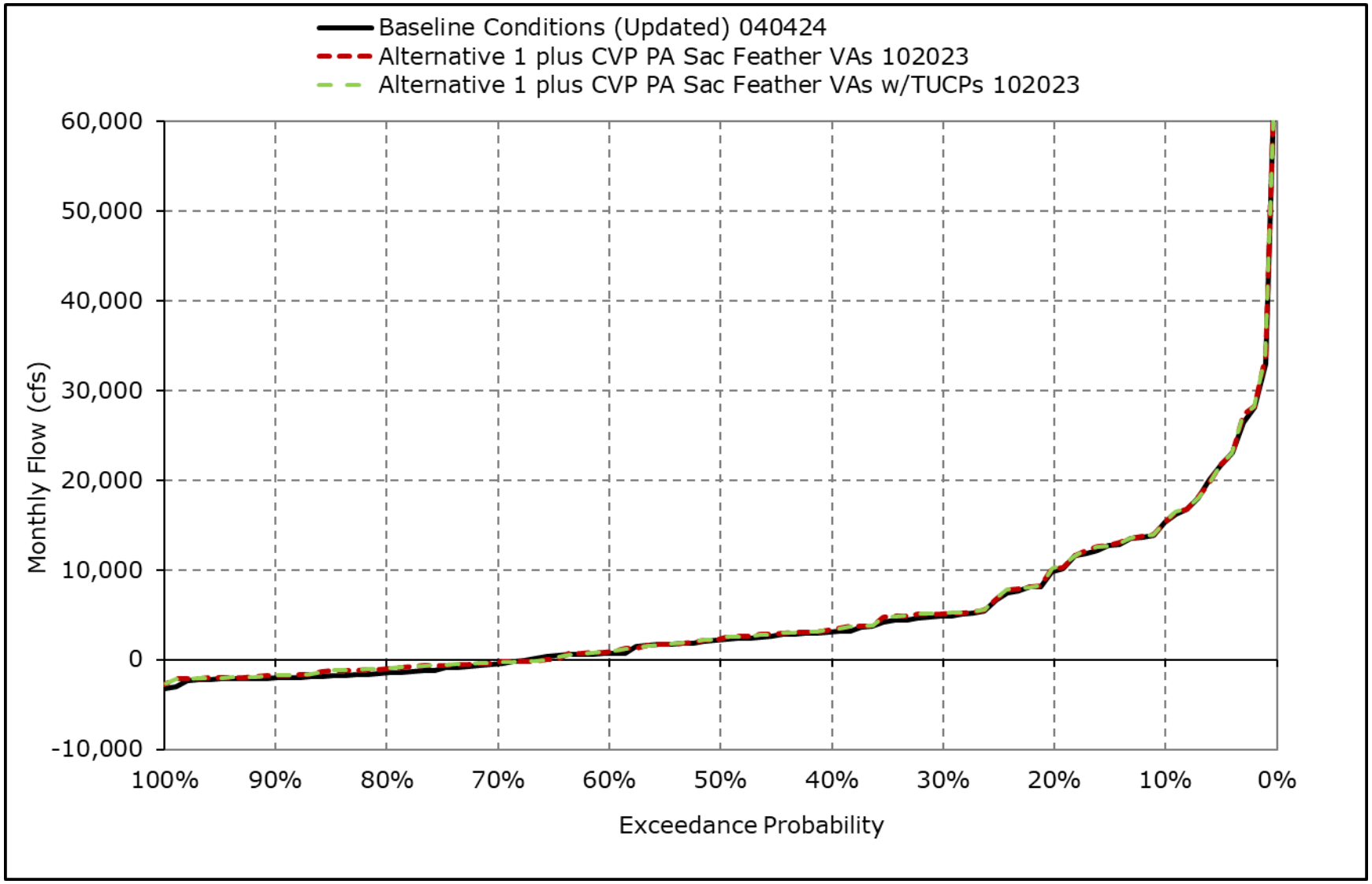
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9i. Qwest, December



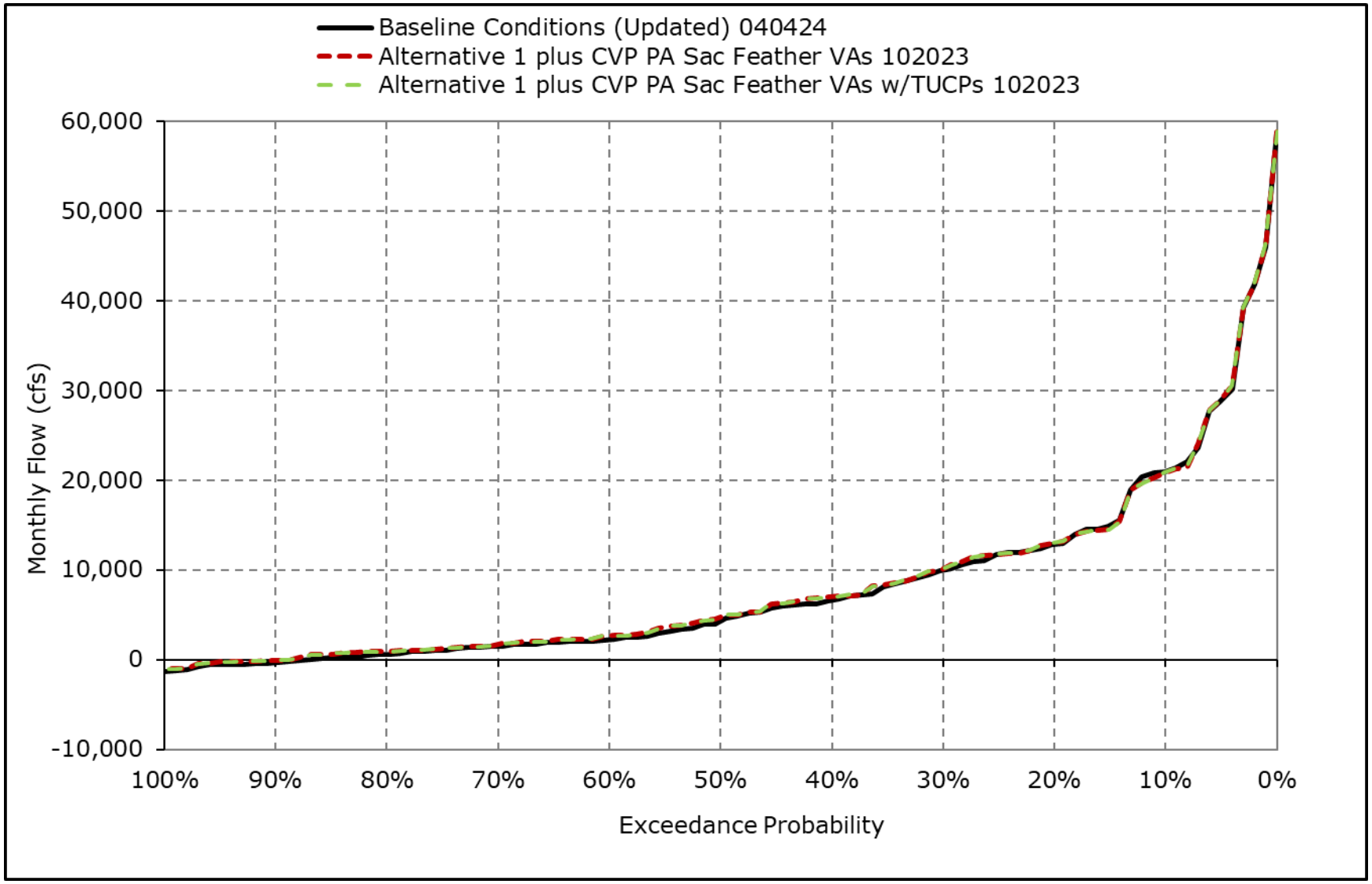
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9j. Qwest, January



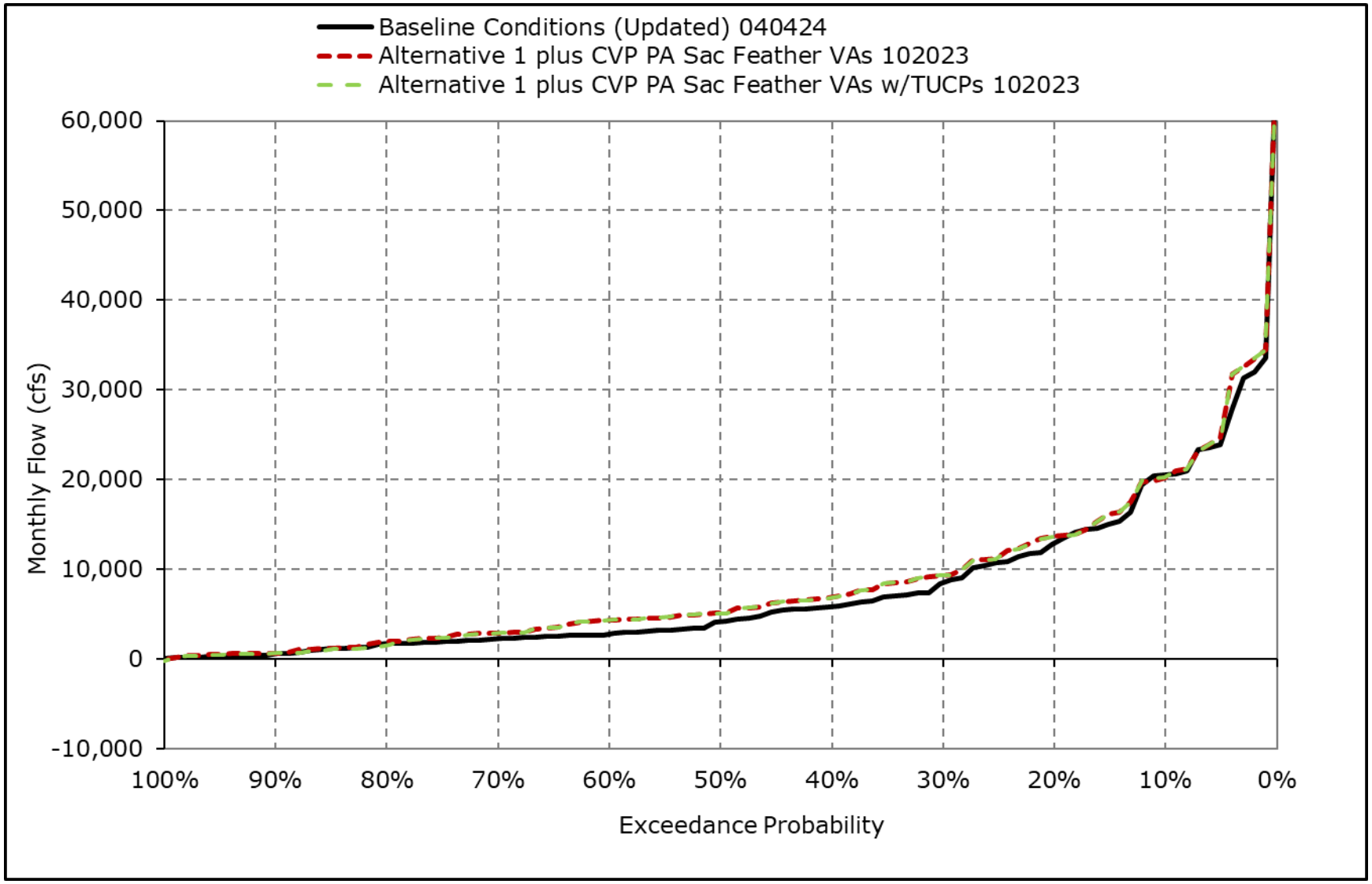
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9k. Qwest, February



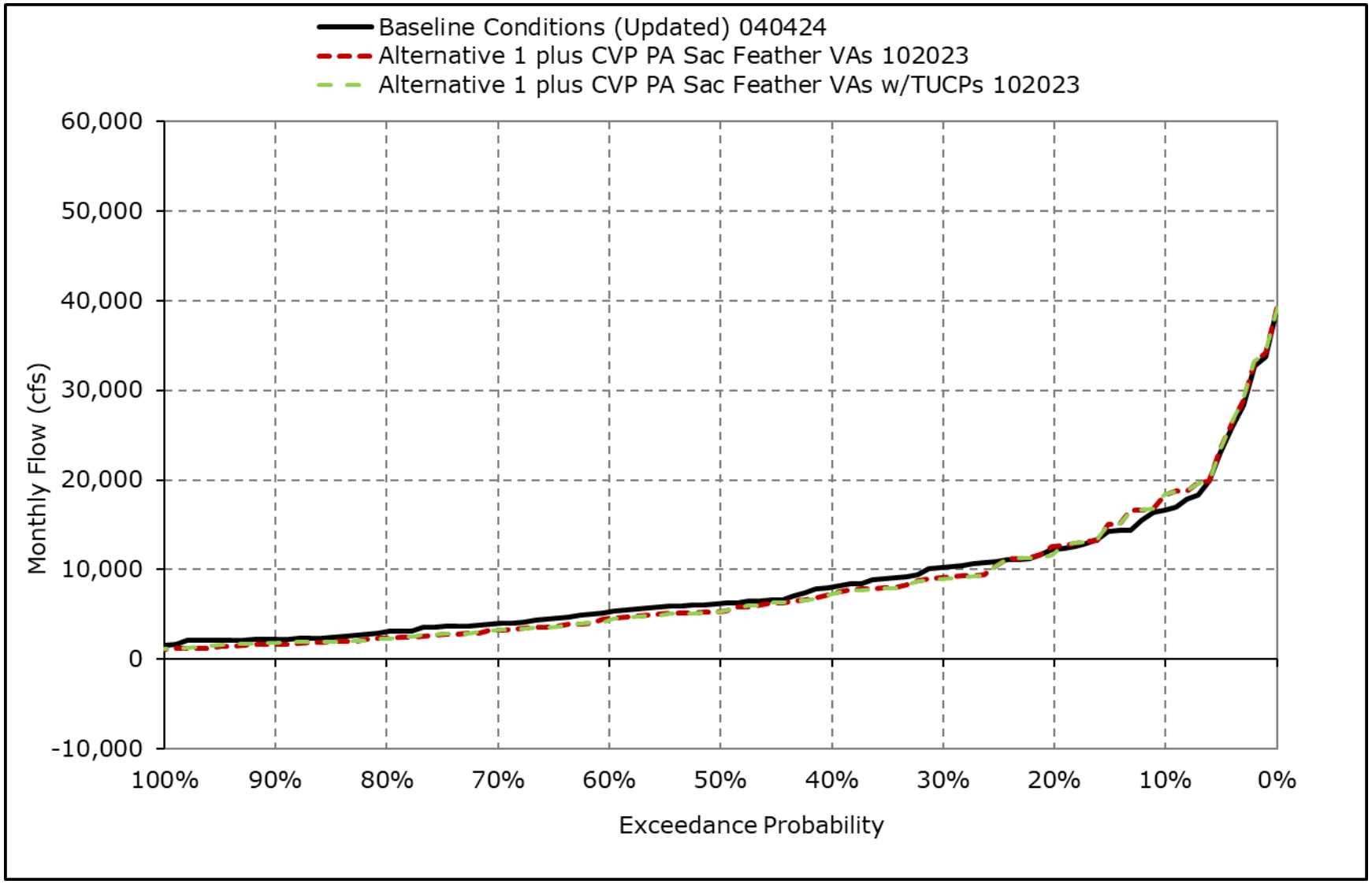
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9l. Qwest, March



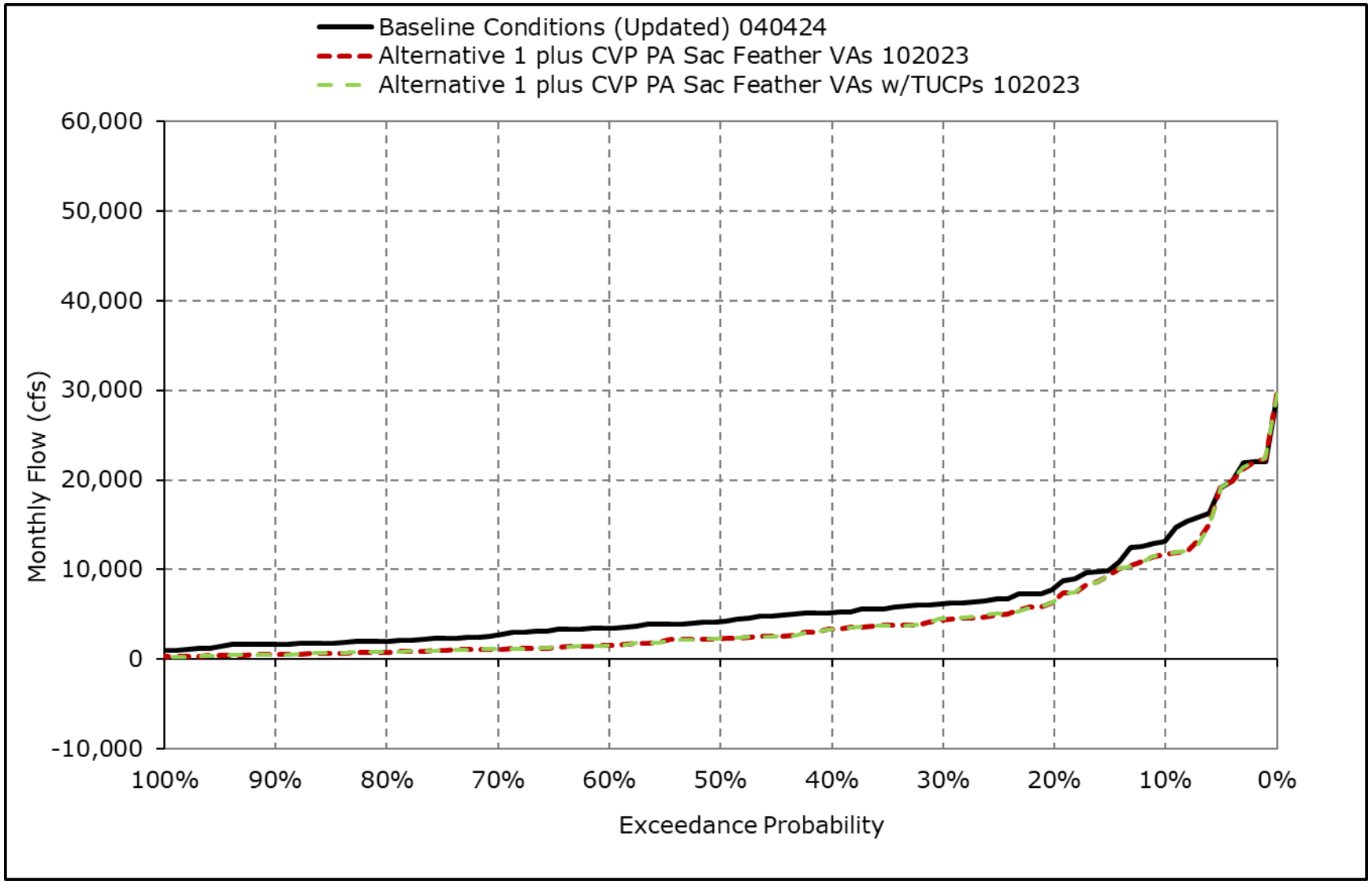
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9m. Qwest, April



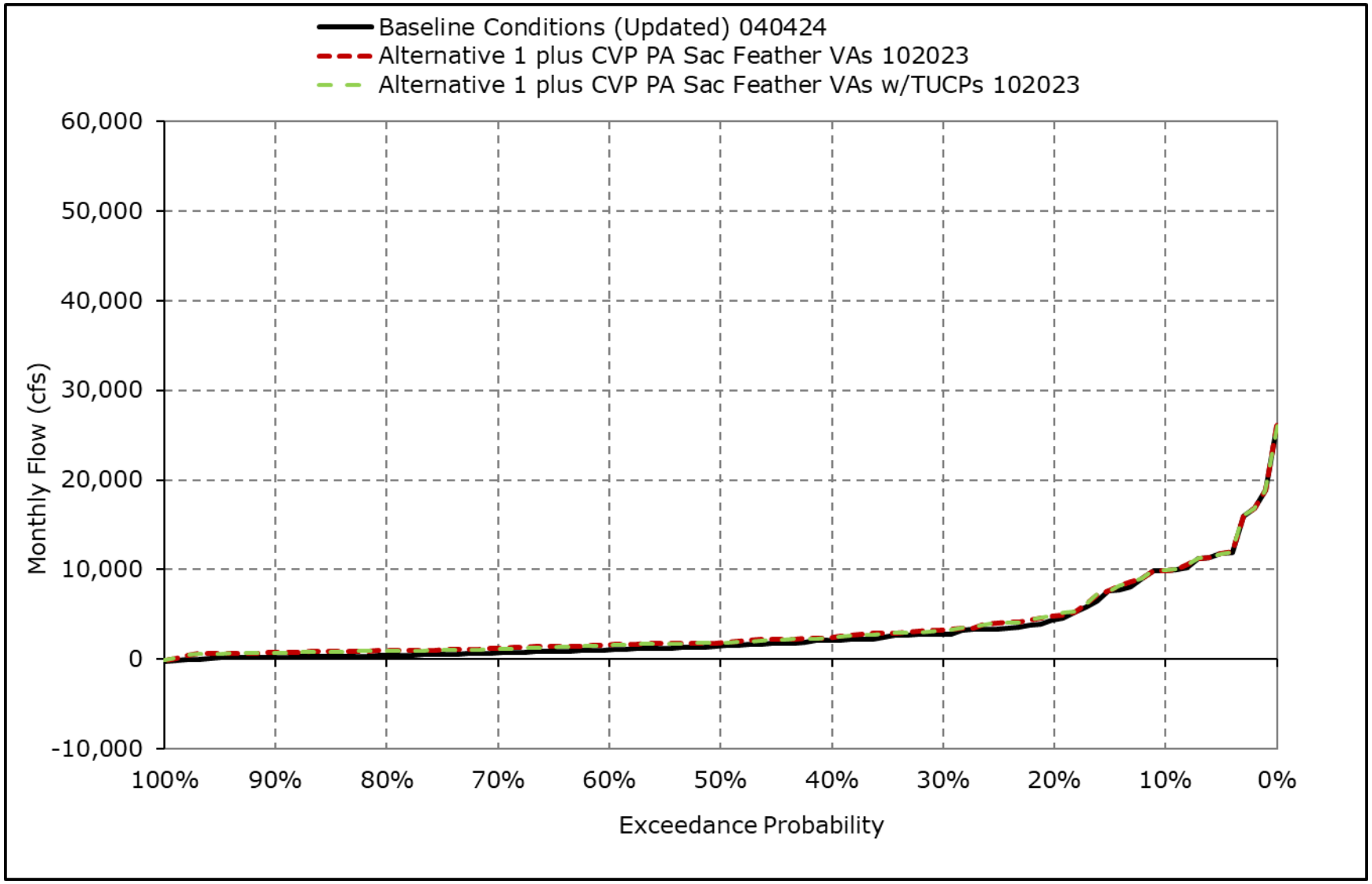
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9n. Qwest, May



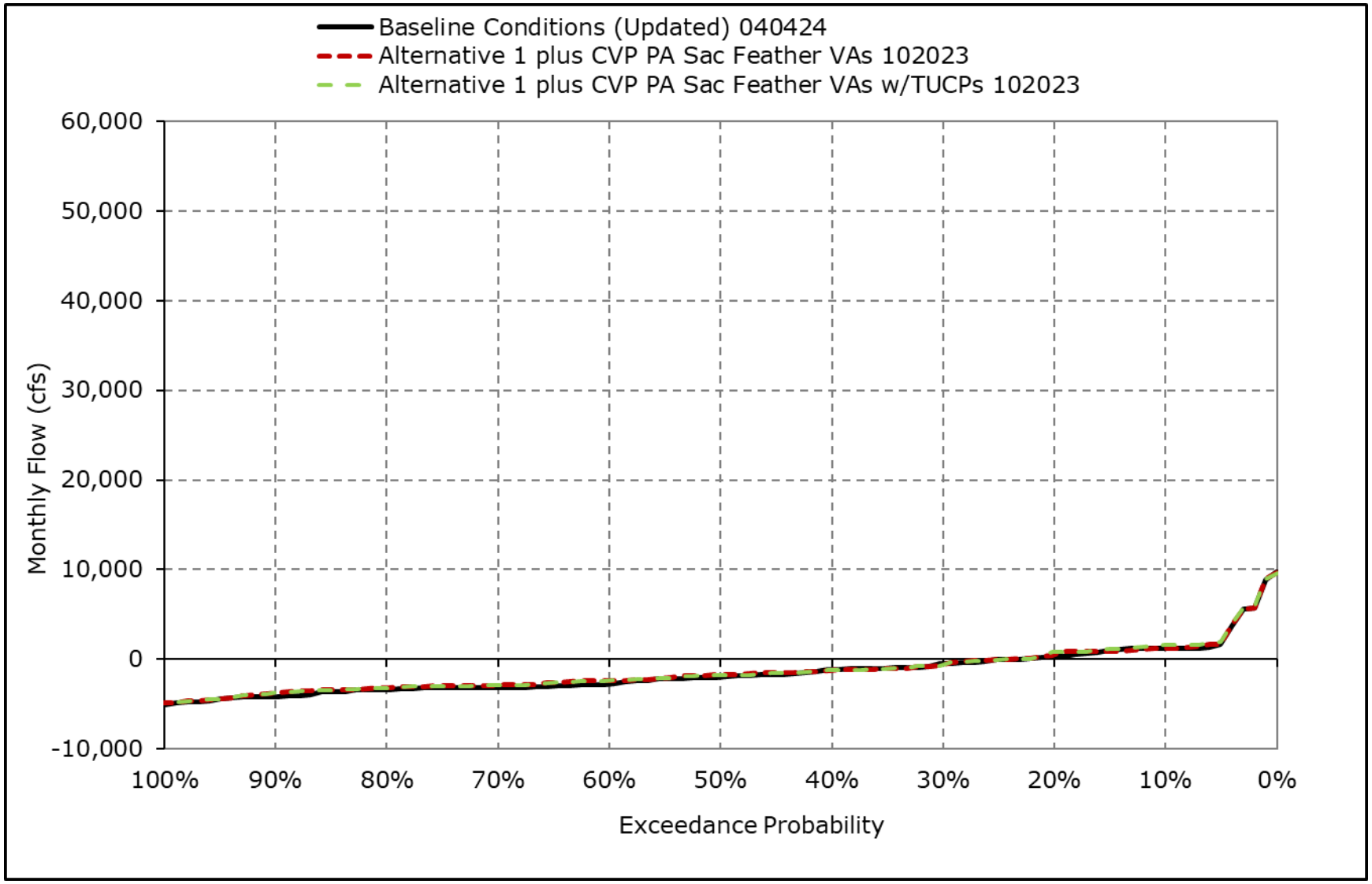
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9o. Qwest, June



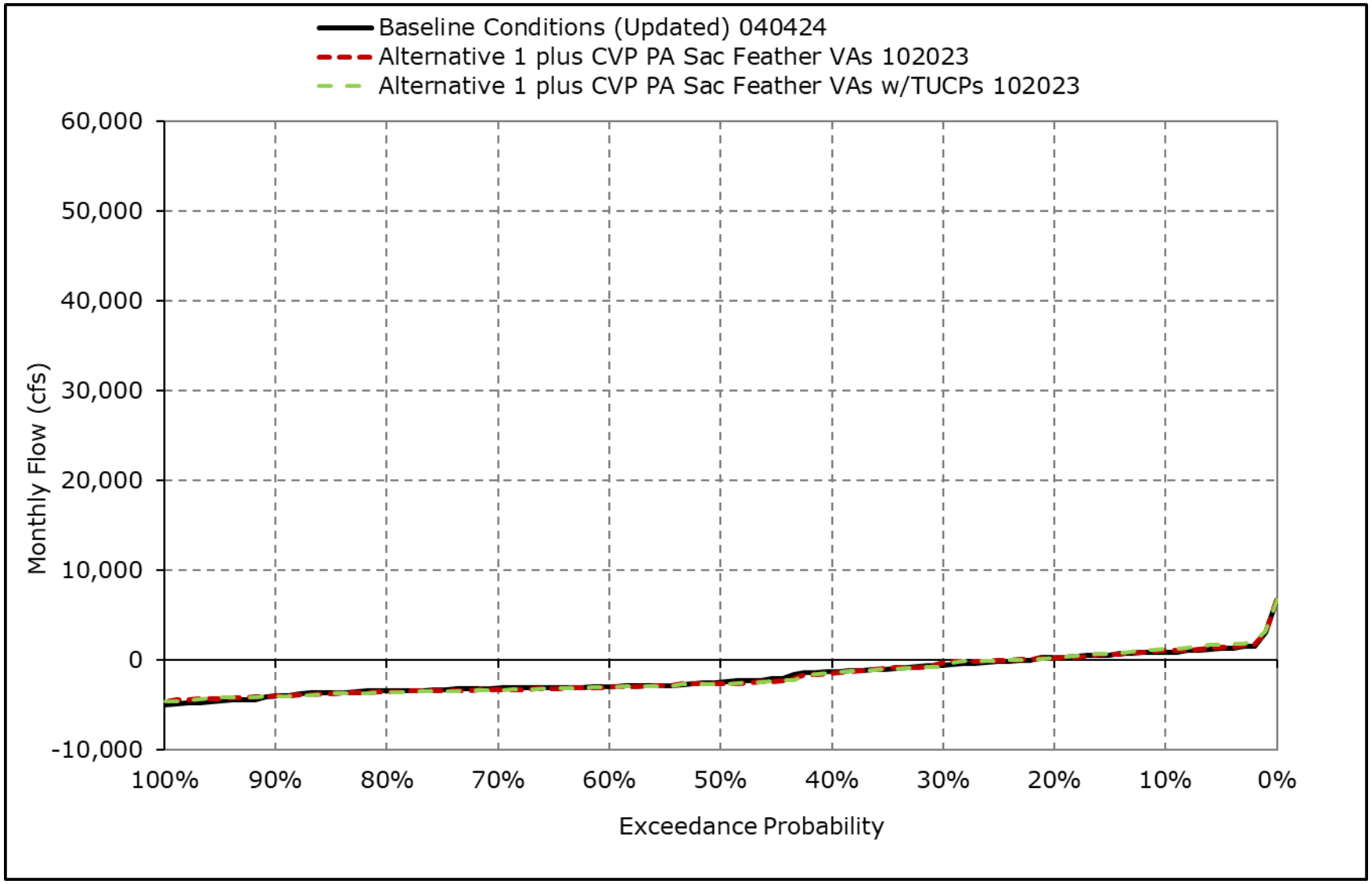
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9p. Qwest, July



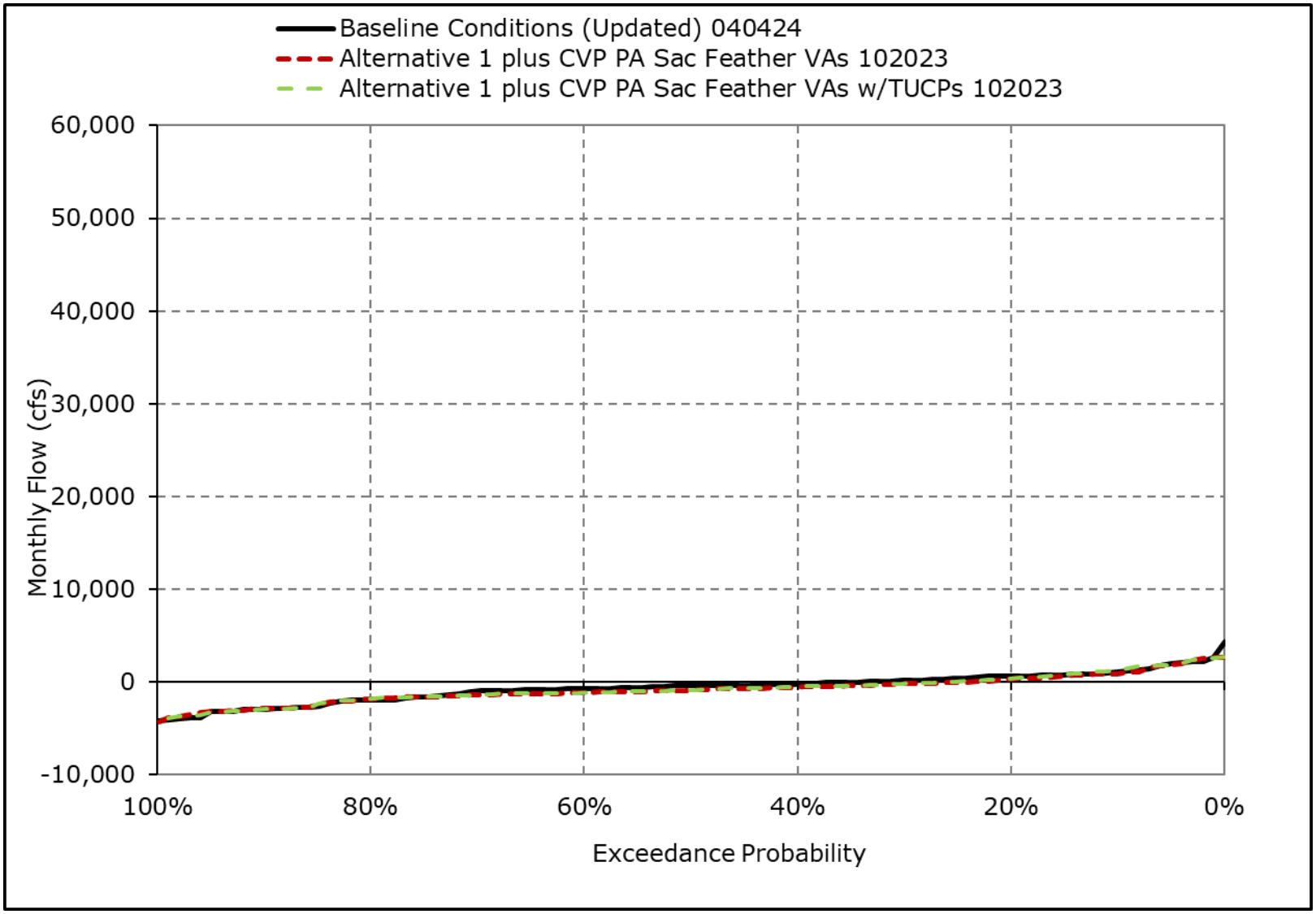
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9q. Qwest, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-9r. Qwest, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 4F-3-10-1a. Delta Outflow, Baseline Conditions (Updated) 040424, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	8,750	15,802	61,124	93,124	124,948	95,161	63,477	47,600	31,869	10,942	7,085	10,504
20% Exceedance	8,125	8,426	34,906	61,502	79,484	62,006	45,213	33,061	20,571	8,749	6,112	10,181
30% Exceedance	7,969	6,909	19,731	36,740	56,477	45,515	31,001	23,220	11,753	8,249	5,812	10,024
40% Exceedance	7,656	6,060	12,296	27,765	40,735	35,702	25,965	18,728	8,622	8,244	5,520	8,872
50% Exceedance	4,797	5,776	9,230	21,973	30,173	24,222	19,196	16,441	7,366	8,005	4,649	4,413
60% Exceedance	4,000	5,357	6,590	16,890	21,333	20,649	15,234	13,056	7,102	6,500	4,050	3,857
70% Exceedance	4,000	4,948	6,040	11,328	16,721	17,417	12,721	11,224	6,930	5,278	4,000	3,115
80% Exceedance	4,000	4,631	5,410	9,385	14,104	13,293	11,173	9,731	6,554	5,000	3,500	3,000
90% Exceedance	3,000	4,500	4,959	7,391	9,825	9,639	10,064	7,777	4,017	4,000	3,000	3,000
Full Simulation Period Average[a]	6,410	9,149	22,224	39,022	50,907	42,658	29,366	22,233	13,246	7,653	5,155	6,559
Wet Water Years (30%)	8,198	15,115	47,417	80,674	101,611	81,776	55,355	39,927	25,280	10,680	7,197	10,966
Above Normal Water Years (11%)	6,010	6,855	14,467	50,398	59,250	55,211	30,859	23,540	14,025	9,696	6,390	10,430
Below Normal Water Years (21%)	6,428	7,857	12,401	21,387	32,858	28,315	22,461	18,719	8,612	7,599	4,322	4,195
Dry Water Years (22%)	5,769	6,233	10,915	13,504	21,708	19,078	14,063	11,689	6,746	5,212	4,107	3,459
Critical Water Years (16%)	4,188	5,246	8,760	11,339	13,942	11,927	9,717	7,269	5,168	4,000	3,011	3,000

Table 4F-3-10-1b. Delta Outflow, Alternative 1 plus CVP PA Sac Feather VAs 102023, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	8,687	16,152	61,402	93,644	125,376	97,400	64,412	47,662	31,855	10,270	6,243	11,109
20% Exceedance	8,438	8,078	35,021	63,595	78,906	64,716	44,228	33,324	21,105	8,440	5,695	10,338
30% Exceedance	7,969	6,677	19,893	37,652	56,271	46,461	31,457	22,692	12,278	8,249	5,453	10,064
40% Exceedance	7,813	5,975	12,738	28,683	42,220	35,733	25,348	16,880	9,299	8,005	5,115	8,957
50% Exceedance	5,147	5,772	9,311	22,397	31,546	26,203	20,030	14,631	8,263	7,391	4,286	4,449
60% Exceedance	4,215	5,447	6,867	16,961	21,382	22,231	15,098	11,802	7,495	6,503	4,000	3,473
70% Exceedance	4,081	5,092	6,107	11,475	16,802	18,210	12,503	10,121	7,142	5,418	3,797	3,127
80% Exceedance	4,050	4,659	5,509	9,641	14,386	14,583	10,797	9,385	6,995	5,000	3,752	3,001
90% Exceedance	3,000	4,500	5,122	7,000	9,979	9,838	9,743	7,160	4,345	4,000	3,000	3,000
Full Simulation Period Average[a]	6,582	9,160	22,472	39,525	51,374	43,462	29,393	21,310	13,688	7,589	4,888	6,559
Wet Water Years (30%)	8,436	15,144	48,090	81,376	101,693	82,014	55,935	38,712	25,615	10,619	6,825	10,756
Above Normal Water Years (11%)	6,281	6,899	14,406	50,927	60,597	56,674	32,050	23,915	14,512	9,312	5,733	11,180
Below Normal Water Years (21%)	6,548	7,894	12,423	21,959	33,338	29,958	21,794	17,098	9,443	7,434	4,154	4,128
Dry Water Years (22%)	5,904	6,214	11,071	13,833	21,901	20,132	13,942	11,198	7,234	5,318	3,857	3,430
Critical Water Years (16%)	4,290	5,206	8,849	11,599	14,885	11,899	9,019	6,322	5,204	4,051	3,055	3,002

Table 4F-3-10-1c. Delta Outflow, Alternative 1 plus CVP PA Sac Feather VAs 102023 minus Baseline Conditions (Updated) 040424, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-63	350	279	520	428	2,238	934	62	-13	-672	-842	606
20% Exceedance	313	-349	115	2,093	-578	2,709	-985	263	534	-309	-416	156
30% Exceedance	0	-232	163	911	-206	945	455	-529	526	0	-360	40
40% Exceedance	156	-84	441	918	1,485	30	-617	-1,847	677	-240	-405	85
50% Exceedance	350	-4	81	425	1,373	1,981	834	-1,809	896	-614	-363	36
60% Exceedance	215	90	278	71	49	1,582	-136	-1,254	394	3	-50	-384
70% Exceedance	81	144	67	148	82	793	-218	-1,103	211	140	-203	12
80% Exceedance	50	28	99	256	282	1,291	-376	-346	440	0	252	1
90% Exceedance	0	0	163	-392	154	199	-321	-618	328	0	0	0
Full Simulation Period Average[a]	173	11	248	503	467	804	27	-923	442	-63	-267	-1
Wet Water Years (30%)	238	29	673	702	82	237	580	-1,215	335	-60	-372	-210
Above Normal Water Years (11%)	271	44	-61	529	1,347	1,464	1,191	375	487	-384	-657	750
Below Normal Water Years (21%)	120	38	22	572	480	1,642	-667	-1,621	831	-164	-168	-68
Dry Water Years (22%)	135	-19	156	330	193	1,054	-121	-490	488	106	-251	-29
Critical Water Years (16%)	102	-41	89	260	943	-28	-698	-947	36	50	44	2

[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Table 4F-3-10-2a. Delta Outflow, Baseline Conditions (Updated) 040424, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	8,750	15,802	61,124	93,124	124,948	95,161	63,477	47,600	31,869	10,942	7,085	10,504
20% Exceedance	8,125	8,426	34,906	61,502	79,484	62,006	45,213	33,061	20,571	8,749	6,112	10,181
30% Exceedance	7,969	6,909	19,731	36,740	56,477	45,515	31,001	23,220	11,753	8,249	5,812	10,024
40% Exceedance	7,656	6,060	12,296	27,765	40,735	35,702	25,965	18,728	8,622	8,244	5,520	8,872
50% Exceedance	4,797	5,776	9,230	21,973	30,173	24,222	19,196	16,441	7,366	8,005	4,649	4,413
60% Exceedance	4,000	5,357	6,590	16,890	21,333	20,649	15,234	13,056	7,102	6,500	4,050	3,857
70% Exceedance	4,000	4,948	6,040	11,328	16,721	17,417	12,721	11,224	6,930	5,278	4,000	3,115
80% Exceedance	4,000	4,631	5,410	9,385	14,104	13,293	11,173	9,731	6,554	5,000	3,500	3,000
90% Exceedance	3,000	4,500	4,959	7,391	9,825	9,639	10,064	7,777	4,017	4,000	3,000	3,000
Full Simulation Period Average[a]	6,410	9,149	22,224	39,022	50,907	42,658	29,366	22,233	13,246	7,653	5,155	6,559
Wet Water Years (30%)	8,198	15,115	47,417	80,674	101,611	81,776	55,355	39,927	25,280	10,680	7,197	10,966
Above Normal Water Years (11%)	6,010	6,855	14,467	50,398	59,250	55,211	30,859	23,540	14,025	9,696	6,390	10,430
Below Normal Water Years (21%)	6,428	7,857	12,401	21,387	32,858	28,315	22,461	18,719	8,612	7,599	4,322	4,195
Dry Water Years (22%)	5,769	6,233	10,915	13,504	21,708	19,078	14,063	11,689	6,746	5,212	4,107	3,459
Critical Water Years (16%)	4,188	5,246	8,760	11,339	13,942	11,927	9,717	7,269	5,168	4,000	3,011	3,000

Table 4F-3-10-2b. Delta Outflow, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	8,687	16,480	61,403	93,617	125,397	97,398	64,405	47,664	31,897	10,271	6,243	11,109
20% Exceedance	8,438	8,078	35,028	65,225	78,931	64,795	44,583	33,326	21,106	8,443	5,695	10,338
30% Exceedance	7,969	6,669	20,194	37,925	56,470	46,463	31,443	22,696	12,284	8,249	5,453	10,064
40% Exceedance	7,813	6,002	12,729	28,882	42,605	35,733	25,331	16,900	9,298	8,005	5,115	8,957
50% Exceedance	5,148	5,754	9,136	22,405	31,507	26,206	20,030	14,632	8,071	7,399	4,289	4,467
60% Exceedance	4,371	5,436	7,052	16,961	21,421	22,237	15,097	11,976	7,490	6,503	4,000	3,551
70% Exceedance	4,081	4,965	6,106	11,478	16,806	18,273	12,313	10,216	7,115	5,418	3,797	3,394
80% Exceedance	4,049	4,659	5,530	9,682	14,452	14,489	10,694	9,385	6,907	5,000	3,752	3,017
90% Exceedance	3,000	4,500	5,117	6,992	9,843	9,282	9,026	7,160	4,401	4,000	3,000	3,000
Full Simulation Period Average[a]	6,600	9,164	22,439	39,593	51,435	43,355	29,206	21,346	13,627	7,531	4,890	6,608
Wet Water Years (30%)	8,445	15,172	48,047	81,394	101,695	82,030	55,940	38,710	25,619	10,615	6,829	10,758
Above Normal Water Years (11%)	6,281	6,949	14,130	51,320	60,707	56,690	31,923	23,910	14,627	9,313	5,734	11,180
Below Normal Water Years (21%)	6,582	7,874	12,401	22,007	33,473	29,989	21,782	17,157	9,447	7,447	4,151	4,168
Dry Water Years (22%)	5,898	6,224	11,066	13,870	21,971	20,095	13,995	11,219	7,226	5,318	3,856	3,449
Critical Water Years (16%)	4,350	5,156	8,950	11,601	14,912	11,198	7,869	6,451	4,743	3,676	3,066	3,227

Table 4F-3-10-2c. Delta Outflow, Alternative 1 plus CVP PA Sac Feather VAs w/TUCPs 102023 minus Baseline Conditions (Updated) 040424, Monthly Outflow (cfs)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-63	677	280	493	449	2,237	927	64	28	-671	-842	606
20% Exceedance	313	-349	122	3,724	-553	2,788	-630	265	534	-306	-416	156
30% Exceedance	0	-241	463	1,184	-8	948	442	-524	532	0	-360	40
40% Exceedance	156	-58	432	1,117	1,870	31	-634	-1,827	676	-240	-405	85
50% Exceedance	351	-22	-94	432	1,335	1,983	833	-1,809	705	-606	-360	54
60% Exceedance	371	79	462	70	88	1,588	-136	-1,080	389	3	-50	-306
70% Exceedance	81	17	67	150	85	856	-409	-1,009	184	140	-203	279
80% Exceedance	49	28	120	297	349	1,197	-479	-347	353	0	252	17
90% Exceedance	0	0	158	-400	18	-356	-1,038	-618	384	0	0	0
Full Simulation Period Average[a]	191	14	215	570	528	697	-160	-887	381	-122	-265	48
Wet Water Years (30%)	247	56	630	720	85	253	586	-1,216	339	-64	-368	-208
Above Normal Water Years (11%)	270	93	-337	922	1,457	1,479	1,064	370	602	-383	-657	750
Below Normal Water Years (21%)	153	17	0	620	615	1,673	-679	-1,562	835	-152	-172	-28
Dry Water Years (22%)	129	-9	151	367	263	1,017	-67	-470	480	107	-251	-10
Critical Water Years (16%)	163	-90	190	262	971	-729	-1,848	-818	-425	-325	55	227

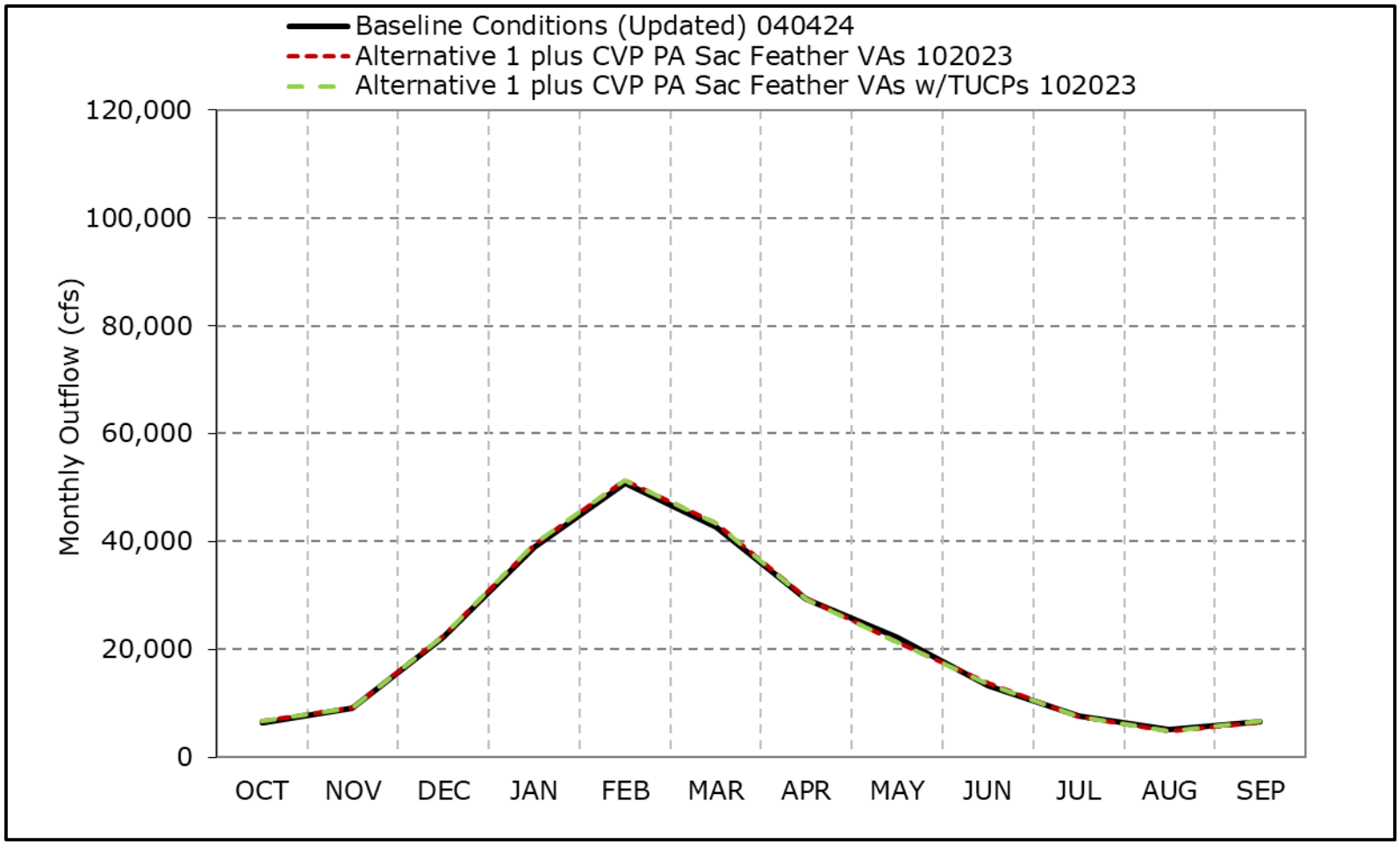
[a] Based on the 100-year simulation period.

* All scenarios are simulated at current climate condition and 0 cm sea level rise.

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

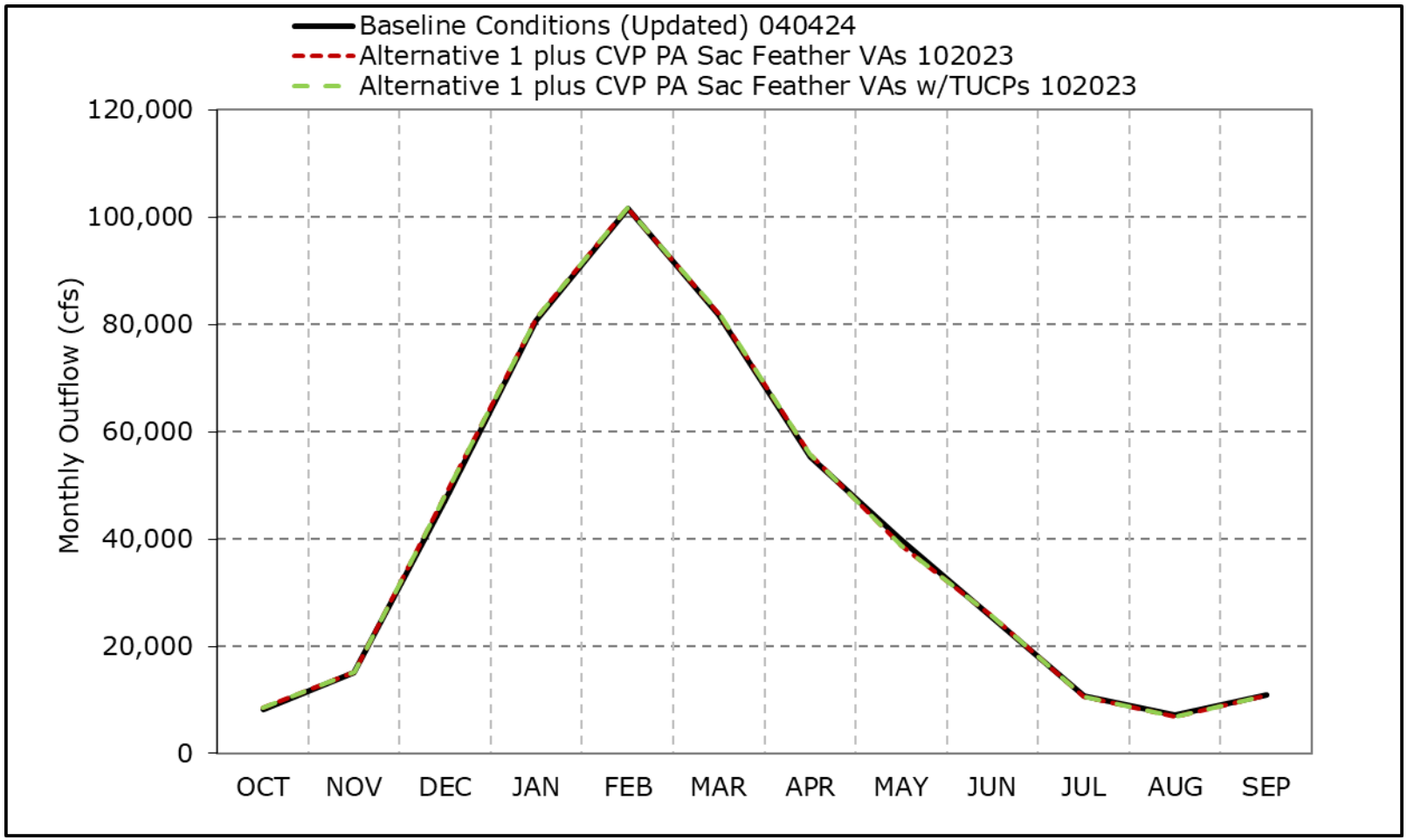
* Water Year Types results are displayed with water year - year type sorting.

Figure 4F-3-10a. Delta Outflow, Long-Term Average Outflow



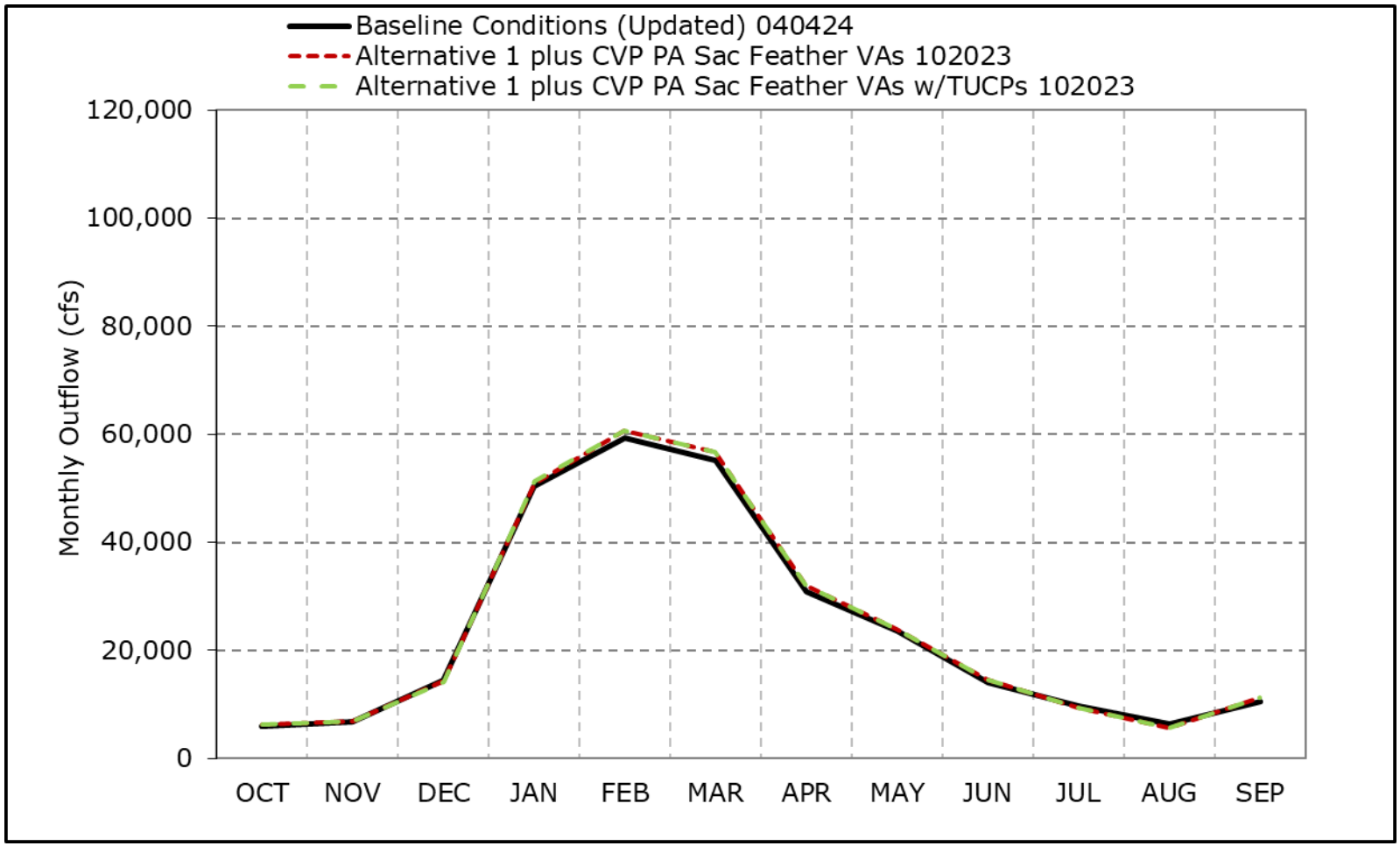
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10b. Delta Outflow, Wet Year Average Outflow



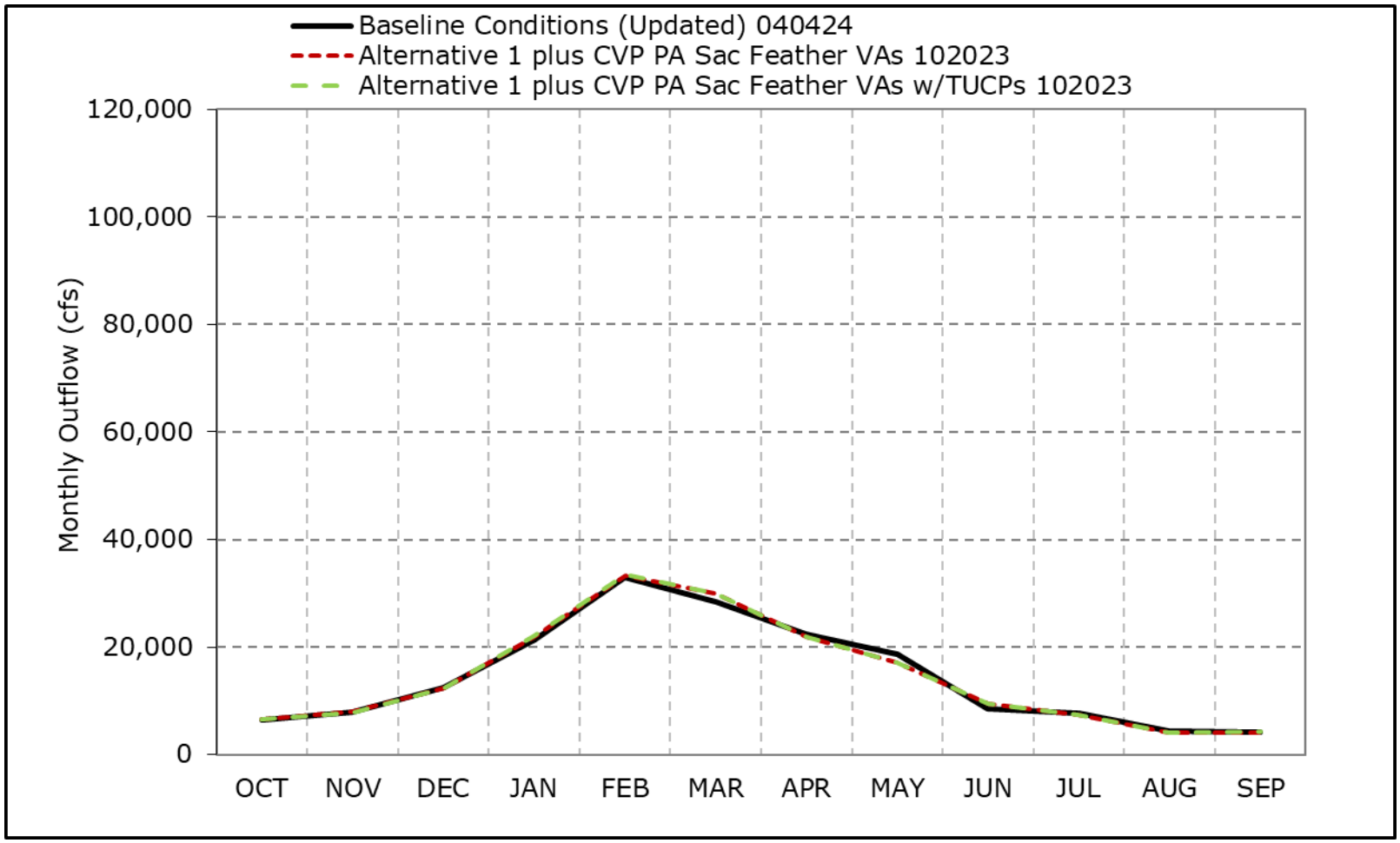
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10c. Delta Outflow, Above Normal Year Average Outflow



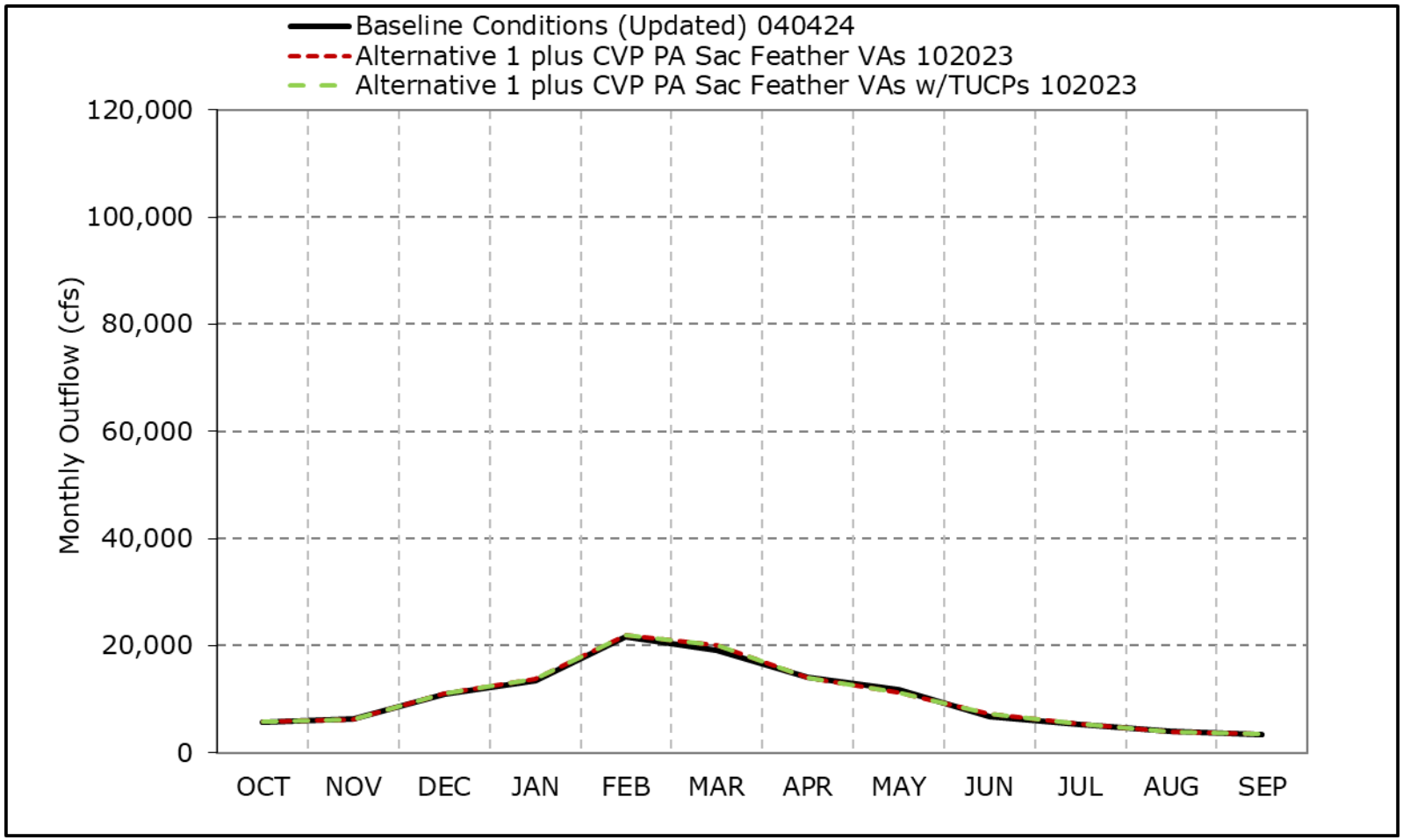
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10d. Delta Outflow, Below Normal Year Average Outflow



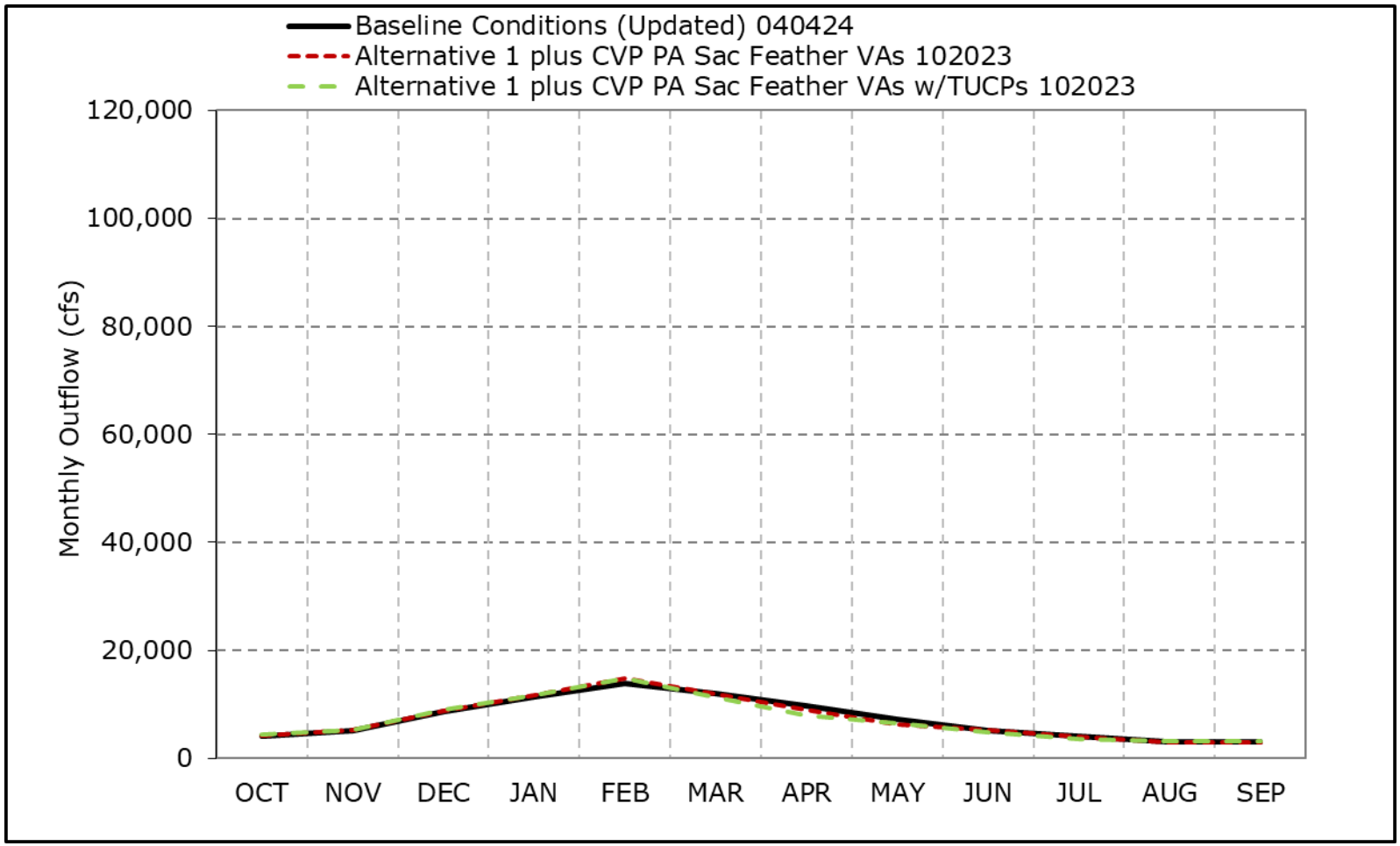
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10e. Delta Outflow, Dry Year Average Outflow



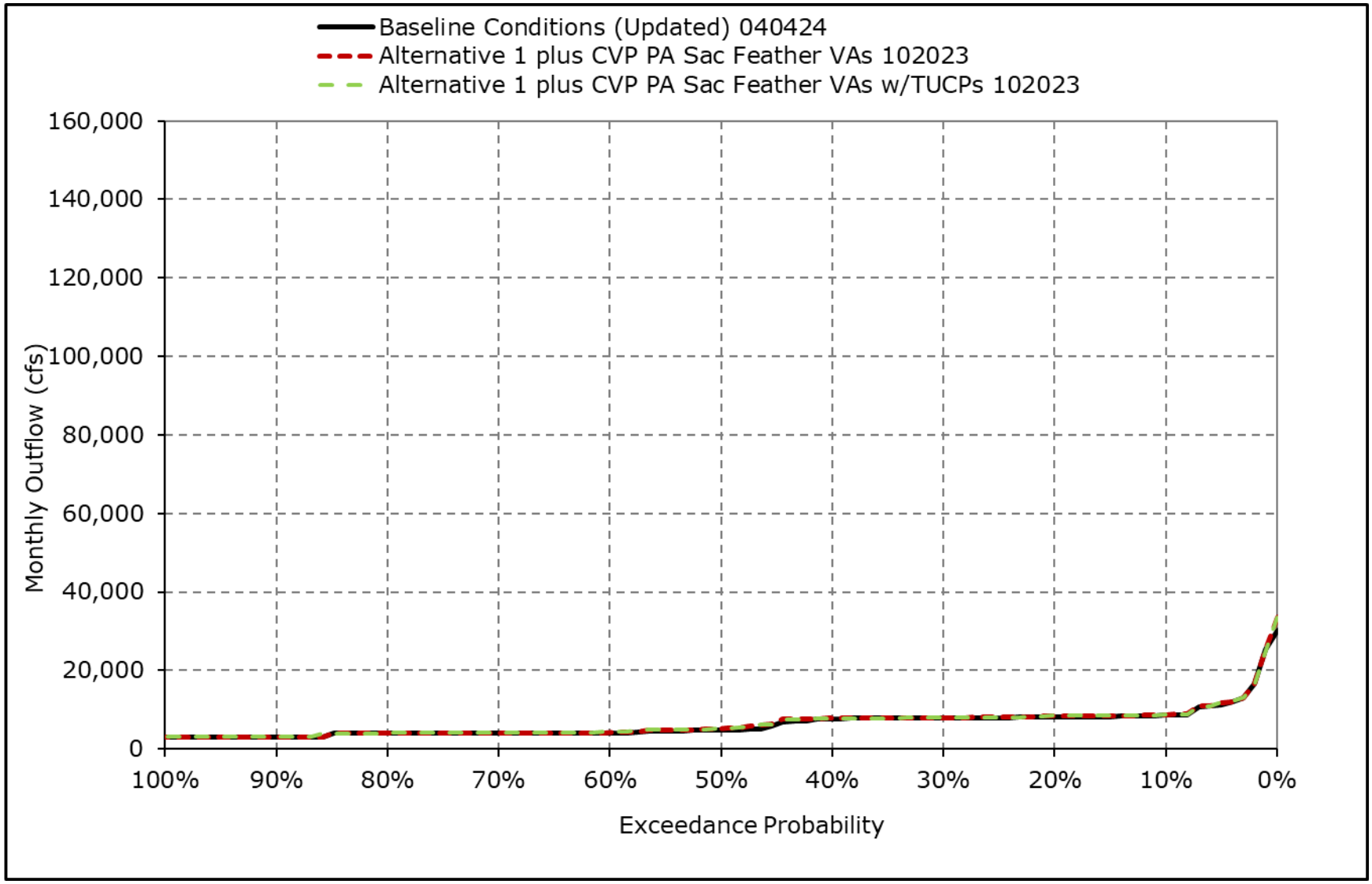
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10f. Delta Outflow, Critical Year Average Outflow



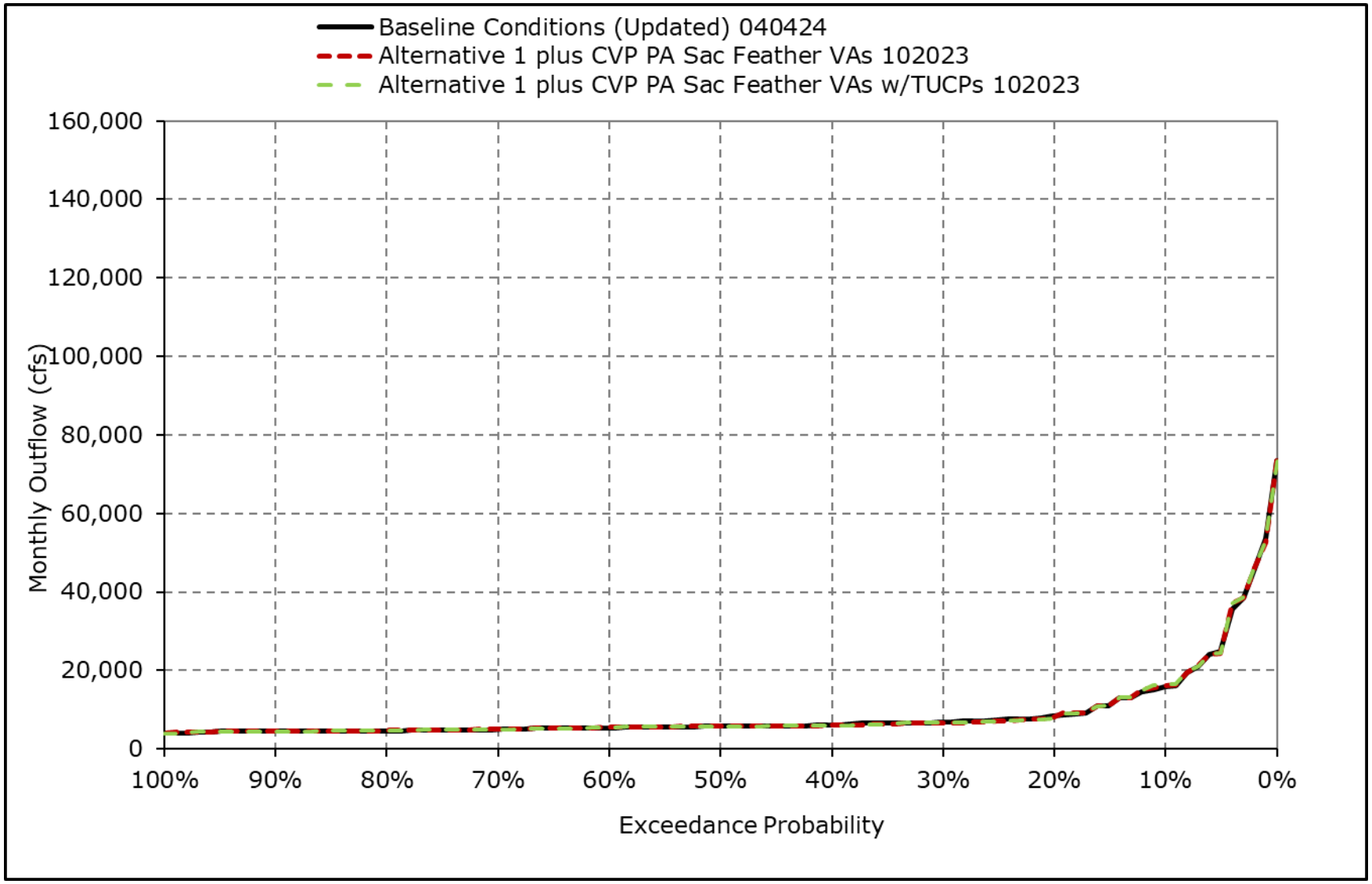
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10g. Delta Outflow, October



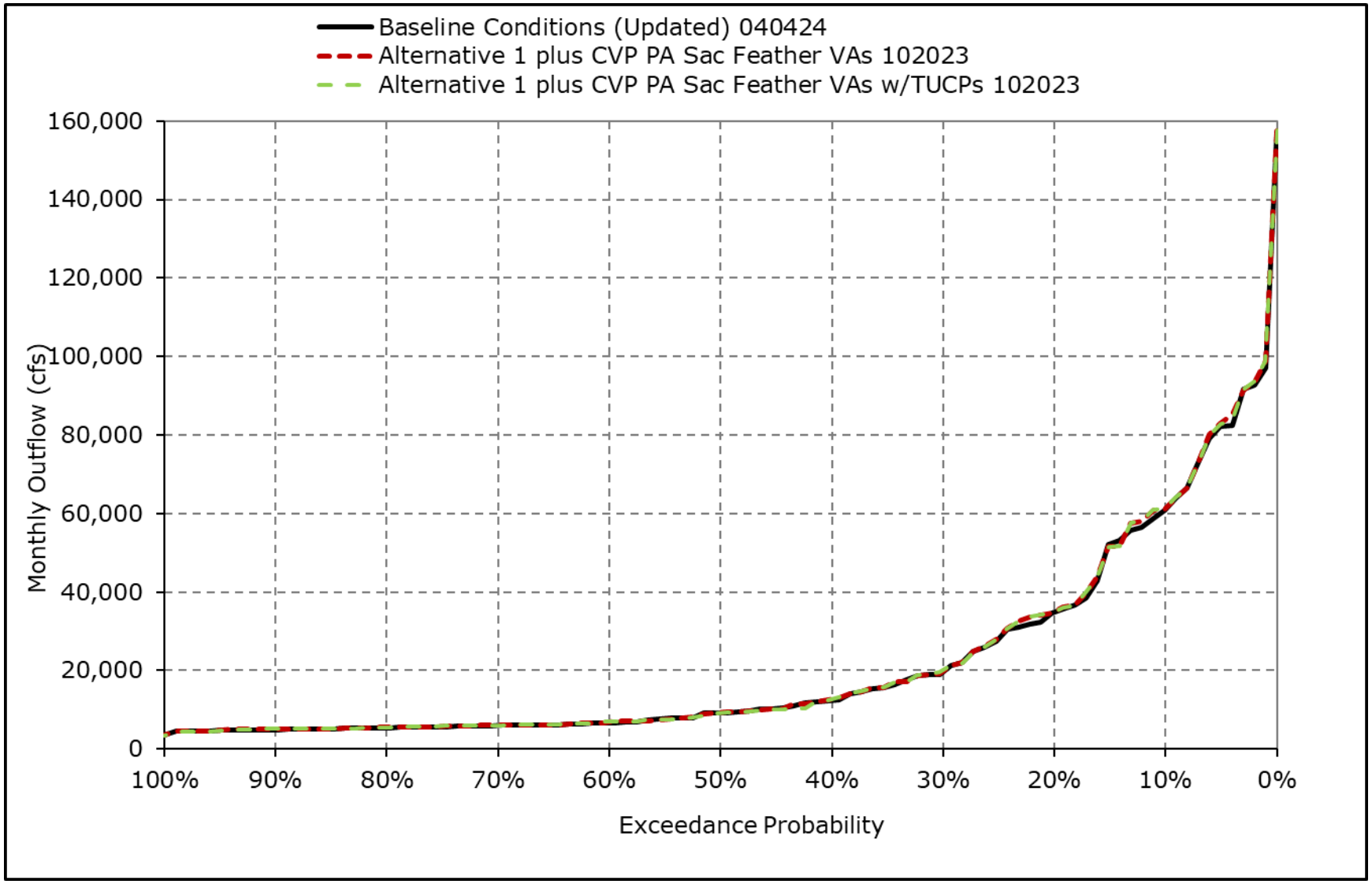
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10h. Delta Outflow, November



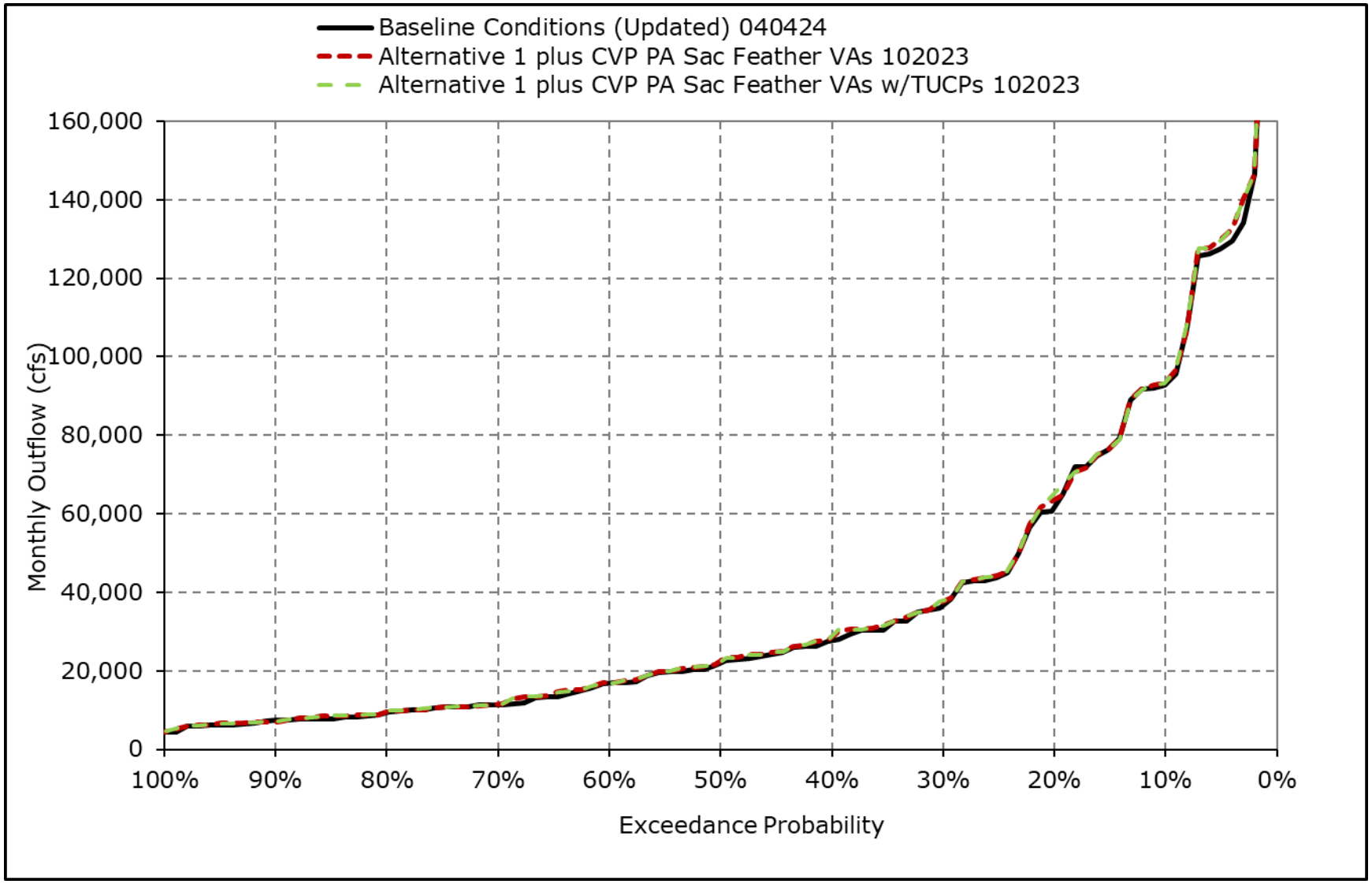
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10i. Delta Outflow, December



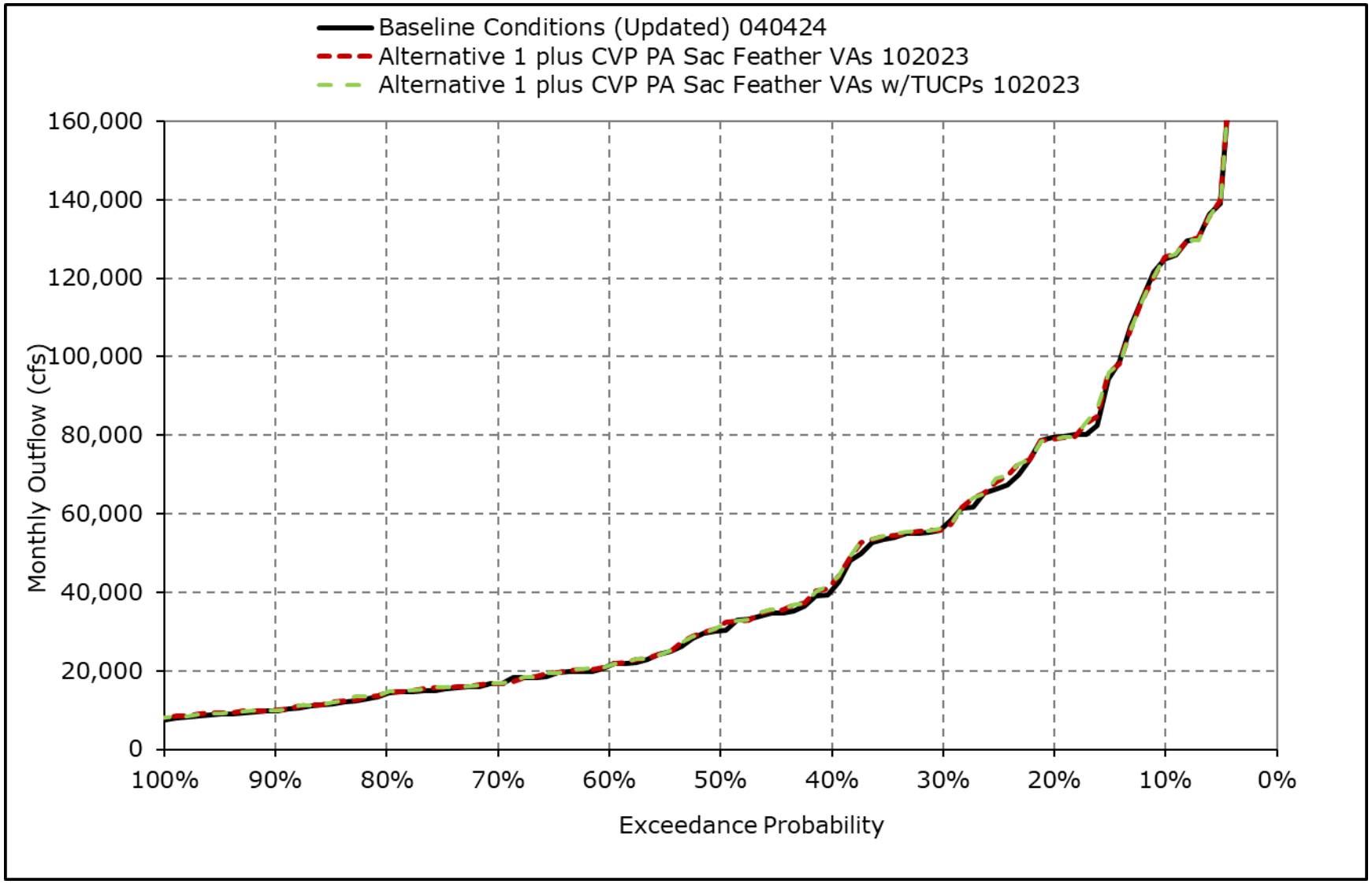
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10j. Delta Outflow, January



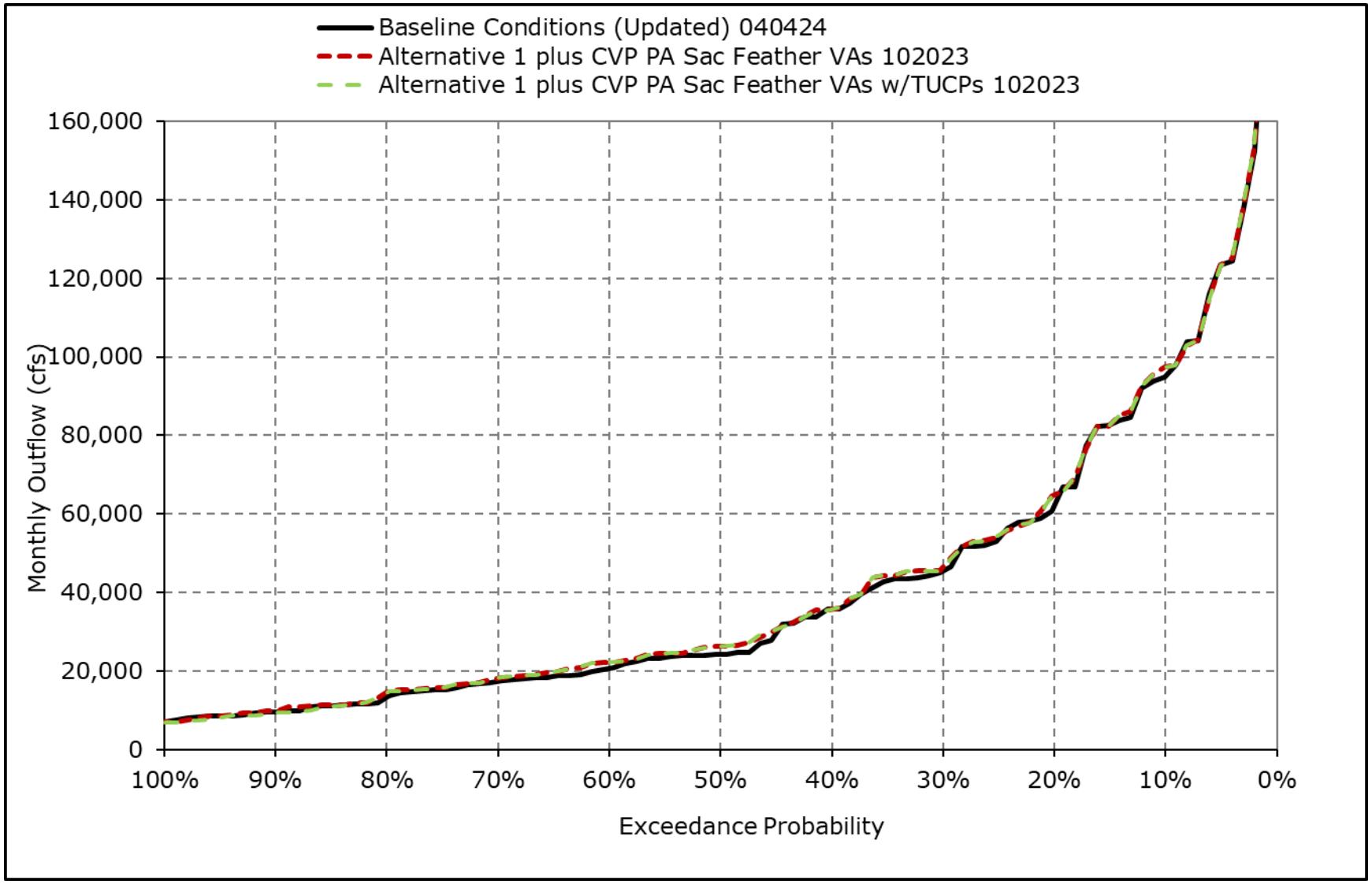
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10k. Delta Outflow, February



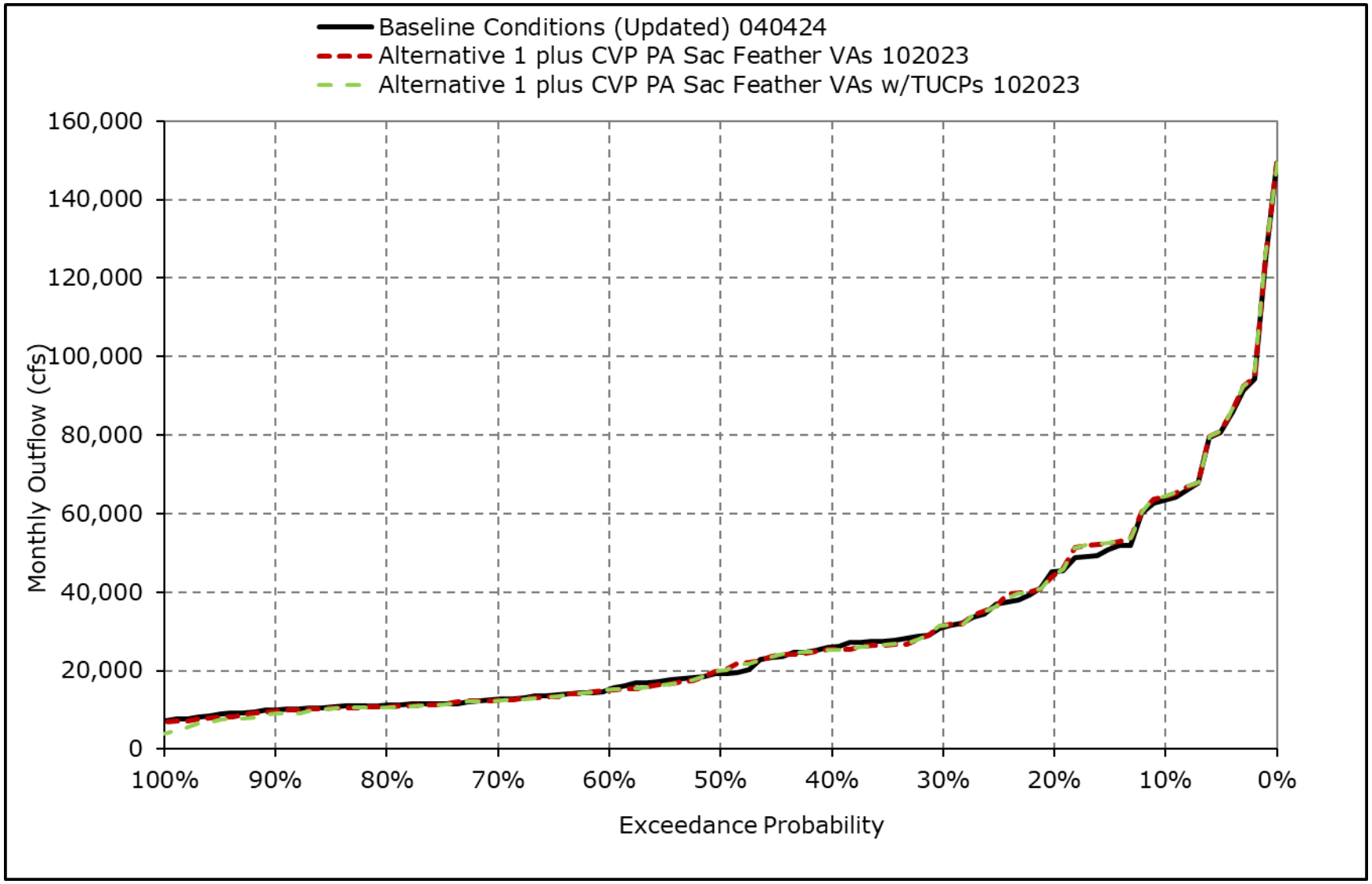
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10l. Delta Outflow, March



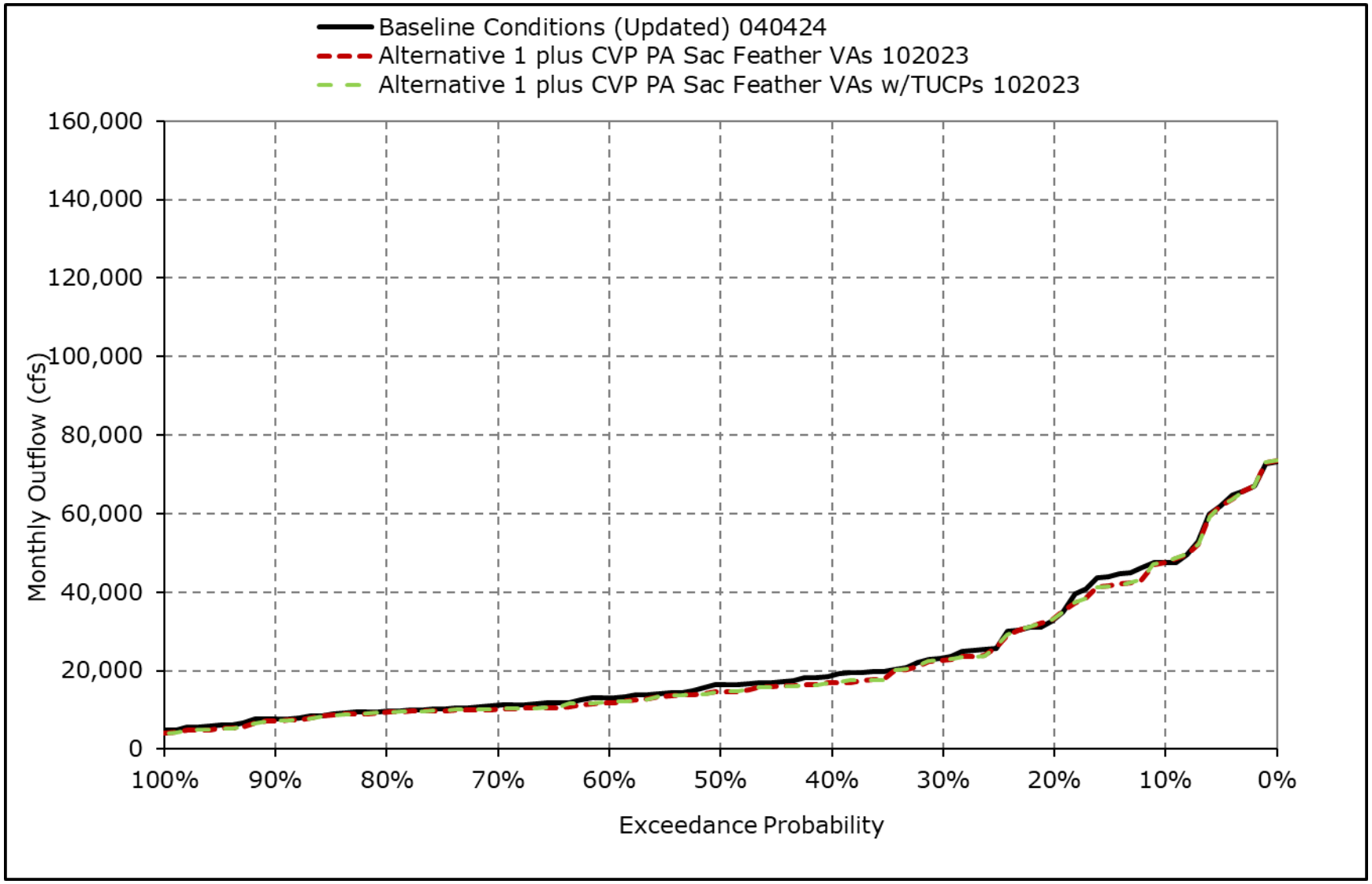
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10m. Delta Outflow, April



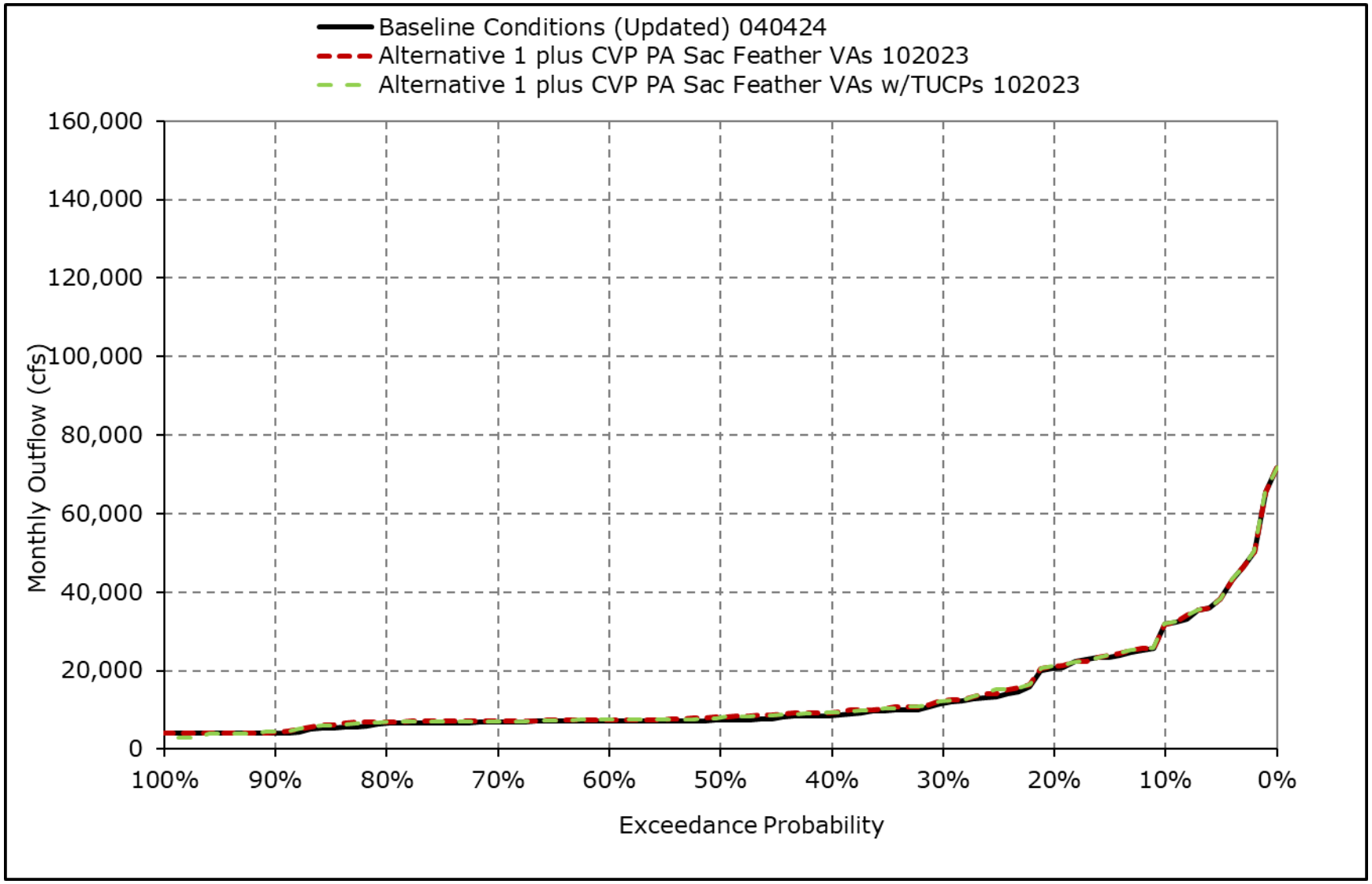
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10n. Delta Outflow, May



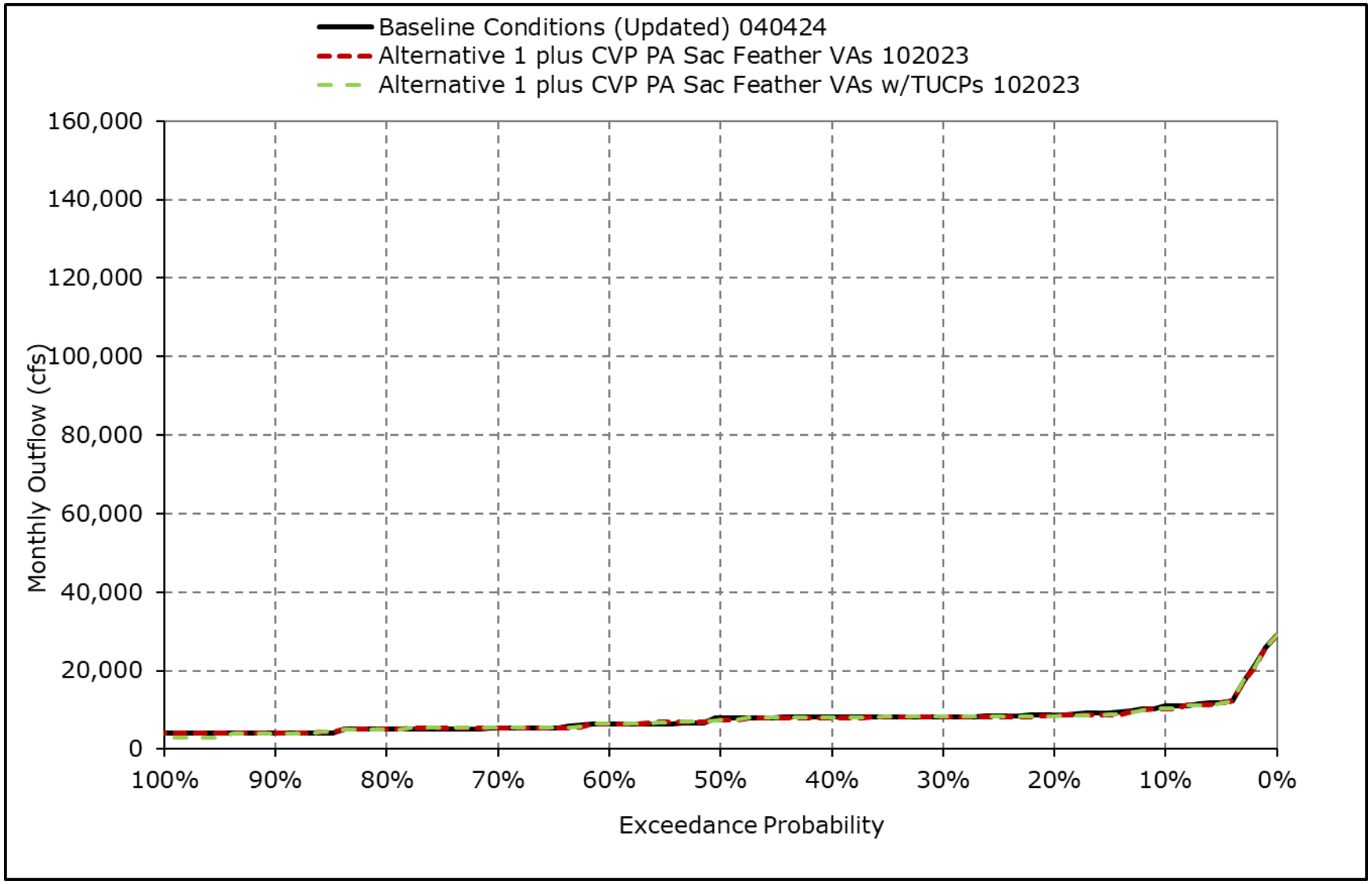
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10o. Delta Outflow, June



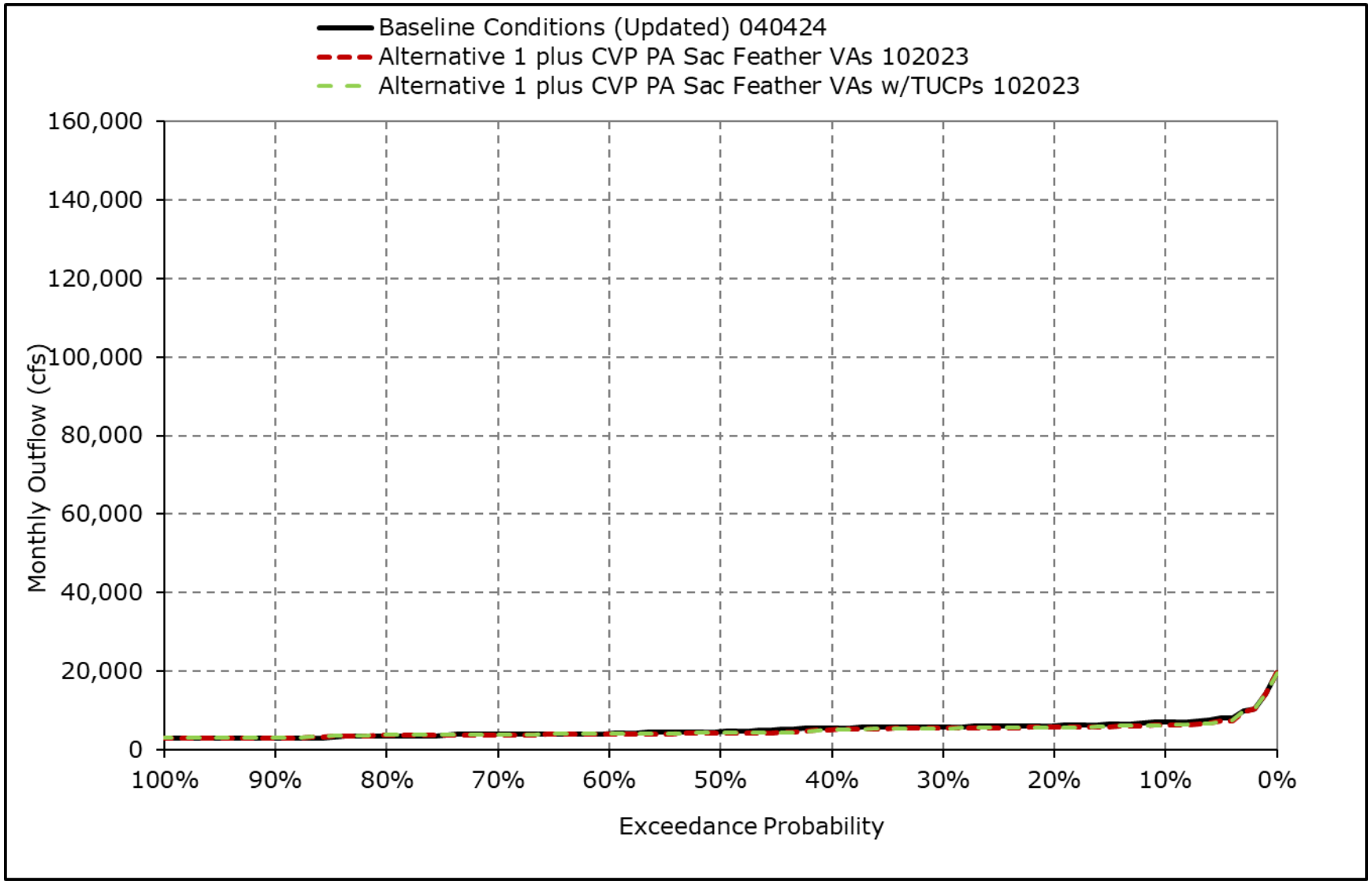
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10p. Delta Outflow, July



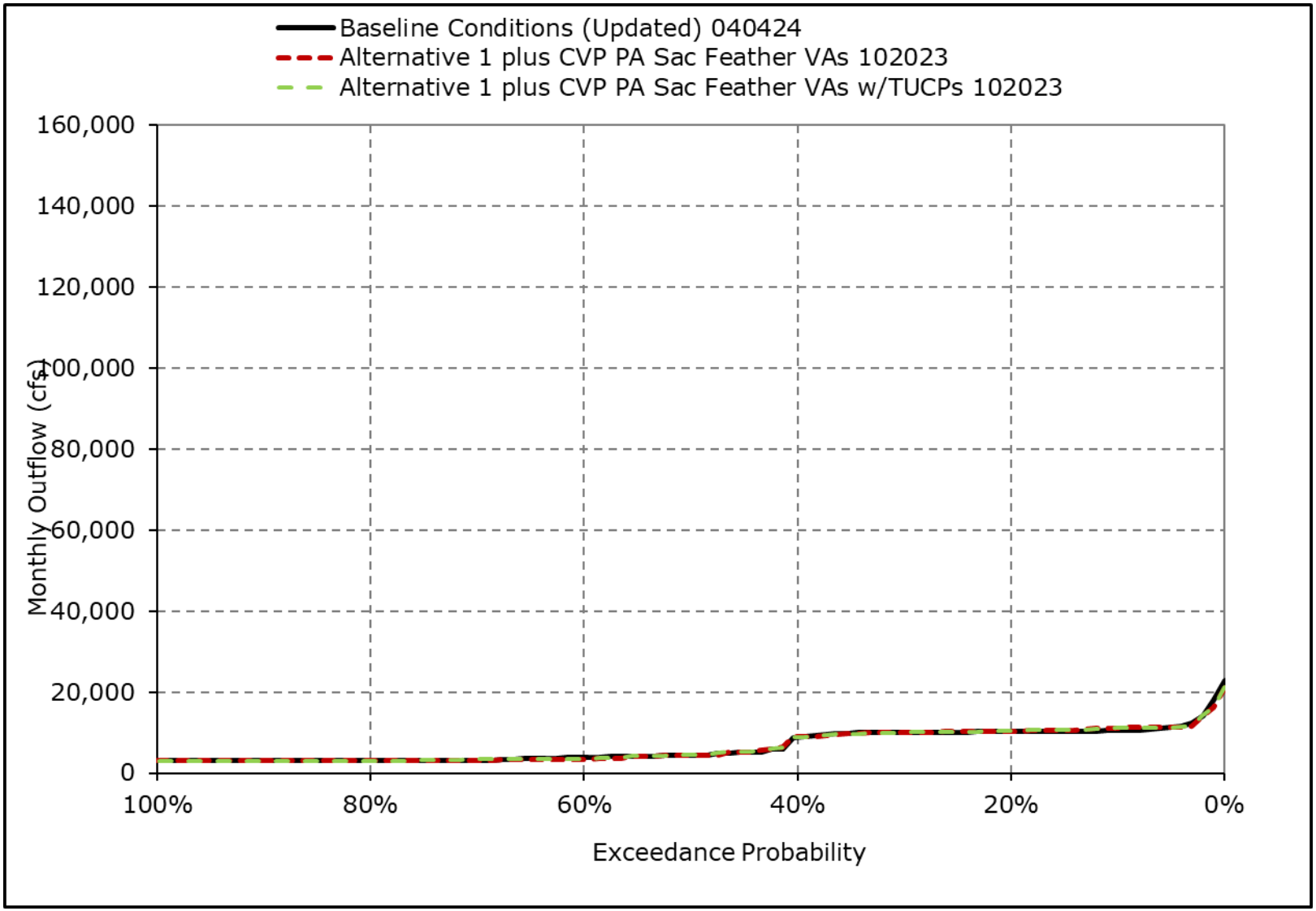
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10q. Delta Outflow, August



*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4F-3-10r. Delta Outflow, September



*All scenarios are simulated at current climate condition and 0 cm sea level rise.